

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
1.	<p>Abbas, S., Kumar, S., Srivastava, V. M., Therese M, M., Nair, S. C., Abraham, A., Mathews, V., George, B. and Srivastava, A. Heterogeneity of Mesenchymal Stromal Cells in Myelodysplastic Syndrome-with Multilineage Dysplasia (MDS-MLD) Indian Journal of Hematology and Blood Transfusion; 2019, 35 (2): 223-232</p> <p><b>Address:</b> Centre for Stem Cell Research, A Unit of in Stem Bengaluru, <b>Christian Medical College Campus</b>, Bagayam, Vellore, Tamil Nadu 632002, India Cytogenetics Unit, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India Department of General Pathology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India Department of Transfusion Medicine and Immunohematology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India Department of Hematology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India</p> <p>Bone marrow niche constituents have been implicated in the genesis of clonal hematopoietic dysfunction in myelodysplastic syndromes (MDS), though the exact role of stroma in the pathogenesis of MDS remains to be defined. We have evaluated the characteristics of mesenchymal stromal cells in a cohort of patients with MDS with multilineage dysplasia (MDS-MLD). MSCs were cultured from bone marrow aspirates of MDS-MLD patients and controls with healthy bone marrow. Phenotypic characterization, cell cycle, and apoptosis were analyzed by flow cytometry. Targeted gene expression analysis was done using a reverse-transcription polymerase chain reaction (Q-PCR). MSCs derived from MDS patients (MDS-MSCs) showed normal morphology, phenotype, karyotype and differentiation potential towards adipogenic and osteogenic lineages. However, these MDS-MSCs showed significantly altered cell cycle status and displayed a shift towards increased apoptosis compared to control MSCs (C-MSCs). The gene expression profile of niche responsive/regulatory cytokines showed a trend towards lower expression VEGF, SCF, and ANGPT with no changes in expression of CXCL12A and LIF compared to C-MSCs. The expression levels of Notch signaling components like Notch ligands (JAGGED-1 and DELTA-LIKE-1), receptors (NOTCH1, NOTCH3) and downstream gene (HES1) showed an aberrant expression pattern in MDS-MSCs compared to C-MSCs. Similarly, Q-PCR analysis of Wnt signaling inhibitory ligands (DKK-1 and DKK-2) in MDS-MSCs showed a</p>	NAT	JAN TO JUN	Centre for Stem Cell Research, Cytogenetics Unit, General Pathology, Transfusion Medicine and Immunohematology, Hematology	<p><b>PMID:</b>30988556 <b>PMC ID:</b>6439082 <b>Impact Factor:</b>0.474 (BIOXBIO-2018) <b>H-Index: 12</b></p>

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	three-fold increase in mRNA expression of DKK1 and a two-fold increase in DKK2 compared to C-MSCs. These data suggested that MDS-MSCs have an altered proliferation characteristic as well as a dysregulated cytokine secretion and signaling profile. These changes could contribute to the pathogenesis of MDS. © 2019, Indian Society of Hematology and Blood Transfusion.				
2.	<p>Abhilash, K. P. P., Tephilah, R., Pradeeptha, S., Gunasekaran, K. and Chandy, G. M.</p> <p>Injury Patterns and Outcomes of Trauma in the Geriatric Population Presenting to the Emergency Department in a Tertiary Care Hospital of South India</p> <p>J Emerg Trauma Shock; 2019, 12 (3): 198-202</p> <p><b>Address:</b> Department of Emergency Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>General Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Background: The geriatric population is more prone for injuries with complications due to their associated comorbidities. This study was done to understand the mode, severity, and outcome of injuries among geriatric patients presenting to the emergency department (ED). Materials and Methods: This retrospective study included all patients &gt;60 years who presented with trauma between October 2014 and March 2015. Details of the incident, injuries, and hospital outcome were noted. Results: Among 8563 geriatric patients, who presented to the ED during the study, 427 (4.9%) patients were trauma related. The mean age was 69 (standard deviation: 6.76) years with 87.6% being young-old (60-79 years) and 12.4% being old-old (&gt;80 years). Majority (63.2%) were Priority 2 patients. The median time between the incident and ED arrival among Priority 1 patients was 3 h (interquartile range: 2-5). Common modes of injuries were slip and fall (37.4%), two-wheeler accidents (25.8%), fall from height (9.1%), and pedestrian (8.9%). The ED team alone managed 25.8% of patients. Specialty departments referred to included orthopedics (48%), neurosurgery (18.3%), plastic surgery (4.2%), HLRS (4%), and others. Injuries due to slip and fall were significantly more among the old-old (P = 0.001), and two-wheeler accidents were more among the young-old (P = 0.001), respectively. Superficial head injuries (28.8%), extremity (24.8%), facial (18.7%), and traumatic brain injuries (17.8%) were common presentations. Thoracic injuries were significantly more among the old-old (P &lt; 0.001). Half (46.3%) of the young-old were discharged stable (P = 0.017). In-hospital mortality rate was 0.7% (3/427), while 12.9% (55/427) left against medical advice due to poor</p>	NAT	JUL TO DEC	Emergency Medicine, General Medicine	<p><b>PMID:</b> 31543643</p> <p><b>Impact Factor:0.56</b></p> <p><b>(RG – 2018)</b></p> <p><b>H-Index:22</b></p>

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	prognosis. Conclusion: Our study demonstrates the pattern of injury seen in the elderly in an urban setting in India. From this, we perceive the need for a prospective study evaluating the causes for geriatric trauma, which would help work on ways to prevent and minimize injuries in the elderly.				
3.	<p>Abiramalatha, T., Arunachal, G., Muthusamy, K. and Thomas, N. A family with floppy neonates with severe respiratory insufficiency: A lethal phenotype of RFT1-CDG due to a novel mutation European Journal of Medical Genetics; 2019, 62 (4): 248-253</p> <p><b>Address:</b> Department of Neonatology, <b>Christian Medical College, Vellore, India</b>                      Department of Neonatology, Sri Ramachandra Medical College and Research Institute, Chennai, India                      Department of Clinical Genetics, <b>Christian Medical College, Vellore, India</b>                      Department of Pediatric Neurology, <b>Christian Medical College, Vellore, India</b></p> <p>Congenital disorders of glycosylation (CDG) are a rapidly expanding group of inborn errors of metabolism with around 100 types described so far. Because of the limited number of reported cases in each type except PMM2-CDG, the complete clinical picture of other types is not known. RFT1-CDG is a rare type, with ten cases reported in the literature. Our patient presented as a floppy neonate with severe respiratory insufficiency and ventilator dependence in the newborn period. He had fetal growth restriction, facial dysmorphism, high arched palate, bilateral cryptorchidism, hypoplastic pons and cerebellum and probable hearing impairment. He succumbed to the illness on day 24 of life. There was a similar history of two previous sibling deaths in the early neonatal period due to respiratory insufficiency and history of multiple neonatal and infant deaths in the extended family. Transferrin iso-electric focusing was normal. Clinical exome sequencing revealed a novel homozygous missense mutation (c.1018 G &gt; A) in RFT1 gene [NM_052859; c.1018G &gt; A; p.G340S; ENST00000296292] and the parents were heterozygous for the same (ClinVar SVC000778540). The pathogenic variants so far reported are all missense variants affecting the luminal loops; whereas the variant in our case is in the trans-membrane helical domain. A strong family history of neonatal deaths and similar presentations in the previous 2 siblings suggests the homogenous phenotype of this mutation. Severe respiratory insufficiency and ventilator dependence shows the lethality of the disease phenotype</p>	INT	JAN TO JUN	Neonatology, Neurology  Pediatric	<p>PMC Article  <b>Impact Factor: 2.004</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 49</b></p>

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4.	<p>and incompatibility with survival beyond the neonatal period. © 2018</p> <p>Abiramalatha, T., Mathew, S. K., Mathew, B. S., Shabeer, M. P., Arulappan, G., Kumar, M., Jayaseelan, V. and Kuruvilla, K. A. Continuous infusion versus intermittent bolus doses of fentanyl for analgesia and sedation in neonates: An open-label randomised controlled trial Archives of Disease in Childhood: Fetal and Neonatal Edition; 2019, 104 (4): F433-F439</p> <p><b>Address:</b> Department of Neonatology, <b>Christian Medical College Vellore</b>, Vellore, Tamil Nadu, 632004, India Department of Neonatology, Sri Ramachandra Medical College and Research Institute, Chennai, Tamil Nadu, India Department of Pharmacology and Clinical Pharmacology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India Department of Clinical Biochemistry, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India</p> <p>Objective Adequate data on fentanyl pharmacokinetics in neonates are lacking. The study was performed to compare serum concentrations and clinical outcome between continuous infusion (CI) and intermittent bolus (IB) doses of fentanyl for analgesia and sedation in neonates. Methods In this open-label randomised controlled trial, neonates requiring 24-48 hours of mechanical ventilation and fentanyl administration were recruited. In CI regimen, 1 mcg/kg loading dose was followed by 1 mcg/kg/hour infusion. In IB regimen, 1mcg/kg/dose was administered every 4 hours. Maximum six blood samples were collected in 48 hours from each baby at prespecified time points for estimating serum fentanyl concentration. Secondary outcomes were pain scores (Neonatal Infant Pain Scale and Neonatal Pain, Agitation and Sedation Scale for acute and ongoing pain, respectively) and incidence of adverse effects of fentanyl. Results 100 neonates were recruited, 53 in CI and 47 in IB group. In CI regimen, median (IQR) serum fentanyl concentration was 0.42 (0.35, 0.46) to 0.61 (0.47, 0.89) ng/mL throughout the infusion period. In IB regimen, median (IQR) peak concentration ranged from 2.21 (1.82, 3.55) to 3.61 (2.91, 4.51) ng/mL and trough concentration 0.41 (0.33, 0.48) to 0.97 (0.56, 1.25) ng/mL for various doses. Median (IQR) peak concentration (C max, 3.06 (1.09, 4.50) vs 0.78 (0.49, 1.73) ng/mL; p&lt;0.001) was significantly higher and area under concentration-time curve (AUC</p>	INT	JAN TO JUN	Neonatology, Pharmacology, Clinical Biochemistry, Biostatistics	<p>PMC Article <b>Impact Factor : 3.953 (BIOXBIO-2018)</b> <b>H-Index : 104</b></p>

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	0-24, 19.6 (10.4, 33.5) vs 13.2 (10.8, 22.6) µg·hour/L; p=0.12) was higher (though not statistically significant) in IB than CI regimen. Pain scores and adverse effects were comparable between the two regimens. Conclusion CI regimen of fentanyl produces steady serum concentrations, whereas IB regimen produces wide fluctuations in serum concentration with high-peak concentrations. A serum fentanyl concentration of 0.4-0.6 ng/mL produces adequate analgesia and sedation in neonates. Trial registration number CTRI/2014/11/005190. © 2019 Author(s).				
5.	Aboobacker, Fouzia, Korula, Anu, Devasia, Anup, Kulkarni, Uday, Lionel, Sharon, Abraham, Aby, Srivastava, Alok, Balasubramanian, Poonkuzhali, Janet, Nancy, Lakshmi, Kavitha, George, Biju and Mathews, Vikram Allogeneic Stem Cell Transplantation for Patients with Acute Lymphoblastic Leukemia: Who and When in a Resource Constrained Environment? Clinical Lymphoma Myeloma & Leukemia; 2019, 19 S196-S196	INT	JUL TO DEC	Clinical Haematology	<b>PMID:</b> WOS:000483480700087 <b>Impact Factor: 2.274</b> <b>(RG-2018)</b> <b>H-Index: 46</b>
6.	Abraham, A. P., Moorthy, R. K., Jeyaseelan, L. and Rajshekhar, V. Postoperative intraventricular blood: a new modifiable risk factor for early postoperative symptomatic hydrocephalus in children with posterior fossa tumors Child's Nervous System; 2019, 35 (7): 1137-1146  <b>Address:</b> Department of Neurological Sciences, <b>Christian Medical College, Vellore, Tamil Nadu, India</b> Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu, India</b>  Objective: To analyze factors associated with the development of early symptomatic hydrocephalus following posterior fossa tumor (PFT) surgery in children. Methods: In this retrospective study, data from 148 children (age < 18 years) who underwent primary resection of their PFTs without preoperative permanent CSF diversion procedures were collected. The incidence of symptomatic hydrocephalus within 30 days of tumor resection was studied and its association with various demographic, tumor-related, and surgery-related risk factors was analyzed. Results: At presentation, 131 (89%) of the 148 patients had symptomatic hydrocephalus. There were 99 males and 49 females (mean age 8.7 years; range 1 to 17 years). Postoperatively, 14 (9.4%) patients required shunt placement for symptomatic hydrocephalus. The indications for shunt surgery were persistent symptoms of raised intracranial pressure (n	INT	JAN TO JUN	Neurological Sciences, Biostatistics	<b>PMC</b> Article <b>Impact Factor: 1.235</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 76</b>

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	= 6, 43%), CSF leak from the wound (n = 7, 50%), and tense pseudomeningocele (n = 1, 7%). On multivariate analysis, age < 6 years (OR 5.9, 95% CI 1.6–22.6, p = 0.009) and the presence of intraventricular blood (IVB) on postoperative CT (OR 6.4, 95% CI 1.7–23.7, p = 0.006) were independent risk factors for developing symptomatic hydrocephalus. Conclusions: The incidence of postoperative symptomatic hydrocephalus in our series (9.4%) is lower than that reported in most previous studies. Age < 6 years and the presence of postoperative IVB were independent risk factors for developing symptomatic hydrocephalus. Of these, postoperative IVB is probably the only modifiable risk factor. © 2019, Springer-Verlag GmbH Germany, part of Springer Nature.				
7.	Abraham, A. P., Sarkar, S., Mannam, P., Chacko, G. and Chacko, A. G. A rare case of a giant tentorial bicompartamental cystic schwannoma unrelated to the cranial nerves Neurol India; 2019, 67 (3): 932-933 <b>Address:</b> Department of Neurological Sciences, <b>Christian Medical College, Vellore</b> Tamil Nadu, India. Department of Radiology, <b>Christian Medical College, Vellore</b> Tamil Nadu, India. Department of Pathology, <b>Christian Medical College, Vellore</b> Tamil Nadu, India.	NAT	JUL TO DEC	Radiology, Pathology	<b>PMID:</b> 31347598 <b>Impact Factor: 0.45 (RG-2018)</b> <b>H-Index: 43</b>
8.	Abraham, A. P., Thomas, M. M., Mathew, V., Muthusamy, K., Yoganathan, S., Jonathan, G. E., Prabhu, K., Daniel, R. T. and Chacko, A. G. EEG lateralization and seizure outcome following peri-insular hemispherotomy for pediatric hemispheric epilepsy Child's Nervous System; 2019, 35 (7): 1189-1195 <b>Address:</b> Department of Neurological Sciences, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India Department of Neurosurgery, University Hospital of Lausanne, Lausanne, Switzerland  Objective: To determine whether preoperative non-lateralizing scalp electroencephalography (EEG) influences seizure outcome following peri-insular hemispherotomy (PIH) in pediatric hemispheric epilepsy. Methods: Retrospective data was collected on 23231212all 45 pediatric patients who underwent PIH between 2005 and 2016. All underwent a basic pre-surgical evaluation consisting of detailed history and examination, neuropsychological assessment, MRI, and EEG. SPECT/PET, fMRI, or Wada testing were done in only eight	INT	JAN TO JUN	Neurological Sciences, Neurosurgery	WOS:000472148300016 <b>Impact Factor: 1.235 (BIOXBIO-2018)</b> <b>H-Index: 76</b>

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	<p>patients. Seizure outcome was assessed using the Engel classification. Results: Among those who underwent hemispherotomy, 20 (44%) were females. Mean age at surgery was <math>8 \pm 4.3</math> years and mean duration of symptoms was <math>5.2 \pm 3.7</math> years. The most common etiologies of hemispheric epilepsy were hemiconvulsion-hemiplegia epilepsy syndrome, Rasmussen encephalitis, and post-encephalitic sequelae, together comprising 27 (60%) patients. Among the 44 patients with follow-up data (mean duration <math>48 \pm 33</math> months), seizure freedom (Engel class I) was attained by 41 (93.2%). Anti-epileptic medications were stopped or decreased in 36 (82%). Seventeen (38.6%) patients had non-lateralizing EEG. Seizure outcome was not related to lateralization of EEG activity. Conclusions: PIH provides excellent long-term seizure control in patients despite the presence of non-lateralizing epileptiform activity, although occurrence of acute postoperative seizures may be higher. Routine SPECT/PET may not be required in patients with a non-lateralizing EEG if there is good clinico-radiological concordance. © 2019, Springer-Verlag GmbH Germany, part of Springer Nature.</p>				
9.	<p>Abraham, M. A., Devasia, A. J., George, S. P., George, B. and Sebastian, T.                      Safety of Pediatric Peripheral Blood Stem Cell Harvest in Daycare Setting: An Institutional Experience                      Anesth Essays Res; 2019, 13 (1): 91-96</p> <p><b>Address:</b> Department of Anaesthesia, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Department of Haematology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>Introduction: Children serving as a donor for their siblings will require anesthesia or sedation. In view of shortage of time and space in operating room setting, peripheral blood stem cell (PBSC) harvest is performed as a daycare procedure. Aim: This study aims to find out whether performing PBSC harvest in hematology blood collection area as a daycare procedure is safe or not. Settings and Design: This secondary analysis included 164 pediatric PBSC harvest (154 pediatric donors, of which 10 had repeat harvesting done) donors, performed under anesthesia, in the Department of Hematology, between January 2009 and June 2017. Materials and Methods: Donors were examined, informed consent was obtained, and</p>	INT	JAN TO JUN	Haematology, Biostatistics	<p><b>PMID:</b>31031487  <b>PMC ID:</b>6444972  <b>Impact Factor:</b>NA  <b>H-Index:</b> NA</p>

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	adequate premedications were ensured. Induction was intravenous for cooperative donors or inhalational sevoflurane followed by intravenous maintenance infusion using either face mask or a laryngeal mask airway (LMA). During the procedure, vitals are monitored with a noninvasive monitor. Normal hemodynamics were ensured before transferring the children to the ward. Statistical Analysis: Statistical analysis was performed using SPSS 16.0 statistical software. Descriptive statistics and frequencies were used for the data description. Results: A total of 137 donors (median age of 5 years) were induced with sevoflurane and LMA was used in 84 children and face mask in 53. Twenty-seven children cooperated for intravenous induction. Various combinations of propofol, dexmedetomidine, and ketamine were used with respiratory and hemodynamic stability. The median duration of anesthesia was 250 (165-375) min. The recovery from anesthesia was smooth with a median wake-up time of 20 (5-60) min. Conclusion: This retrospective analysis demonstrates that nonoperating room anesthesia for pediatric age group for PBSC harvest can be safely and successfully accomplished outside the operation room setting by a consultant anesthesiologist.				
10.	<p>Acharya, Y., Luke, N., Haro, M. F., Rose, W., Russell, P. S. S., Oommen, A. M. and Minz, S.</p> <p>Nutritional status, cognitive achievement, and educational attainment of children aged 8-11 in rural South India                      PLoS One; 2019, 14 (10): e0223001</p> <p><b>Address:</b> Department of Health Policy and Administration, The Pennsylvania State University, Pennsylvania, United States of America.                      Department of Sociology and Criminology, The Pennsylvania State University, Pennsylvania, United States of America.                      Department of Pediatrics, <b>Christian Medical College, Vellore, India.</b>                      Department of Psychiatry, <b>Christian Medical College, Vellore, India.</b>                      Department of Community Health, <b>Christian Medical College, Vellore, India.</b></p> <p>BACKGROUND: Malnutrition among children is one of the most pressing health concerns middle- and low-income countries face today, particularly those in Sub-Saharan Africa and South Asia. Early-life malnutrition has been shown to affect long-term health and income. One hypothesized channel linking early-life malnutrition and long-term outcomes is cognitive development. However, there is limited empirical evidence on the relationship between nutritional</p>	INT	JUL TO DEC	Pediatrics, Psychiatry, Community Health	<p><b>PMID:</b>31596845  <b>PMC ID:</b>6784908  <b>Impact Factor: 2.776</b>  <b>(BIOXBIO-2018-2019)</b>  <b>H-Index: 268</b></p>



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	status and cognitive achievement in middle childhood. STUDY DESIGN: As part of the South India Community Health Study (SICHs), we collected educational attainment and anthropometric data from 1,194 children in rural Vellore district of Tamil Nadu, India, and assessed their math and reading skills. We analyzed the relationship between continuous and binary anthropometric measures of nutritional status and three measures of cognitive achievement (reading, math, and grade level), adjusting for potential confounders, using a regression framework. RESULTS: Lower height-for-age and weight-for-age and their corresponding binary measures (stunting, underweight) were associated with lower reading scores, lower math scores, and lower grade level, with the exception of the association between weight-for-age and reading, which was marginally significant. A stunted child had one-third of a grade disadvantage compared to a non-stunted counterpart, whereas an underweight child had one-fourth of a grade disadvantage compared to a non-underweight counterpart. Lower BMI-for-age was associated with grade level and marginally associated with lower math scores, and its binary measure (thinness) was marginally associated with lower math scores. CONCLUSIONS: Acute and chronic malnutrition in middle childhood were negatively associated with math scores, reading scores, and educational attainment. Our study provides new evidence that cognitive achievement during middle childhood could be an important mechanism underlying the association between early-life malnutrition and long-term wellbeing.				
11.	<p>Agarkhedkar, S., Chhatwal, J., Kompithra, R. Z., Lalwani, S. K., Narayan, A., Muninarayanawam, V., Gogtay, N., Dotter, K. and Gresset-Bourgeois, V.</p> <p>Immunogenicity and safety of an intramuscular split-virion quadrivalent inactivated influenza vaccine in individuals aged <math>\geq</math> 6 months in India</p> <p>Human Vaccines and Immunotherapeutics; 2019, 15 (4): 973-977</p> <p><b>Address:</b> Dr. D. Y. Patil Medical College, Hospital &amp; Research Centre, Pune, Maharashtra, India            Department of Pediatrics, <b>Christian Medical College</b> &amp; Hospital, Ludhiana, Punjab, India            Well Baby Immunization Clinic, Department of Pediatrics, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamil Nadu, India            Department of Pediatrics, Medical College Road, Pune, Maharashtra, India            Department of Medicine, M.S. Ramaiah Medical College and</p>	INT	JAN TO JUN	Pediatrics	<p>PMID: 30762467</p> <p>PMCID:PMC6605869</p> <p>WOS:000467847400027</p> <p>Impact Factor:2.592</p> <p>H-Index: 43</p>

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	<p>Hospitals, Bangalore, India                      Department of Community Medicine, Mandya Institute of Medical Sciences, Mandya, Karnataka, India                      Department of Clinical Pharmacology, Seth GS Medical College &amp; KEM Hospital, Mumbai, Maharashtra, India                      Medical Operations, Sanofi Pasteur, Swiftwater, PA, United States                      Global Medical Strategy, Sanofi Pasteur, Lyon, France</p> <p>A quadrivalent split-virion inactivated influenza vaccine (IIV4; Fluzone® Quadrivalent, Sanofi Pasteur) has been available in the US since 2013 for individuals aged <math>\geq 6</math> months. Here, we describe the results of an open-label, multicenter trial (WHO Universal Trial Number U1111-1143-8370) evaluating the immunogenicity and safety of IIV4 in Indian children aged 6–35 months and 3–8 years, adolescents aged 9–17 years, and adults aged <math>\geq 18</math> years (n = 100 per group). Post-vaccination hemagglutination inhibition titers for all strains in all age groups were <math>\geq 8</math> fold higher than at baseline (range, 8–51). At least 70% of participants in all age groups seroconverted or had a significant increase in titer for each strain. The most common solicited reactions were injection-site pain and tenderness, plus fever in participants 6–23 months and myalgia in older children and adolescents. All injection-site reactions and most systemic reactions were grade 1 or 2 and resolved within 3 days. Only three vaccine-related unsolicited adverse events were reported, all of which were grade 1 or 2 and transient. No immediate adverse events, adverse events leading to study discontinuation, adverse events of special interest, or serious adverse events were reported. This study showed that IIV4 was well tolerated and highly immunogenic in all age groups. This adds important data on the safety, tolerability, and immunogenicity of influenza vaccines in India. © 2019, © 2019 The Author(s). Published with license by Taylor &amp; Francis Group, LLC.</p>				
12.	<p>Agarwal D(1), Hanafi NS(2), Chippagiri S(3), Brakema EA(4), Pinnock H(5), KhooEM(2), Sheikh A(5), Liew SM(2), Ng CW(2), Isaac R(3), Chinna K(2), Ping WL(2),Husseini NB(2), Juvekar S(6); RESPIRE Collaborators.</p> <p><b>Collaborators:</b> Das D, Paul B, Campbell H, Grant E, Fletcher M, Saha S, Habib M, El Arifeen S, Huque R, Khatavkar P, Salvi S, Yusuf S, Yusuf MO, Bashir N.</p> <p>Systematic scoping review protocol of methodologies of chronic respiratorydisease surveys in low/middle-income countries.                      NPJ Prim Care Respir Med. 2019 May 8;29(1):17.</p>	INT	JAN TO JUN	RUHSA	<p><b>PMCID:</b> PMC6506487  <b>PMID:</b> 31068586  <b>WOS:</b>000469395800001  <b>Impact Factor: 1.70 (RG-2018)</b>  <b>H-Index: 16</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>doi: 10.1038/s41533-019-0129-7.</p> <p><b>Author information:</b>                      (1)Vadu Rural Health Program, KEM Hospital Research Centre, Pune, India.                      (2)Department of Primary Care Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia.                      (3)RUHSA Department, <b>Christian Medical College, Vellore, India.</b>                      (4)Department of Public Health and Primary care, Leiden University Medical Centre, Leiden, The Netherlands.                      (5)NIHR Global Health Research Unit on Respiratory Health (RESPIRE), Usher Institute of Population Health Sciences and Informatics, The University of Edinburgh, Edinburgh, UK.                      (6)Vadu Rural Health Program, KEM Hospital Research Centre, Pune, India. sanjay.juvekar@gmail.com.</p> <p>This protocol describes a systematic scoping review of chronic respiratorydisease surveys in low/middle-income countries (LMICs) undertaken as part of the Four Country ChrOnic Respiratory Disease (4CCORD) study within the NationalInstitute for Health Research Global Health Research Unit on Respiratory Health(RESPIRE). Understanding the prevalence and burden of chronic respiratory disease(CRD) underpins healthcare planning. We will systematically scope the literature to identify existing strategies (definitions/questionnaires/diagnostics/outcomes) used in surveys of CRDs in adults in low-resource settings. We will searchMEDLINE, EMBASE, ISI WoS, Global Health and WHO Global Health Library [searchterms: prevalence AND CRD (COPD, asthma) AND LMICs, from 1995], and two reviewerswill independently extract data from selected studies onto a piloted customized data extraction form. We will convene a workshop of the multidisciplinary 4CCORD research team with representatives from the RESPIRE partners (Bangladesh, India, Malaysia, Pakistan and Edinburgh) at which the findings of the scoping reviewwill be presented, discussed and interpreted. The findings will inform a futureRESPIRE 4CCORD study, which will estimate CRD burden in adults in Asian LMICs.                      DOI: 10.1038/s41533-019-0129-7</p>				
13.	<p>Agarwal, Indira and Chandran, Sukesh                      Lupus Anticoagulant-Hypoprothrombinemia Syndrome:                      Correspondence                      Indian Journal of Pediatrics; 2019, 86 (5): 483-484</p>	NAT	JUL TO DEC	Pediatrics, TMIH	<p><b>PMID:</b>                      WOS:000467598100019  <b>Impact Factor: 1.046</b>  <b>(BIOXBIO-2018)</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
					<b>H-Index: 43</b>
14.	<p>Agarwal, S., Dasgupta, R., Paul, T. V. and Thomas, N.                      Acral enlargement without growth hormone excess: A clinical conundrum                      BMJ Case Reports; 2019, 12 (4):  <b>Address:</b> Department of Endocrinology, Diabetes and Metabolism,  <b>Christian Medical College and Hospital, Vellore,</b> Tamil Nadu, India</p>	INT	JAN TO JUN	Endocrinology, Diabetes and Metabolism,	<b>PMCID</b> <b>Impact Factor: 0.22 (RG-2018)</b> <b>H-Index: 20</b>
15.	<p>Agrawal, V., Valson, A. T., Mohapatra, A., David, V. G., Alexander, S., Jacob, S., Bakthavatchalam, Y. D., Prakash, J. A. J., Balaji, V. and Varughese, S.                      Fast and furious: a retrospective study of catheter-associated bloodstream infections with internal jugular nontunneled hemodialysis catheters at a tropical center                      Clin Kidney J; 2019, 12 (5): 737-744  <b>Address:</b> Department of Nephrology, <b>Christian Medical College Hospital, Vellore,</b> Tamil Nadu, India.                      Department of Microbiology, <b>Christian Medical College Hospital, Vellore,</b> Tamil Nadu, India.                      Background: Nontunneled hemodialysis catheters (NTHCs) remain the preferred vascular access at hemodialysis (HD) initiation in developing countries. We studied the incidence, risk factors and microbiological spectrum of jugular NTHC-associated bloodstream infections (CABSIs) at a tertiary care center in South Asia. Methods: In this retrospective cohort study, all adult (&gt;=18 years) incident patients who underwent jugular NTHC insertion for HD between January 2016 and June 2017, had no prior history of temporary vascular access insertion and were followed up for &gt;=14 days were included. Results: A total of 897 patients underwent NTHC insertion during the study period and 169 patients fulfilled the inclusion criteria and contributed 7079 patient days of follow-up. CABSIs incidence was 7.34 episodes per 1000 catheter days and median infection-free survival and time to CABSIs were 96 and 24.5 days, respectively. In multivariate Cox regression analysis, immunosuppressive medication {hazard ratio [HR] 2.87 [95% confidence interval (CI) 1.09-7.55]; P = 0.033} and intravenous cefazolin use [HR 0.51 (95% CI 0.28-0.94); P = 0.031] was independently associated with CABSIs. The cumulative hazard of CABSIs was 8.3, 13.3, 17.6 and 20.9% at Weeks 1, 2, 3 and 4, respectively. Gram-negative organisms were the most common etiological agents (54.7%) and 40.3% of CABSIs were caused by drug-resistant organisms. Gram-negative and Gram-positive CABSIs were associated with neutrophil left shift and higher procalcitonin</p>	INT	JUL TO DEC	Nephrology, Microbiology	<b>PMID: 31583098</b> <b>Impact Factor: 2.975 (Website)</b> <b>H-Index: 29</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	compared with coagulase-negative staphylococcal CABSIs. Conclusion: In South Asia, NTHC-associated CABSIs occur early and are predominantly Gram negative. We hypothesize that poor hygiene practices may play a role in this phenomenon.				
16.	<p>Ahmed, S., Shenoy, P., Danda, D. and Misra, R. Sustained remission in large-Vessel vasculitis: Do they ever burn out? Indian Journal of Rheumatology; 2019, 14 (4): 304-311</p> <p>Address: Department of Clinical Immunology and Rheumatology, Kalinga Institute of Medical Sciences, KIIT University, Bhubaneswar, Odisha, India Centre for Arthritis and Rheumatism Excellence, Cochin, Kerala, India Department of Clinical Immunology and Rheumatology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India Department of Clinical Immunology and Rheumatology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, Uttar Pradesh, 226 014, India</p> <p>Drug-free remission is the ideal end point for any chronic disease. Although there are data on drug-free remission in rheumatoid arthritis and lupus, such data are limited for most vasculitis. Notably, there is less evidence for disease-modifying agents in large-vessel vasculitis (LVV). Thus, we explored the literature about sustained remission in LVV. MEDLINE and SCOPUS were searched for outcomes in LVV, and the results were manually screened for studies with at least 1-year follow-up. Isolated polymyalgia rheumatica was not included. In giant cell arteritis (GCA), histological and clinical remissions were discordant. Histology could not predict relapse rate. Various imaging techniques exhibit vessel wall inflammation in clinically quiescent disease. Relapse rate seems to correlate with the rate of steroid reduction. Relapse was rare when on higher steroid doses. Emerging evidence suggests that tocilizumab and methotrexate may prevent relapse. In Takayasu arteritis (TA), histology specimens are difficult to obtain. Remission on imaging does not mirror clinical remission. While magnetic resonance imaging and positron emission tomography are sensitive tools, these cannot differentiate smouldering disease from vascular repair. The best predictor of relapse is the extent of disease. Approximately half of the TA patients relapsed by 5 years. In patients undergoing intravascular procedures, restenosis occurred in around a third. Even for patients on anti-Tumour necrosis factor necrosis factor, sustained</p>	NAT	JUL TO DEC	Clinical Immunology and Rheumatology	SCOPUS

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	remission was in 20% only. LVV seems to be steroid dependent, and the efficacy of various steroid-sparing agents cannot be established unless the natural history of the disease is known. Both TA and GCA can have grumbling courses with relapse rates increasing over time. © 2019 Wolters Kluwer Medknow Publications. All rights reserved.				
17.	Ajay Prasad Hrishi, P. and Lionel, K. Intracranial Bleed Presenting as an Acute Cardiac Failure; Brain Heart Interaction at Its Apogee! Neurology India; 2019, 67 (4): 1159-1160 <b>Address:</b> Division of Neuroanesthesia, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala, India Department of Anesthesiology, Neuroanesthesia Unit III, <b>Christian Medical College, Vellore, Tamil Nadu, India</b> DOI: 10.4103/0028-3886.266254	NAT	JUL TO DEC	Anesthesiology	<b>PMID:31512669</b> <b>PMC Letter</b> <b>Impact Factor: 0.45</b> <b>(RG-2018)</b> <b>H-Index: 43</b>
18.	Aker, K., Stoen, R., Eikenes, L., Martinez-Biarge, M., Nakken, I., Haberg, A. K., Gibikote, S. and Thomas, N. Therapeutic hypothermia for neonatal hypoxic-ischaemic encephalopathy in India (THIN study): a randomised controlled trial Arch Dis Child Fetal Neonatal Ed; 2019, <b>Address:</b> Department of Clinical and Molecular Medicine, Norwegian University of Science and Technology, Trondheim, Norway karoline.aker@ntnu.no. Department of Paediatrics, St Olavs Hospital, Trondheim University Hospital, Trondheim, Norway. Department of Clinical and Molecular Medicine, Norwegian University of Science and Technology, Trondheim, Norway. Department of Circulation and Medical Imaging, Norwegian University of Science and Technology, Trondheim, Norway. Department of Paediatrics, Imperial College London, London, UK. Norwegian Advisory Unit for Functional MRI, Department of Radiology, St Olavs Hospital, Trondheim University Hospital, Trondheim, Norway. Department of Neuroscience, Norwegian University of Science and Technology, Trondheim, Norway. Department of Radiology, <b>Christian Medical College and Hospital Vellore</b> , Vellore, Tamil Nadu, India. Department of Neonatology, <b>Christian Medical College and Hospital Vellore</b> , Vellore, Tamil Nadu, India. OBJECTIVE: To evaluate the neuroprotective effect of therapeutic hypothermia (TH) induced by phase changing material (PCM) on MRI biomarkers in infants with hypoxic-ischaemic encephalopathy (HIE)	INT	JUL TO DEC	Radiology, Neonatology	<b>PMID: 31662328</b> <b>Impact Factor: 3.776</b> <b>(BIOXBIO-2018-2019)</b> <b>H-Index:</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>in a low-resource setting. DESIGN: Open-label randomised controlled trial. SETTING: One neonatal intensive care unit in a tertiary care centre in India. PATIENTS: 50 term/near-term infants admitted within 5 hours after birth with predefined physiological criteria and signs of moderate/severe HIE. INTERVENTIONS: Standard care (n=25) or standard care plus 72 hours of hypothermia (33.5 degrees C +/- 0.5 degrees C, n=25) induced by PCM. MAIN OUTCOME MEASURES: Primary outcome was fractional anisotropy (FA) in the posterior limb of the internal capsule (PLIC) on neonatal diffusion tensor imaging analysed according to intention to treat. RESULTS: Primary outcome was available for 22 infants (44%, 11 in each group). Diffusion tensor imaging showed significantly higher FA in the cooled than the non-cooled infants in left PLIC and several white matter tracts. After adjusting for sex, birth weight and gestational age, the mean difference in PLIC FA between groups was 0.026 (95% CI 0.004 to 0.048, p=0.023). Conventional MRI was available for 46 infants and demonstrated significantly less moderate/severe abnormalities in the cooled (n=2, 9%) than in the non-cooled (n=10, 43%) infants. There was no difference in adverse events between groups. CONCLUSIONS: This study confirmed that TH induced by PCM reduced brain injury detected on MRI in infants with moderate HIE in a neonatal intensive care unit in India. Future research should focus on optimal supportive treatment during hypothermia rather than looking at efficacy of TH in low-resource settings. TRIAL REGISTRATION NUMBER: CTRI/2013/05/003693.</p>				
19.	<p>Al Abri, R., Mathew, J. and Jeyaseelan, L. Multiple Mini-interview Consistency and Satisfactoriness for Residency Program Recruitment: Oman Evidence Oman Med J; 2019, 34 (3): 218-223</p> <p><b>Address:</b> Ear, Nose and Throat Division, Department of Surgery, College of Medicine and Health Sciences, Sultan Qaboos University, Muscat, Oman. Department of Biostatistics, <b>Christian Medical College, Vellore, India.</b></p> <p>Objectives: Standard interviews are used by most residency programs to assess non-cognitive skills, but variability in the interviewer's skills, interviewer bias, and context specificity limit reliability. We sought to investigate the consistency and satisfactoriness of the multiple mini-interview (MMI) model for resident selection into an otorhinolaryngology head and neck surgery residency program. Methods: This pilot study was done in an</p>	INT	JAN TO JUN	Biostatistics	<p><b>PMID:31110629</b> <b>PMC ID:6505339</b> <b>Impact Factor:0.79</b> <b>(RG-2018)</b> <b>H-Index: 20</b></p>

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	independent academic residency training center for 15 applicants, in seven eight-minute MMI stations with eight raters for the 2015-2016 academic year. The raters included the chief resident and education committee chairman in one of the stations. Candidates were assessed on two items: medical knowledge (two standardized case scenarios) and behavioral knowledge (personality and attitude, professionalism, communication, enthusiasm to the specialty, and English proficiency). Results: Of 15 candidates, 10 (66.7%) were female and five (33.3%) were male; five were recommended for selection, and five were kept on the waiting list. The reliability, intraclass correlation coefficient (ICC), of the scores obtained from seven items of MMI was 0.36 (95% confidence interval (CI): -0.31-0.75; $p = 0.110$ ). However, the ICC of the medical interview was 0.54 (95% CI: 0.45-0.84; $p = 0.090$ ). The correlation between behavioral items score and MMI total score was $r = 0.135$ ( $p = 0.150$ ). Conclusions: The interview evaluation/survey form given to candidates and interviewers has shown that MMI is a fair and effective tool to evaluate non-cognitive traits. Both candidates and interviewers prefer MMI to standard interviews. The MMI process for residency interviews can generate reliable interview results using only seven stations and is acceptable and preferred over standard interview modalities by residency program applicants and faculty members.				
20.	<p>Alagarasu, K., Patil, J. A., Kakade, M. B., More, A. M., Bote, M., Chowdhury, D., Seervi, M., Rajesh, N. T., Ashok, M., Anukumar, B., Abraham, A. M., Parashar, D. and Shah, P. S.</p> <p>Spatio-temporal distribution analysis of circulating genotypes of dengue virus type 1 in western and southern states of India by a one-step real-time RT-PCR assay</p> <p>Infection Genetics and Evolution; 2019, Volume: 75, Nov 2019</p> <p>Article Number: UNSP 103989</p> <p>DOI: 10.1016/j.meegid.2019.103989</p> <p><b>Author Information</b></p> <p>Reprint Address: Alagarasu, K (reprint author), Natl Inst Virol, ICMR, Dengue Chikungunya Grp, Pune 411001, Maharashtra, India.</p> <p><b>Addresses:</b></p> <p>[1] Natl Inst Virol, ICMR, Dengue Chikungunya Grp, Pune 411001, Maharashtra, India</p> <p>[2] PSG Inst Med Sci &amp; Res, Coimbatore, Tamil Nadu, India</p> <p>[3] ICMR Natl Inst Virol, Bangalore Field Unit, Bengaluru, Karnataka, India</p> <p>[4] ICMR Natl Inst Virol, Kerala Field Unit, Alappuzha, Kerala, India</p>	INT	JUL TO DEC	Clinical Virology	<p><b>WOS:000495408600054</b></p> <p><b>PMC 35593</b></p> <p><b>Impact Factor: 2.611</b></p> <p><b>(BIOXBIO – 2018/2019)</b></p> <p><b>H-Index: 74</b></p>



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>[5] <b>Christian Med Coll &amp; Hosp, Vellore</b>, Tamil Nadu, India E-mail Addresses:alagarasu.k@nic.in</p> <p>Funding75 Dengue virus type 1 (DENV-1) Asian and American/African (AM/AF) genotypes were reported to be co-circulating in southern and western states of India based on envelope (E) gene sequencing of few representative samples. The objective of the present study was to develop a one-step real-time RT-PCR to discriminate between Asian and AM/AF genotypes of DENV-1 and investigate the spatio-temporal distribution of the DENV-1 genotypes in southern and western states of India. A one-step real-time RT-PCR to discriminate the Asian and AM/AF genotypes of DENV-1 was developed and validated using 40 samples (17 Asian and 23 AM/AF), for which the envelope (E) gene sequence data was available. DENV-2, DENV-3 and DENV-4 isolates, one each and DENV negative samples (n = 17) were also tested by the assay. Additional 296 samples positive for DENV-1 from selected Southern and Western states of India were genotyped using the real-time RT-PCR assay. Among the samples used for validation, the genotyping results were concordant with sequencing results for 39 samples. In the one discordant sample which was positive for AM/AF by sequencing, the genotyping assay tested positive for both Asian and AM/AF genotype. DENV-2, DENV-3 and DENV-4 isolates were not reactive in the assay. None of the DENV negative samples were positive (sensitivity 100% and specificity 98.2%). A total of 336 samples (40 samples with sequence data and 296 samples without sequence data) were used for spatio-temporal distribution analysis. The results revealed that the Asian genotype was the predominant genotype in Tamil Nadu and Kerala, the southern states. The AM/AF genotype was the predominant genotype in Maharashtra, a western state of India. In Nashik district of Maharashtra, Asian genotype was observed in 32.6% of DENV-1 samples during 2017 while the same decreased to 7.3% during 2018. In Pune district, Asian genotype was observed in 40.0% of DENV-1 samples during 2018 only. To conclude, a one step real-time RT-PCR has been developed for discriminating Asian and AM/AF genotypes of DENV-1. This assay can act as a complement to sequencing but not a substitute and can be utilized in resource limited settings for molecular surveillance of DENV-1. DENV-1 Asian genotype was the dominant genotype in South India while, AM/AF genotype was dominant in Western India.</p>				
<b>21.</b>	Albert, Anju, Holla, Sunil, M, Henry and Prithishkumar, Ivan Anatomical Localization of Motor Entry Points of Hamstring Muscles - for Neurolysis in Hamstring Spasticity	<b>INT</b>	<b>JUL TO DEC</b>	Anatomy, Physical Medicine & Rehabilitation	<b>PMC 35591</b> <b>Impact Factor: 0.21</b> <b>(RG – 2018)</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>International Journal of Anatomy and Research; December 2019, 7(4.3):7176-7182 DOI: 10.16965/ijar.2019.336</p> <p><b>Corresponding Author:</b> Dr. Anju Mary Albert, Assistant Professor, Department of Anatomy, Believers Church Medical College, Thiruvalla – 689103, Kerala, India. Phone : 8489073711 E-Mail: <a href="mailto:dranjubalu@gmail.com">dranjubalu@gmail.com</a></p> <p>1. Assistant Professor, Department of Anatomy, Believers Church medical college, Thiruvalla, Kerala, India. 2. Retd. Professor, Department of Anatomy, <b>CMC Vellore</b>, Tamil Nadu, India. 3. Physical Medicine &amp; Rehabilitation, Professor, Department of PMR, <b>CMC Vellore</b>, Tamil Nadu, India. 4. Professor, Department of Anatomy, <b>CMC Vellore</b>, Tamil Nadu, India.</p> <p>Objectives: To study the motor entry points of hamstring muscles of lower limb and to suggest ideal sites for motor point procedures for treatment of spasticity in the above muscles. Materials and Methods: The study was done after approval from Institutional Review Board. Sample size was estimated using Population mean-Absolute precision method. A total of 10 adult lower limbs were chosen. The nerve branches to hamstring muscles were dissected up to its motor entry point. Position of proximal and distal motor entry points were marked and following variables measured: a) The length of muscle; b)Number of motor entry points; c)The distance of proximal entry point (PEP) and distal entry point (DEP) from the origin of muscle;e)The position of PEP and DEP as a fraction of length of muscle; f) Ideal site of motor entry point injection; g) Ideal site of motor point injection expressed as a percentage of muscle length. Results: The proximal and distal motor entry points of long head of Biceps Femoris were located at 35% and 51% of the total length of muscle. Most of the motor entry points of Semitendinosus were located between 43% and 48% of muscle length ie, in the third-fifth of total muscle length. Semimembranosus had its motor entry points located between 52% and 70% of the total muscle length ie, in the third-fifth and fourth-fifth of muscle length. Conclusion: The interventions done for relief of spasticity will have the best outcomes if planned at the above mentioned areas of the respective muscles. KEY WORDS: Motor entry point, Hamstring, Chemical neurolysis, Selective motor</p>				<b>H-Index:</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	fasciculotomy, Spasticity				
22.	<p>Alex, D., Raj Williams, T. I., Sachithanandham, J., Prasannakumar, S., Demosthenes, J. P., Ramalingam, V. V., Victor, P. J., Rupali, P., Fletcher, G. J. and Kannangai, R.</p> <p>Performance of a Modified In-House HIV-1 Avidity Assay among a Cohort of Newly Diagnosed HIV-1 Infected Individuals and the Effect of ART on the Maturation of HIV-1 Specific Antibodies</p> <p>Curr HIV Res; 2019, 17 (2): 134-145</p> <p><b>Address:</b> Department of Clinical Virology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, 632004, India.                      Department of Infectious Diseases, <b>Christian Medical College, Vellore, Tamil Nadu</b>, 632004, India.                      Department of Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b>, 632004, India.</p> <p>BACKGROUND: Viral kinetics impact humoral immune response to HIV; antibody avidity testing helps distinguish recent (&lt;6 months) and long-term HIV infection. This study aims to determine the frequency of recent HIV-1 infection among clients attending ICTC (Integrated Counselling and Testing Centre) using a commercial EIA, to correlate it with a modified in-house avidity assay and to study the impact of ART on anti-HIV-1 antibody maturation. METHODS: Commercial LAg Avidity EIA was used to detect antibody avidity among 117 treatment naive HIV-1 infected individuals. A second-generation HIV ELISA was modified for in-house antibody avidity testing and cutoff was set based on Receiver Operating Characteristic (ROC) analysis. Archived paired samples from 25 HIV-1 infected individuals before ART and after successful ART; samples from 7 individuals responding to ART and during virological failure were also tested by LAg Avidity EIA. RESULTS: Six individuals (5.1%) were identified as recently infected by a combination of LAg avidity assay and HIV-1 viral load testing. The modified in-house avidity assay demonstrated sensitivity and specificity of 100% and 98.2%, respectively, at AI=0.69 by ROC analysis. Median ODn values of individuals when responding to ART were significantly lower than pre-ART [4.136 (IQR 3.437- 4.827) vs 4.455 (IQR 3.748-5.120), p=0.006] whereas ODn values were higher during virological failure [4.260 (IQR 3.665 - 4.515) vs 2.868 (IQR 2.247 - 3.921), p=0.16]. CONCLUSION: This modified in-house antibody avidity assay is an inexpensive method to detect recent HIV-1 infection. ART demonstrated significant effect on HIV-1 antibody avidity owing to changes in viral kinetics.</p>	INT	JUL TO DEC	Clinical Virology, Infectious Diseases, Medicine.	<p><b>PMID:</b> 31309891</p> <p><b>Impact Factor: 1.115</b></p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 46</b></p>
23.	<p>Alexander, V., Binu, A. J. and Sathyendra, S.</p> <p>Myelomatous pleural effusion and extensive extraskelatal soft tissue</p>	INT	JUL TO DEC	Medicine	<p><b>PMID:</b> 31519718</p> <p><b>Impact Factor: 0.22</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>involvement: a rare presentation of clonal plasma cell disorders                      BMJ Case Rep; 2019, 12 (9): <b>Address:</b> Department of Medicine, Unit-3, <b>Christian Medical College and Hospital Vellore</b>, Vellore, Tamil Nadu, India.</p> <p>A 65-year-old woman presented with a history of progressive dyspnoea, left pleuritic pain, loss of weight and appetite. Previous history was significant for pulmonary tuberculosis diagnosed 10 years before. Physical examination revealed a left supraclavicular soft tissue mass with absent breath sounds over the left hemithorax. Investigations revealed hypercalcemia with albumin:globulin reversal. The bone marrow biopsy was consistent with the diagnosis of multiple myeloma (IgG). Pleural fluid analysis revealed an exudative effusion; cytology showed mature plasma cells and plasmablasts. Serum electrophoresis revealed an M band in the gamma region. Biopsy of the supraclavicular mass revealed plasma cells which were CD 138+ with Kappa light chain restriction. She was initiated on chemotherapy and is currently doing well. Myelomatous pleural effusion is a rare presentation of multiple myeloma.</p>				<b>(RG-2018)</b> <b>H-Index: 20</b>
<b>24.</b>	<p>Alexander, V., Das, S., Mangan, A. S. and Iyadurai, R.                      Acute parvovirus B19 infection presenting as rheumatoid arthritis mimic                      J Family Med Prim Care; 2019, 8 (3): 1257-1259</p> <p><b>Address:</b> Department of Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>Acute parvovirus B19 infection can cause acute symmetric polyarthritis indistinguishable from polyarticular rheumatoid arthritis. Most cases of acute arthritis due to parvovirus B19 are self-limiting and resolve with symptomatic treatment. We present a 65-year-old lady from Southern India who presented with history of fever and joint pain for 10 days. Clinical examination revealed symmetric inflammatory arthritis involving the appendicular skeleton with predominant involvement of bilateral metacarpophalangeal joints. Laboratory investigations revealed elevated inflammatory markers with negative serology for rheumatoid arthritis. Parvovirus B19 IgM antibody tested positive. She was initiated on nonsteroidal anti-inflammatory drugs with which her symptoms resolved completely.</p>	<b>NAT</b>	<b>JAN TO JUN</b>	Medicine	<b>PMID:31041286</b> <b>PMC ID:6482719</b> <b>Impact Factor: 0.21</b> <b>(RG-2018)</b> <b>H-Index: NA</b>
<b>25.</b>	<p>Alexander, V., George, T., Devarajan, G. and Zachariah, A.                      Acute myocardial infarction and haemodynamic stroke in a young patient with Bardet-Biedl syndrome                      BMJ Case Reports; 2019, 12 (4):</p>	<b>INT</b>	<b>JAN TO JUN</b>	Medicine	<b>PMC Article</b> <b>Impact Factor: 0.22</b> <b>(RG-2018)</b> <b>H-Index: 49</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> Department of Medicine, <b>Christian Medical College and Hospital, Vellore, Tamil Nadu, India</b></p> <p>A 28-year-old man diagnosed with diabetes mellitus and systemic hypertension presented with a medical history of sudden onset retrosternal discomfort followed by loss of consciousness and generalised tonic clonic seizures. Examination revealed obesity, polysyndactyly and retinal pigment dystrophy. He was diagnosed to have acute myocardial infarction and left posterior watershed infarct. He was also diagnosed to have Bardet-Biedl syndrome based on clinical features. He was managed symptomatically and is currently doing well on regular follow-up in the outpatient clinic. © BMJ Publishing Group Limited 2019.</p>				
26.	<p>Alexander, V., Koshy, M., Dasgupta, R. and Carey, R. A. Arterial thrombosis as primary presentation of endogenous Cushing's syndrome BMJ Case Reports; 2019, 12 (2): <b>Address:</b> Department of Internal Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India</b> Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College, Vellore, Tamil Nadu, India</b></p> <p>Cushing's syndrome is known to present with a characteristic set of clinical manifestations and complications, well described in literature. However, hypercoagulability remains an under recognised entity in Cushing's syndrome. A 31-year-old woman from Southern India presented with history of fever, left upper quadrant pain and progressive breathing difficulty for 3 weeks. Clinical examination revealed discriminatory features of Cushing's syndrome. Laboratory investigations showed biochemical features of endogenous ACTH-dependent Cushing's syndrome. Imaging of the abdomen revealed splenic collection, left-sided empyema and extensive arterial thrombosis. Gadolinium enhanced dynamic MRI of the pituitary gland revealed no evidence of an adenoma while a Ga-68 DOTATATE positron emission tomography CT scan ruled out an ectopic Cushing's. A diagnosis of endogenous Cushing's syndrome causing a prothrombotic state with extensive arterial thrombosis was made. She was initiated on oral anticoagulation and oral ketoconazole for medical adrenal suppression. She subsequently underwent bilateral adrenalectomy and was well at follow-up. © BMJ Publishing Group Limited 2019.</p>	INT	JAN TO JUN	Internal Medicine, Endocrinology, Diabetes and Metabolism	<p><b>PMCArticle Impact Factor: 0.22 (RG-2018)</b> <b>H-Index: 20</b></p>
27.	<p>Alexander, V., Koshy, M., Shenoy, R. and Sudarsanam, T. D. Chronic multifocal osteomyelitis: A rare presentation of melioidosis</p>	NAT	JAN TO JUN	Medicine	<p><b>PMID:30598977</b> <b>PMC ID:6259495</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>J Family Med Prim Care; 2018, 7 (5): 1133-1135</p> <p><b>Address:</b> Department of Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>A 45-year-old gentleman presented with fever, weight loss, and painful swelling of both knees. His history was significant for type 2 diabetes mellitus. Blood cultures grew Burkholderia pseudomallei, and imaging revealed osteomyelitis of bilateral distal femura and proximal tibiae, with no involvement of the joint space. He underwent debridement and was initiated on ceftazidime followed by eradication therapy with trimethoprim-sulfamethoxazole. He recovered well with no further complications. Melioidosis is a rare cause of multifocal osteomyelitis and is a differential to be considered in an appropriate clinicoepidemiological setting.</p>				<p><b>Impact Factor: 0.21 (RG-2018)</b>  <b>H-Index: NA</b></p>
28.	<p>Aljurf M(1), Weisdorf D(2), Hashmi S(3), Nassar A(4), Gluckman E(5), Mohty M(6), Rizzo D(7), Pasquini M(7), Hamadani M(7), Saber W(7), Hari P(7), Kharfan-Dabaja M(8), Majhail N(9), Gerges U(10), Hamidieh AA(11), Hussain F(12), Elhaddad A(4), Mahmoud HK(4), Tbakhi A(13), Othman TB(14), Hamladji RM(15), Bekadja MA(16), Ahmed P(17), Bazarbachi A(18), Adil S(19), Alkindi S(20), Ladeb S(14), Dennison D(20), Patel M(21), Lu P(22), Quessar AE(23), Okamoto S(24), Atsuta Y(25), Alhejazi A(26), Ayas MF(12), Ahmed SO(12), Novitzky N(27), Srivastava A(28), Seber A(29), Solh HE(12), Ghavamzadeh A(11), Confer D(7), Kodera Y(30), Hildegard G(31), Szer J(32), Horowitz MM(7), Niederwieser D(33).</p> <p>Worldwide Network for Blood and Marrow Transplantation Recommendations for Establishing a Hematopoietic Stem Cell Transplantation Program in Countries with Limited Resources, Part II: Clinical, Technical, and Socioeconomic Considerations.</p> <p>Biol Blood Marrow Transplant. 2019 Apr 17.  pii: S1083-8791(19)30235-6.  doi: 10.1016/j.bbmt.2019.04.012. [Epub ahead of print]</p> <p><b>Author information:</b>  (1)Hematology Department, King Faisal Specialist Hospital &amp; Research Centre, Riyadh, Saudi Arabia. Electronic <b>Address:</b> maljurf@kfshrc.edu.sa.  (2)University of Minnesota, Minneapolis, Minnesota.</p>	INT	JAN TO JUN	Centre for Stem Cell Research, Cytogenetics Unit	<p><b>PMID:</b> 31002990  <b>WOS:000472145600004</b>  <b>Impact Factor: 4.484 (BIOXBIO-2018)</b>  <b>H-Index: 107</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>(3)Hematology Department, King Faisal Specialist Hospital &amp; Research Centre, Riyadh, Saudi Arabia; Department of Medicine, Mayo Clinic, Rochester, Minnesota.</p> <p>(4)National Cancer Institute, Cairo University, Cairo, Egypt.</p> <p>(5)Eurocord Hôpital Saint-Louis and University Paris Diderot, Paris, France.</p> <p>(6)Hopital Saint-Antoine, Sorbonne University, Paris, France.</p> <p>(7)Center for International Blood and Marrow Transplant Research, Milwaukee, Wisconsin.</p> <p>(8)Department of Medicine, Division of Hematology-Oncology and Blood and Marrow Transplantation program, Mayo Clinic, Jacksonville, Florida.</p> <p>(9)Blood and Marrow Transplant Program, Cleveland Clinic, Cleveland, Ohio.</p> <p>(10)Hematologic Malignancies &amp; Bone Marrow Transplant, Department of Medical Oncology, New York-Presbyterian Hospital/Weill Cornell Medical Center, New York, New York.</p> <p>(11)Hematology, Oncology and SCT Research Center, Tehran University of Medical Sciences, Tehran, Iran.</p> <p>(12)Hematology Department, King Faisal Specialist Hospital &amp; Research Centre, Riyadh, Saudi Arabia.</p> <p>(13)King Hussein Cancer Center, Amman, Jordan.</p> <p>(14)Center National de Greffe de Moelle Osseuse de Tunis, Tunis, Tunisia.</p> <p>(15)Pierre and Marie Curie Center, Algiers, Algeria.</p> <p>(16)University Hospital Establishment 1st Nov, Oran, Algeria.</p> <p>(17)Armed Forces Institute of Transplantation, Rawalpindi, Pakistan.</p> <p>(18)Department of Hematology/Oncology, American University of Beirut Medical Center, Beirut, Lebanon.</p> <p>(19)Aga Khan University Hospital, Karachi, Pakistan.</p> <p>(20)Sultan Qaboos University Hospital, Muscat, Oman.</p> <p>(21)University of the Witwatersrand, Johannesburg, South Africa.</p> <p>(22)Hebei Yanda Ludaopei Hospital, Langfang, China.</p> <p>(23)Hôpital 20 Août, Casablanca, Morocco.</p> <p>(24)Japanese Data Center for Hematopoietic Cell Transplantation, Nagoya, Japan.</p> <p>(25)Keio University School of Medicine, Tokyo, Japan.</p> <p>(26)King Abdulaziz Medical City, NGHHA, Riyadh, Saudi Arabia.</p> <p>(27)African Blood &amp; Marrow Transplantation Society, South Africa.</p> <p>(28)<b>Christian Medical College and Hospital, Bagayam, Vellore, India.</b></p> <p>(29)Instituto de Oncologia Pediatrica, Sao Paulo, Brazil.</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>(30)Center for Hematopoietic Stem Cell Transplantation, Aichi Medical University Hospital, Nagakute, Japan.                      (31)Medical University of Graz, Graz, Austria.                      (32)Department of Clinical Haematology, Royal Melbourne Hospital, Melbourne, Australia.                      (33)Center for Hematopoietic Stem Cell Transplantation, Aichi Medical University Hospital, Nagakute, Japan; Department of Hematology and Medical Oncology, University Hospital, Leipzig, Germany.</p> <p>The development of hematopoietic stem cell transplantation (HSCT) programs can face significant challenges in most developing countries because such endeavors must compete with other government health care priorities, including the delivery of basic services. Although this is may be a limiting factor, these countries should prioritize development of the needed expertise to offer state-of-the-art treatments, including transplantation, by providing financial, technological, legal, ethical, and other needed support. This would prove beneficial in providing successful programs customized to the needs of their population and potentially provide long-term cost savings by circumventing the need for their citizens to seek care abroad. The costs of establishing an HSCT program and the costs of the HSCT procedure itself can be substantial barriers in developing countries. In addition, socioeconomic factors intrinsic to specific countries can influence access to HSCT, patient eligibility for HSCT, and timely utilization of HSCT center capabilities. This report describes recommendations from the Worldwide Network for Blood and Marrow Transplantation for establishing HSCT programs, with a specific focus on developing countries, and identifies challenges and opportunities for providing this specialized procedure in resource-constrained settings. Copyright © 2019 American Society for Blood and Marrow Transplantation. All rights reserved.                      DOI: 10.1016/j.bbmt.2019.04.012</p>				
29.	<p>Al-Zaabi, K., Al-Adawi, S., Jaju, S., Jeyaseelan, L., Al-Sibani, N., Al-Alawi, M., Al-Abri, M. and Al-Abri, R.                      Effects of an Adenotonsillectomy on the Cognitive and Behavioural Function of Children Who Snore: A naturalistic observational study Sultan Qaboos Univ Med J; 2018, 18 (4): e455-e460</p> <p><b>Address:</b> Department of Surgery, Sultan Qaboos University Hospital, Sultan Qaboos University, Muscat, Oman.                      Department of Behavioural Medicine, College of Medicine &amp; Health Sciences, Sultan Qaboos University, Muscat, Oman.</p>	INT	JAN TO JUN	Biostatistics	<p><b>PMID:30988963</b>  <b>PMC ID:6443270</b></p> <p><b>Impact Factor: 0.76 (RG-2018)</b>  <b>H-Index: 20</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Family Medicine &amp; Public Health, College of Medicine &amp; Health Sciences, Sultan Qaboos University, Muscat, Oman.                      Department of Biostatistics, <b>Christian Medical College, Vellore, India.</b>                      Department of Behavioural Medicine, Sultan Qaboos University Hospital, Sultan Qaboos University, Muscat, Oman.                      Department of Physiology, College of Medicine &amp; Health Sciences, Sultan Qaboos University, Muscat, Oman.                      Department of Surgery, College of Medicine &amp; Health Sciences, Sultan Qaboos University, Muscat, Oman.</p> <p>Objectives: This study aimed to evaluate cognitive and behavioural changes among 9-14-year-old Omani children with obstructive sleep apnoea (OSA) after an adenotonsillectomy (AT). Methods: This naturalistic observational study was conducted at the Sultan Qaboos University Hospital, Muscat, Oman, between January 2012 and December 2014. Omani children with adenotonsillar hypertrophy (ATH) underwent overnight polysomnography and those with confirmed OSA were scheduled for an AT. Cognitive and behavioural evaluations were performed using standardised instruments at baseline prior to the procedure and three months afterwards. Results: A total of 37 children were included in the study, of which 24 (65%) were male and 13 (35%) were female. The mean age of the males was 11.4 +/- 1.9 years, while that of the females was 11.1 +/- 1.5 years. Following the AT, there was a significant reduction of 56% in mean apnoea-hypopnoea index (AHI) score (2.36 +/- 4.88 versus 5.37 +/- 7.17; P &lt;0.01). There was also a significant positive reduction in OSA indices, including oxygen desaturation index (78%), number of desaturations (68%) and number of obstructive apnoea incidents (74%; P &lt;0.01 each). Significant improvements were noted in neurocognitive function, including attention/concentration (42%), verbal fluency (92%), learning/recall (38%), executive function (52%) and general intellectual ability (33%; P &lt;0.01 each). There was a significant decrease of 21% in both mean inattention and hyperactivity scores (P &lt;0.01 each). Conclusion: These results demonstrate the effectiveness of an AT in improving cognitive function and attention deficit hyperactivity disorder-like symptoms among children with ATH-caused OSA. Such changes can be observed as early as three months after the procedure.</p>				
30.	Amirtham, Soosai Manickam, Ozbey, Ozlem, Kachro, Upasana, Ramasamy, Boopalan and Vinod, Elizabeth	INT	JUL TO DEC	Anatomy	WOS:000481315700001 <b>Impact Factor: 1.813</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Optimization of immunohistochemical detection of collagen type II in osteochondral sections by comparing decalcification and antigen retrieval agent combinations Clinical Anatomy; 2019,</p> <p>Bone containing tissues such as osteochondral joint are resistant to routine tissue processing, therefore require decalcification. This technique causes removal of mineral salts, but in the process may macerate the organic tissue, hence the need for tissue fixation. Such severe processing demands careful antigen retrieval to necessitate optimal staining. The aim of our study was to compare five different antigen retrieval protocols (heat retrieval and protein digestion) following decalcification of rabbit knee joints using two different techniques (20% formic acid and 10% ethylenediamine-tetra acetic acid: EDTA). Osteochondral sections were compared based on time required for decalcification, ease of sectioning, morphological integrity using HE staining and antigen preservation (Collagen type II) using immunohistochemistry. The two decalcification solutions did not impair the tissue morphology and ease of sectioning. Joints processed with formic acid decalcified four times faster than EDTA. Among the five antigen retrieval approaches, maximal collagen II uptake with minimal nonspecific staining was found with protein digestion (pronase and hyaluronidase) in both formic acid and EDTA sections. For osteo-chondral sections, we recommend using 10% EDTA for decalcification and pronase plus hyaluronidase for antigen retrieval if maintaining tissue morphology is crucial, whereas if time is of the essence, 20% FA with pronase plus hyaluronidase is the faster option while still preserving structural integrity. Clin. Anat., 2019. (c) 2019 Wiley Periodicals, Inc.</p>				(BIOXBIO – 2018-2019) H-Index:62
31.	<p>Amladi, A. U., Abirami, B., Devi, S. M., Sudarsanam, T. D., Kandasamy, S., Kekre, N., Veeraraghavan, B. and Sahni, R. D. Susceptibility profile, resistance mechanisms &amp; efficacy ratios of fosfomycin, nitrofurantoin &amp; colistin for carbapenem-resistant Enterobacteriaceae causing urinary tract infections Indian Journal of Medical Research; 2019, 149 (2): 185-191</p> <p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632 004, India Department of Internal Medicine, <b>Christian Medical College, Vellore, India</b> Department of Intensive Care, <b>Christian Medical College, Vellore, India</b> Department of Urology, <b>Christian Medical College, Vellore, India</b></p>	NAT	JAN TO JUN	Clinical Microbiology, Internal Medicine, Intensive Care, Urology	<p><b>PMCArticle Impact Factor: 1.508</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 75</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Background &amp; objectives: The escalation in carbapenem resistance among Enterobacteriaceae has resulted in a lack of effective therapeutic alternatives. Older antimicrobials, fosfomycin, nitrofurantoin and colistin for urinary tract infections (UTIs) caused by carbapenem-resistant Enterobacteriaceae (CRE) may be effective treatment options. The objectives of this study were to evaluate the utility of fosfomycin, nitrofurantoin and colistin in treating UTI caused by CRE and molecular characterization of the plasmid-mediated carbapenem resistance mechanisms. Methods: Consecutive, non-duplicate isolates of CR Escherichia coli and Klebsiella spp. from urine cultures were included (n=150). Minimum inhibitory concentrations (MIC) were determined by E-test (fosfomycin and nitrofurantoin) and broth microdilution (colistin). Efficacy ratios were derived by dividing susceptibility breakpoints by observed MIC values of the drugs for the isolates. Isolates were screened for genes coding for carbapenemases using multiplex PCR. Fosfomycin, nitrofurantoin and colistin-resistant isolates were screened for plasmid-borne resistance genes fos A3, oqx AB and mcr-1, respectively using PCR. Results: Among E. coli, 98.9, 56 and 95 per cent isolates were susceptible to fosfomycin, nitrofurantoin and colistin, respectively, while 94 and 85 per cent of Klebsiella spp. were susceptible to fosfomycin and colistin, respectively. The efficacy ratios indicated fosfomycin as the drug of choice for UTI caused by CR E. coli and Klebsiella spp., followed by colistin. The blaNDM gene was most common, followed by blaOXA48-like. Plasmid-borne genes encoding resistance to fosfomycin, nitrofurantoin and colistin were absent. Interpretation &amp; conclusions: With increasing resistance against the current treatment options, older drugs may emerge as effective options. Molecular screening of resistant isolates is essential to prevent the spread of plasmid-borne resistance against these drugs. © 2019 Indian Journal of Medical Research.</p>				
32.	<p>Amladi, A., Devanga Ragupathi, N. K., Vasudevan, K., Venkatesan, M., Anandan, S. and Veeraraghavan, B.                      First report of Burkholderia pseudomallei ST412 and ST734 clones harbouring blaOXA-57 but susceptible to imipenem in India                      New Microbes New Infect; 2019, 32 100613  <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore,</b> 632 004, Tamil Nadu, India.                      Melioidosis caused by Burkholderia pseudomallei has become an important clinical threat, especially in Northern Australia and Southeast Asia. However, the genome information on this pathogen is limited. B. pseudomallei isolates identified from bloodstream infections from inpatients were subjected to whole-genome</p>	INT	JUL TO DEC	Clinical Microbiology	<p><b>PMID:</b>31737280  <b>PMC ID:</b>6849412  <b>Impact Factor: 0.630</b>  <b>(Journal Website)</b>  <b>H-Index:17</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	sequencing by IonTorrent PGM and MinION Oxford Nanopore sequencing technologies. Highly accurate complete genomes of two strains, VB3253 and VB2514, were obtained by a hybrid genome assembly method using both short and long DNA reads. Both isolates carried blaPenI and carbapenemase-encoding blaOXA-57 genes, although the isolates were susceptible to imipenem by E-test method with MIC 1 mug/mL. Multiple IS family transposases specific for all non-fermenting Gram-negative bacteria (NFGNBs)-especially IS3 and IS5, which facilitate mobilization of extended-spectrum beta-lactamase (ESBL) and carbapenemase genes-were carried in these genomes. This further adds to the complexity of gene transmission. These IS families were identified only upon hybrid genome assembly and would otherwise be missed.				
33.	<p>Anand Mariadoss, A. V., Vinayagam, R., Vijayakumar, S., Balupillai, A., Herbert, F. J., Kumar, S., Ghidan, A. Y., Al-Antary, T. M. and David, E.</p> <p>Green synthesis, characterization and antibacterial activity of silver nanoparticles by Malus domestica and its cytotoxic effect on (MCF-7) cell line Microb Pathog; 2019, 103609</p> <p><b>Address:</b> Department of Biotechnology, Thiruvalluvar University, Vellore, 632 115, Tamil Nadu, India. Electronic <b>Address:</b> mavijaibt@gmail.com. Department of Biotechnology, Thiruvalluvar University, Vellore, 632 115, Tamil Nadu, India. Centre for Stem Cell Research, <b>Christian Medical College, Bagayam</b>, Vellore, Tamil Nadu, 632002, India. Department of Plant Protection, School of Agriculture, The University of Jordan, Amman, 11942, Jordan. Department of Biotechnology, Thiruvalluvar University, Vellore, 632 115, Tamil Nadu, India. Electronic <b>Address:</b> ernestdavid2009@gmail.com.</p> <p>This article reports the utilization of Malus domestica for the synthesis of silver nanoparticles (AgNPs) with cytotoxic activity against the Michigan Cancer Foundation-7 (MCF-7) cell line as well as their antibacterial and radical scavenging potential. The biosynthesized AgNPs were confirmed using various analytical characterization techniques. The cytotoxic effect of Malus domestica-AgNPs (M.d-AgNPs) was studied by MTT assay and scavenging efficacy was assessed by DPPH, nitric oxide radical and phosphomolybdate assays. Furthermore, green synthesized</p>	NAT	JAN TO JUN	Centre for Stem Cell Research	<p><b>PMID:31247255</b> <b>PMC</b> <b>Impact Factor: 2.332</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 64</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	nanoparticles were evaluated for their antibacterial activity against multidrug resistant-clinical isolates. M.d-AgNPs were observed to be almost spherical in shape with an average diameter from 50 to 107.3nm as assessed by TEM and DLS. M.d-AgNPs revealed the dose-dependent antioxidant activity and antimicrobial activity against multidrug-resistant bacterial strain viz. Enterobacter aerogenes, Klebsiella pneumoniae, Pseudomonas aeruginosa, and Escherichia coli. Also, in vitro studies revealed dose-dependent cytotoxic effects of M.d-AgNPs treated MCF-7cell line. The data strongly suggest that M.d-AgNPs had a potential antioxidant, antimicrobial and cytotoxicity activity.				
34.	<p>Anand, R. and Sankaran, P. S. Factors influencing the career preferences of medical students and interns: a cross-sectional, questionnaire-based survey from India Journal of educational evaluation for health professions; 2019, 16 12</p> <p><b>Address:</b> Department of Biochemistry, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632002, India</p> <p>PURPOSE: The study aimed to identify the motivational factors and demographic variables influencing the career preferences of medical students in India. METHODS: We conducted a questionnaire-based survey at <b>Christian Medical College, Vellore, India</b>. The participants were 368 of the 460 medical students and interns enrolled at the institution from October 2015 to August 2016. We designed the questionnaire to collect demographic data, students' preferences for career specialties, and the motivational factors influencing them. Then, we analyzed the influence of these factors and demographic variables on career preferences using regression analysis. RESULTS: Of the 368 respondents, 356 (96.7%) expressed their intention to pursue a residency program after the MBBS program, and about two-thirds indicated their preference to do so in India. The specialties most preferred by students were general surgery, general medicine (internal medicine), and pediatrics, while the least preferred were anatomy, obstetrics and gynecology, and community medicine. Factor analysis yielded three motivational factors, which we named 'personal growth,' 'professional growth,' and 'personal satisfaction' based on the items loaded in each. The motivational factors were predicted by demographic variables (gender, geographical background, current stage in the MBBS program, and the presence of relatives in the health professions). Demographic variables and the motivational factors also had significant influences on career preferences. CONCLUSIONS: This</p>	NAT	JAN TO JUN	Biochemistry	<p><b>PMCArticle Impact Factor: 1.07 (RG-2018)</b> <b>H-Index: 5</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	study provides insights into the motivational factors that influence the career preferences of Indian medical students and interns. A robust longitudinal study would be required to study intra-individual variations in preferences and the persistence of choices.				
35.	<p>Andrews, J. R., Baker, S., Marks, F., Alsan, M., Garrett, D., Gellin, B. G., Saha, S. K., Qamar, F. N., Yousafzai, M. T., Bogoch, I. I., Antillon, M., Pitzer, V. E., Kim, J. H., John, J., Gauld, J., Mogasale, V., Ryan, E. T., Luby, S. P. and Lo, N. C.</p> <p>Typhoid conjugate vaccines: a new tool in the fight against antimicrobial resistance The Lancet Infectious Diseases; 2019, 19 (1): e26-e30</p> <p><b>Address:</b> Division of Infectious Diseases and Geographic Medicine, Stanford University School of Medicine, Stanford, CA, United States Department of Medicine, University of Cambridge, Cambridge, United Kingdom Epidemiology Unit, International Vaccine Institute, Seoul, South Korea Center for Health Policy and the Center for Primary Care and Outcomes Research, Stanford University, Stanford, CA, United States Sabin Vaccine Institute, Washington, DC, United States Department of Microbiology, Bangladesh Institute of Child Health, Dhaka Shishu Hospital, Dhaka, Bangladesh Department of Paediatrics and Child Health, Aga Khan University, Karachi, Pakistan Department of Medicine, University of Toronto, Toronto, Canada Center for Health Economics Research and Modeling Infectious Diseases, University of Antwerp, Belgium Department of Epidemiology of Microbial Diseases, Yale School of Public Health, New Haven, CT, United States Department of Community Health, <b>Christian Medical College, Vellore, Tamil Nadu, India</b> Institute for Disease Modeling, Bellevue, WA, United States Policy and Economic Research Department, Development and Delivery Unit, International Vaccine Institute, Seoul, South Korea Division of Infectious Diseases, Massachusetts General Hospital, Harvard University, Boston, MA, United States</p> <p>Typhoid fever is an acute systemic infectious disease responsible for an estimated 12–20 million illnesses and over 150 000 deaths annually. In March, 2018, a new recommendation was issued by WHO for the programmatic use of typhoid conjugate vaccines in</p>	INT	JAN TO JUN	Community Health	<p><b>WOS:000453926700004</b> <b>PMC</b> <b>Impact Factor: 25.148</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 201</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>endemic countries. Health economic analyses of typhoid vaccines have informed funding decisions and national policies regarding vaccine rollout. However, by focusing only on averted typhoid cases and their associated costs, traditional cost-effectiveness analyses might underestimate crucial benefits of typhoid vaccination programmes, because the potential effect of typhoid vaccines on the treatment of patients with non-specific acute febrile illnesses is not considered. For every true case of typhoid fever, three to 25 patients without typhoid disease are treated with antimicrobials unnecessarily, conservatively amounting to more than 50 million prescriptions per year. Antimicrobials for suspected typhoid might therefore be an important selective pressure for the emergence and spread of antimicrobial resistance globally. We propose that large-scale, more aggressive typhoid vaccination programmes—including catch-up campaigns in children up to 15 years of age, and vaccination in lower incidence settings—have the potential to reduce the overuse of antimicrobials and thereby reduce antimicrobial resistance in many bacterial pathogens. Funding bodies and national governments must therefore consider the potential for broad reductions in antimicrobial use and resistance in decisions related to the rollout of typhoid conjugate vaccines. © 2019 Elsevier Ltd</p>				
36.	<p>Anisha Mathew, D. J. Christopher, T. Balamugesh, Richa Gupta Correlation between 1 min sit to stand test and six minute walk test, spirometry parameters and health related quality of life in patients with chronic obstructive pulmonary disease <u>Lung India</u>. 2019 Nov; 36(Suppl 3): S94.</p> <p><b>Christian Medical College, Vellore</b>, Tamil Nadu, India. E-mail: <a href="mailto:anishamathewp@gmail.com">anishamathewp@gmail.com</a></p> <p><b>Aim and Objectives:</b> To study the correlation between One Minute Sit to Stand test (OMSTST) and Six Minute Walk test (6MWT), spirometry parameters and health related quality of life in patients with COPD. To determine reference values for One Minute Sit to Stand test (OMSTST) in healthy Indian adult population. <b>Methods:</b> This was a cross-sectional study conducted in CMC, Vellore from January 2018 to July 2019. Patients diagnosed with COPD were recruited and underwent OMSTST, six minute walk test and spirometry. Healthy bystanders were also enrolled in the study and underwent OMSTST. <b>Observation:</b> 103 COPD patients and 206 healthy individuals were included. Significant correlation was observed in COPD patients between number of repetitions in</p>	NAT	JUL TO DEC	Respiratory Medicine	<p><b>PMCID: PMC6891926</b> <b>Impact Factor: 0.58</b> <b>(RG-2018)</b> <b>H-Index: 18</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	OMSTST and six minute walk distance ( $r=0.495$ ), desaturation in OMSTST and six minute walk test ( $r=0.627$ ), repetition saturation product of OMSTST and distance saturation product of 6MWT ( $r=0.508$ ), the number of repetition of OMSTST and quality of life assessed by CAT questionnaire ( $r=-0.353$ ). The equation for reference values in healthy population was calculated by linear regression analysis. Number of repetitions in OMSTST = $43.325 - (\text{age} \times 0.117) - (\text{BMI} \times 0.397)$ . <b>Conclusion:</b> One minute sit to stand test can be used as an alternative for six minute walk test to assess the functional capacity of patients with COPD. Using the reference equation, the predicted value for all individuals can be calculated.				
37.	<p>Ann Mary Thomas, Sophy Korula, Leenath Thomas, Santhanam Sridhar, John Mathai, Julie Hephzibah                      Neonatal Cholestasis Syndrome: Aetiological Spectrum and Outcome Analysis- Single Center Study                      Journal of Clinical and Diagnostic Research; 2019, 13 (11): SC01-SC04</p> <p><b>PARTICULARS OF CONTRIBUTORS:</b></p> <ol style="list-style-type: none"> <li>1. Paediatric Trainee, Department of Paediatric Unit 1, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> <li>2. Associate Professor, Department of Paediatric Unit 1, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> <li>3. Assistant Professor, Department of Paediatric Unit 1, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> <li>4. Professor, Department of Neonatology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> <li>5. Professor, Department of Paediatric Surgery, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> <li>6. Professor, Department of Nuclear Medicine, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> </ol> <p>Introduction: Neonatal Cholestasis syndrome is a common condition among infants that needs to be evaluated in detail to establish aetiology. Although Idiopathic neonatal hepatitis is common, clear outcome for same has not been established. Aim: To assess the clinical profile, aetiological spectrum of infants with Neonatal Cholestasis Syndrome (NCS) followed-up over 10 years. Materials and Methods: It was a retrospective study; data were collected from online records Jan 2008-Dec 2018. Total of 300 infants (210 males) were studied. Clinical outcome was assessed in non-surgical patients with a minimum of 6 month follow-up period. Chi-square test was used for statistical analysis. Results: Intrahepatic NCS was identified</p>	NAT	JUL TO DEC	Paediatrics Unit I, Neonatology, Paediatric Surgery, Nuclear Medicine	<p>PMC 35621  <b>Impact Factor: 0.41 (RG - 2018)</b>  <b>H-Index: 28</b></p>



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	in 232 (77%)-majority 164 (54.6%) were idiopathic hepatitis. Remaining 68 (23%) had Extrahepatic NCS and Biliary Atresia (BA) was confirmed in 64 (21.3%). Mean age of presentation was 2.4 months in the intrahepatic group and 3 months in Extrahepatic NCS. All underwent blood tests and ultrasound. Liver biopsy was done in 72 (24%) -35 neonatal hepatitis (2 with cirrhosis), 24 BA, 11 Progressive Familial Intrahepatic Cholestasis, 1 bile duct paucity. All received multivitamin therapy till 1 year of age. Follow-up analysis done in 95 subjects at a mean age of 23.5 months (range 6-90) showed significant improvement in growth (weight centile from 8.9 to 27.7 and height centile from 16.7 to 22.4) and in liver function. Hepatobiliary scan had a sensitivity of 90% in diagnosing Biliary Atresia. Conclusion: Idiopathic neonatal hepatitis is the most common aetiology in Neonatal hepatitis. Intrahepatic NCS has good outcome in terms of growth and normalisation of liver function.				
38.	Antony, G., Kamleshkumar, H., Verma, S., Kapoor, N., Asha, H. S., Peter, D. and Paul, T. V. Visual vignette Endocrine Practice; 2019, 25 (3): 293  <b>Address:</b> Departments of Endocrinology, Vellore, Tamil Nadu 632004, India Departments of Radiodiagnosis, Vellore, Tamil Nadu 632004, India Departments of Dermatology, Department of Endocrinology, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India	NAT	JAN TO JUN	Dermatology, Department of Endocrinology	<b>WOS:000462349700014</b> <b>Impact Factor: 3.805</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 77</b>
39.	Anuradha, B. Screen time Journal of Tropical Pediatrics; 2019, 65 (2): 105-106  <b>Address:</b> Department of Paediatrics, <b>Christian Medical College, Vellore, India</b>	NAT	JAN TO JUN	Paediatrics	<b>WOS:000465121400001</b> <b>PMC</b> <b>Impact Factor: 1.187</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 47</b>
40.	Armstrong, L. J., Cynthia, S., George, M. and Zachariah, A. Comparing community and hospital data of snakebite in North Bihar: a community incidence survey and a parallel hospital-based clinical study Trop Doct; 2019, 49 (4): 285-292 <b>Address:</b> Consultant, Epidemiology and Research Department, Duncan Hospital, Raxaul, East Champaran District, Bihar, India. Consultant, Community Health Department, Duncan Hospital, Raxaul, East Champaran District, Bihar, India. Research Project Manager, Epidemiology and Research Department, Duncan Hospital, Raxaul, East Champaran District, Bihar, India.	INT	JUL TO DEC	Infectious Diseases, Medicine	<b>PMID: 31354064</b> <b>Impact Factor: 0.591</b> <b>(BIOXBIO – 2018/2019)</b> <b>H-Index: 31</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Professor, Department of Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>In Bihar, an estimated 4500 snakebite deaths occur per year, but community data are scarce. Using a multi-stage cluster design, 4159 households were interviewed across six Community Development (CD) blocks in North Bihar, identifying 206 snakebites and 254 deaths between the Chhaat festivals of 2014 and 2015. Concurrently, 357 snakebite victims presented to Duncan Hospital from this area. None of the 254 verbal autopsies were attributed to snakebite envenoming. The annual community snakebite incidence was 643/100,000 person-years (95% confidence interval [CI] = 556-730) with peak incidence in women aged 30-39 years at 1323/100,000 person-years (95% CI = 837-1809). Two-thirds of snakebite victims attended traditional healers first for help (95% CI = 59.9-73.2). The community envenomation rate was 24.9/100,000 person-years (95% CI = 7.6-42.2). The hospital envenomation rate was 4.6% (95% CI = 3.5-5.7). Of the hospital snakebite deaths, 91% (10/11) were aged &lt;16 years. Only 4.6% (95% CI = 4.1-5.1) of snakebite victims from this area presented at the local hospital.</p>				
41.	<p>Arockiaraj, J., Karthik, R., Michael, J. S., Amritanand, R., David, K. S., Krishnan, V. and Sundararaj, G. D.</p> <p>'Need of the hour': Early diagnosis and management of multidrug resistant tuberculosis of the spine: An analysis of 30 patients from a "high multidrug resistant tuberculosis burden" country Asian Spine Journal; 2019, 13 (2): 265-271</p> <p><b>Address:</b> Spinal Disorder Surgery Unit, Department of Orthopaedics, <b>Christian Medical College and Hospital, Vellore, India</b> Infectious Diseases Unit, Department of Medicine, <b>Christian Medical College and Hospital, Vellore, India</b> Department of Microbiology, <b>Christian Medical College and Hospital, Vellore, India</b></p> <p>Study Design: Retrospective study. Purpose: To report the prevalence of patients with multidrug-resistant (MDR) tubercular spondylodiscitis and their outcomes. Additionally, to assess the role of Xpert MTB/RIF assay in early detection of MDR tuberculosis. Overview of Literature: MDR tuberculosis is increasing globally. The World Health Organization (WHO) has strongly recommended Xpert MTB/RIF assay for early detection of tuberculosis. Methods: From 2006 to 2015, a retrospective study was conducted on patients treated for MDR tuberculosis of the spine. Only patients whose</p>	INT	JAN TO JUN	Spinal Disorder Surgery Unit, Infectious Diseases, Microbiology	<p><b>PMCArticle Impact Factor: 0.82 (RG-2018)</b> <b>H-Index: 20</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>diagnosis was confirmed using either culture and/or the Xpert MTB/RIF assay were included. Diagnostic method, treatment regimen, time taken to initiate second-line antituberculosis treatment (ATT), drug-related complications, and cost of medications were analyzed. All patients with MDR were treated according to the WHO recommendations for 2 years. The outcome parameters analyzed included clinical, biochemical, and radiological criteria to assess healing status. Results: From 2006 to 2015, a total of 730 patients were treated for tubercular spondylodiscitis. Of those, 36 had MDR tubercular spondylitis (prevalence, 4.9%), and three had extremely drug resistant tubercular spondylitis (prevalence, 0.4%). In this study, 30 patients, with a mean age of 29 years and a mean post-treatment follow-up of 24 months, were enrolled. The majority (77%) had secondary MDR, 17 (56%) underwent surgery, and 26 (87%) completed treatment for 2 years and were healed. Drug-related complications (33%) included ototoxicity, hypothyroidism, and hyperpigmentation of the skin. The average time taken for initiation of second line ATT for MDR patients with Xpert MTB/RIF assay as the diagnostic tool was 18 days, when compared to patients for whom the assay was not available which was 243 days. Conclusions: The prevalence of MDR tubercular spondylodiscitis was 4.9%. In total, 87% of patients were healed with adequate treatment. The sensitivity and specificity of the Xpert MTB/RIF assay to detect MDR was 100% and 92.3%, respectively. © 2019 by Korean Society of Spine Surgery.</p>				
42.	<p>Arockiaraj, J., Robert, M., Rose, W., Amritanand, R., David, K. S. and Krishnan, V.                      Early detection and analysis of children with multidrug-resistant tuberculosis of the spine                      Asian Spine Journal; 2019, 13 (1): 77-85</p> <p><b>Address:</b> Spinal Disorder Surgery Unit, Department of Orthopaedics, <b>Christian Medical College and Hospital, Vellore, India</b>                      Department of Paediatrics, <b>Christian Medical College and Hospital, Vellore, India</b></p> <p>Study Design: Retrospective case series. Purpose: The aim of the study is to report the clinical characteristics, early diagnosis, management, and outcome of children with multidrug-resistant (MDR) tubercular spondylodiscitis and to assess the early detection of rifampicin resistance using the Xpert MTB/ RIF assay. Overview of</p>	INT	JAN TO JUN	Spinal Disorder Surgery Unit, Paediatrics	<p><b>PMC Article Impact Factor: 0.82 (RG-2018)</b>  <b>H-Index: 20</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Literature: MDR tuberculosis is on the rise, especially in developing countries. The incidence rate of MDR has been reported as 8.9% in children. Methods: A retrospective study of children aged &lt; 15 years of age who were diagnosed and treated for MDR tuberculosis of the spine was conducted. Confirmed cases of MDR tuberculosis and patients who had completed at least 18 months of second-line antituberculous treatment (ATT) were included. Children were treated with ATT for 24 months according to drug-susceptibility-test results. Outcome measures included both clinical and radiological measures. Clinical measures included pain, neurological status, and return to school. Radiological measures included kyphosis correction and healing status. Results: Six children with a mean age of 10 years were enrolled. The mean follow-up period was 12 months. All the children had previous history of treatment with first-line ATT, with an average of 13.6 months before presentation. Clinically, 50% (3/6 children) had psoas abscesses and 50% had spinal deformities. Radiologically, 50% (three of six children) had multicentric involvement. Three children underwent surgical decompression; two needed posterior stabilization with pedicle screws posteriorly followed by anterior column reconstruction. Early diagnosis of MDR was achieved in 83.3% (five of six children) with Xpert MTB/RIF assay. A total of 83.3% of the children were cured of the disease. Conclusions: Xpert MTB/RIF assay confers the advantage of early detection, with initiation of MDR drugs within an average of 10.5 days from presentation. The cost of second-line ATT drugs was 30 times higher than that of first-line ATT. © 2019 by Korean Society of Spine Surgery.</p>				
43.	<p>Arokia Vijaya Anand, M., Ramachandran, V., Xu, B., Karthikumar, V., Vijayalakshmi, S., Shalini, V., Sandya Rani, B., Sadiq, A. M. and Ernest, D.</p> <p>Phloretin loaded chitosan nanoparticles enhance the antioxidants and apoptotic mechanisms in DMBA induced experimental carcinogenesis</p> <p>Chemico-Biological Interactions; 2019, 308 11-19</p> <p><b>Address:</b> Department of Biotechnology, Thiruvalluvar University, Serkadu, Vellore, Tamilnadu 632 115, India                      Food Science and Technology Program, Beijing Normal University-Hong Kong Baptist University, United International College, Zhuhai, 519087, China                      Department of Pharmacology and Therapeutics, College of Medicine and Health Sciences, UAE University, Al Ain, United Arab Emirates                      Center for Stem Cell Research, <b>Christian Medical College,</b></p>	INT	JAN TO JUN	Center for Stem Cell Research	<p><b>PMC Article</b>  <b>Impact Factor: 3.296</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 108</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Vellore</b>, 632004, India Adhiparasakthi College of Arts and Science, G.B. Nagar, Kalavai, Tamilnadu 632 506, India</p> <p>The main aim of this study was to investigate the effects of phloretin loaded chitosan nanoparticles (PhCsNPs) on 7,12-dimethylbenz[a]anthracene (DMBA) induced experimental cancer in hamsters. Oral squamous cell carcinoma (OSCC) was induced in male golden Syrian hamsters by painting with 0.5% DMBA three times a week for 14 weeks. Varying concentration of PhCsNPs (5, 10, and 20 mg/kg b.wt.) was orally administered on alternative days to evaluate the optimum dose. The experiment design was terminated at the end of the 14th week. The development of OSCC was confirmed by histopathological and biochemical analysis (lipid peroxidation, antioxidant profile, and detoxification enzymes) in plasma, erythrocyte, buccal, and liver tissues. Significant increases in oxidation and lipid peroxidation were noticed in DMBA-painted hamsters. Oral administration of PhCsNPs in various doses on alternate days reversed the deleterious effects induced by DMBA. In addition, immunoblot analyses of PhCsNPs treatment enhanced the release of Bcl-2 associated X protein (Bax), cytochrome c, caspase-3, 9 and suppressed the B-cell lymphoma 2 (Bcl-2) expression, which the use of PhCsNPs for mitochondrial-mediated apoptosis. These findings suggest biofabricated PhCsNPs may act as a potent antioxidant and anti-carcinogenic in DMBA induced oral cancer in experimental animals. © 2019</p>				
44.	<p>Arora, A., Kumar, A., Anand, A. C., Puri, P., Dhiman, R. K., Acharya, S. K., Aggarwal, K., Aggarwal, N., Aggarwal, R., Chawla, Y. K., Dixit, V. K., Duseja, A., Eapen, C. E., Goswami, B., Gujral, K., Gupta, A., Jindal, A., Kar, P., Kumari, K., Madan, K., Malhotra, J., Malhotra, N., Pandey, G., Pandey, U., Puri, R. D., Rai, R. R., Rao, P. N., Sarin, S. K., Sharma, A., Sharma, P., Shenoy, K. T., Singh, K. R., Singh, S. P., Suri, V., Trehanpati, N. and Wadhawan, M.</p> <p>Indian National Association for the Study of the Liver—Federation of Obstetric and Gynaecological Societies of India Position Statement on Management of Liver Diseases in Pregnancy Journal of Clinical and Experimental Hepatology; 2019, <b>Address:</b> Institute of Liver, Gastroenterology, and Pancreatico-Biliary Sciences, Sir Ganga Ram Hospital, New Delhi, India Kalinga Institute of Medical Sciences, KIIT University, Bhubaneswar, India</p>	INT	JAN TO JUN	Hepatology	<p><b>PMCReview</b> <b>Impact Factor: 0.13</b> <b>(RG-2018)</b> <b>H-Index: 25</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Hepatology, Postgraduate Institute of Medical Education and Research, Chandigarh, India</p> <p>Department of Obstetrics and Gynecology, LHMC &amp; Associated Hospitals, New Delhi, India</p> <p>Department of Obstetrics and Gynecology, Postgraduate Institute of Medical Education and Research, Chandigarh, India</p> <p>Department of Gastroenterology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India</p> <p>Department of Gastroenterology, Institute of Medical Sciences, Banaras Hindu University, Varanasi, India</p> <p>Department of Hepatology, <b>Christian Medical College, Vellore, India</b></p> <p>Department of Gastroenterology, Guwahati Medical College Assam, India</p> <p>Institute of Obstetrics and Gynecology, Sir Ganga Ram Hospital, New Delhi, India</p> <p>Delhi IVF and Fertility Research Centre, New Delhi, India</p> <p>Institute of Liver and Biliary Sciences, New Delhi, India</p> <p>Department of Gastroenterology and Hepatology, Max Super Speciality Hospital, Vaishali, Patparganj, New Delhi, India</p> <p>Max Cure Suyosha Woman &amp; Child Hospital, Hyderabad, India</p> <p>Max Smart Super Speciality Hospital, Saket, New Delhi, India</p> <p>Rainbow Hospitals, Agra, India</p> <p>Dept of Obstetrics &amp; Gynecology, Institute of Medical Sciences, Banaras Hindu University, Varanasi, India</p> <p>Department of Gastroenterology, NIMS Medical College and Hospital, Jaipur, India</p> <p>Department of Hepatology, Asian Institute of Gastroenterology Hospitals, Hyderabad, India</p> <p>Department of Obstetrics and Gynecology, All India Institute of Medical Sciences (AIIMS) New Delhi, India</p> <p>Sree Gokulam Medical College and Research Foundation, Venjaramoodu, Thiruvananthapuram, India</p> <p>Regional Institute of Medical Sciences (RIMS), Imphal, Manipur, India</p> <p>Department of Gastroenterology, SCB Medical College, Cuttack, India</p> <p>BLK Super Speciality Hospital, New Delhi, India</p> <p>Liver diseases occurring during pregnancy can be serious and can progress rapidly, affecting outcomes for both the mother and fetus. They are a common cause of concern to an obstetrician and an important reason for referral to a hepatologist, gastroenterologist, or</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>physician. Liver diseases during pregnancy can be divided into disorders unique to pregnancy, those coincidental with pregnancy, and preexisting liver diseases exacerbated by pregnancy. A rapid differential diagnosis between liver diseases related or unrelated to pregnancy is required so that specialist and urgent management of these conditions can be carried out. Specific Indian guidelines for the management of these patients are lacking. The Indian National Association for the Study of the Liver (INASL) in association with the Federation of Obstetric and Gynaecological Societies of India (FOGSI) had set up a taskforce for development of consensus guidelines for management of patients with liver diseases during pregnancy, relevant to India. For development of these guidelines, a two-day roundtable meeting was held on 26–27 May 2018 in New Delhi, to discuss, debate, and finalize the consensus statements. Only those statements that were unanimously approved by most members of the taskforce were accepted. The primary objective of this review is to present the consensus statements approved jointly by the INASL and FOGSI for diagnosing and managing pregnant women with liver diseases. This article provides an overview of liver diseases occurring in pregnancy, an update on the key mechanisms involved in its pathogenesis, and the recommended treatment options. © 2019</p>				
45.	<p>Arpudh Michael Anandaraj, Kishore Kumar Pichamuthu, Samuel George Hansdak, Prasanna Samuel, Aparna Irodi, Sniya Valsa, and Et Al.                      A Randomised Controlled Trial of Lactobacillus in the Prevention of Ventilator Associated Pneumonia                      Journal of Clinical and Diagnostic Research; 2019, 13 (8): OC21-OC24</p> <p><b>PARTICULARS OF CONTRIBUTORS:</b></p> <ol style="list-style-type: none"> <li>1. Assistant Physician, Department of Cardiology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> <li>2. Professor, Division of Critical Care, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> <li>3. Professor, Department of Medicine, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> <li>4. Lecturer, Department of Biostatistics, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> <li>5. Professor, Department of Radiology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> <li>6. Professor, Department of Radiology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> </ol>	NAT	JUL TO DEC	Cardiology, Critical Care, Medicine, Biostatistics, Radiology	<p>PMC 35615  <b>Impact Factor: 0.41 (RG - 2018)</b>  <b>H-Index: 28</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>7. Professor, Division of Critical Care, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Introduction: Ventilator Associated Pneumonia (VAP), continues to complicate a significant proportion of critically ill mechanically ventilated patients, resulting in increased morbidity, mortality and hospital costs. Probiotics offer a novel approach to the prevention of VAP. Uncertainty still exists regarding its benefit for the prevention of VAP. Aim: To study the efficacy of probiotic prophylaxis in preventing VAP in the Medical Intensive Care Unit (MICU) of a tertiary hospital in Southern India. Materials and Methods: The study was a prospective, randomised, double-blind, placebo controlled trial that included 146 critically ill, mechanically ventilated adult patients admitted to a 24 bed MICU. Patients in the probiotic group received 2×10<sup>9</sup> Colony Forming Units (CFU) of Lactobacillus rhamnosus on a twice daily basis (as oral slurry and via nasogastric tube) upto seven days, while those in the placebo arm received identical appearing inert base powder. The primary outcome was incidence of VAP as defined by the clinical criteria of Johansen. Secondary outcomes included duration of mechanical ventilation, MICU stay, hospital stay and mortality. The differences in means and proportions between the two study groups were assessed using independent-t-test and twosample proportion tests respectively. Results: The incidence of VAP, though lower in the Lactobacillus arm, was not statistically significant- (10% vs. 11%, Lactobacillus vs. placebo). Other outcomes including ICU mortality, median time to VAP, duration of mechanical ventilation, duration of ICU and hospital stay were also not significantly different in the two groups. There were no episodes of Lactobacillus bacteraemia. Conclusion: In critically ill, adult patients admitted to the MICU administration of Lactobacillus rhamnosus did not prevent VAP. ICU mortality, in hospital mortality and median time to VAP were also not influenced by the administration of probiotics.</p>				
46.	<p>Arthur, Anupriya, Benjamin, Rohithninan, Appaswamythirumal, Prabakhar, Mannam, Pavitra and Aaron, Sanjith Subacute sclerosing panencephalitis: Hyper acute variant Neurology Asia; 2019, 24 (2): 161-166</p> <p><b>Address:</b>Department of Ophthalmology, Neurology Unit, Department of Neurological Sciences, &amp; Department of Radiology, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamil Nadu, India</p> <p>Subacute sclerosing panencephalitis (SSPE) usually presents insidiously. Acute presentations with a fulminant course can occur.</p>	NAT	JUL TO DEC	Ophthalmology, Neurological Sciences, Radiology	<p><b>PMID:</b> WOS:000473124500009 <b>Impact Factor: 0.218</b> <b>(BIOXBIO – 2018/2019)</b> <b>H-Index: 12</b></p>



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	However hyper acute presentations with a non-progressive course have not been reported. Here we describe two cases that had hyper acute presentation with occipital involvement misdiagnosed initially as ischemic infarct. One case remained stable for 4 years and then had a fulminant course and patient succumbed; the other patient continued to remain stable at 2 year follow up. In countries where SSPE is prevalent, it is important to be aware of such a variant of SSPE.				
47.	<p>Aruldas, B. W., Hoglund, R. M., Ranjalkar, J., Tarning, J., Mathew, S. K., Verghese, V. P., Bose, A. and Mathew, B. S. Optimization of dosing regimens of isoniazid and rifampicin in children with tuberculosis in India British Journal of Clinical Pharmacology; 2019, 85 (3): 644-654</p> <p><b>Address:</b> Department of Pharmacology &amp; Clinical Pharmacology, <b>Christian Medical College, Vellore, Tamil Nadu, India</b> Department of Paediatrics, <b>Christian Medical College and Hospital, Vellore, Tamil Nadu, India</b> Department of Community Health, <b>Christian Medical College, Vellore, Tamil Nadu, India</b> Mahidol-Oxford Tropical Medicine Research Unit, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand Centre for Tropical Medicine and Global Health, Nuffield Department of Medicine, University of Oxford, Oxford, United Kingdom</p> <p>Aims: Pharmacokinetic studies in the past have shown inadequate antituberculosis drug levels in children with the currently available dosing regimens. This study attempted to investigate the pharmacokinetics of isoniazid and rifampicin, when used in children, and to optimize their dosing regimens. Methods: Data were collected from 41 children, aged 2–16 years, who were being treated with antituberculosis drugs for at least 2 months. Concentration measurements were done for 6 h and analysed using a nonlinear, mixed-effects model. Results: Isoniazid pharmacokinetics were described by a one-compartment disposition model with a transit absorption model (fixed, n = 5). A mixture model was used to identify the slow and fast acetylator subgroups. Rifampicin was described by a one-compartment disposition model with a transit absorption model (fixed, n = 9). Body weight was added to the clearance and volume of distribution of both the drugs using an allometric function. Simulations with the isoniazid model showed that 84.9% of the population achieved therapeutic peak serum concentration with the planned fixed-dose combination regimen.</p>	INT	JAN TO JUN	Pharmacology & Clinical Pharmacology, Paediatrics, Community Health	<p><b>PMC Article Impact Factor: 3.838 (BIOXBIO-2018)</b> <b>H-Index: 131</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Simulations with the rifampicin model showed that only about 28.8% of the simulated population achieve the therapeutic peak serum concentration with the fixed-dose combination regimen. A novel regimen for rifampicin, with an average dose of 35 mg kg<sup>-1</sup>, was found to provide adequate drug exposure in most children. Conclusions: The exposure to isoniazid is adequate with present regimens. For rifampicin, a novel dosing regimen was developed to ensure adequate drug concentrations in children. However, further studies are required to assess the dose-effect relationship of higher doses of rifampicin. © 2018 The Authors. British Journal of Clinical Pharmacology published by John Wiley &amp; Sons Ltd on behalf of British Pharmacological Society.</p>				
48.	<p>Arumugam, V., Bhowmick, R., Agarwal, I. and Arumadi, M. Does severe ADAMTS13 deficiency in thrombotic microangiopathy rule out complement-mediated atypical hemolytic uremic syndrome Saudi J Kidney Dis Transpl; 2019, 30 (3): 701-705</p> <p><b>Address:</b> Department of Pediatrics, Division of Pediatric Nephrology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>In evaluating a patient with thrombotic microangiopathy (TMA), it is necessary to rule out thrombotic thrombocytopenic purpura before a diagnosis of atypical hemolytic uremic syndrome (aHUS) is made. There have been reports that mutations of complement factors can coexist with partial A Disintegrin and Metalloproteinase with a ThromboSpondin type 1 motif, member 13 deficiency. Here, we report the case of a 6-year-old girl who was initially diagnosed as nephrotic syndrome and developed TMA after five years of onset of illness. She had poor response to treatment and had multiple relapses due to associated complement factor mutation. Hence, genetic evaluation has to be considered in all children presenting with aHUS.</p>	INT	JAN TO JUN	Pediatrics	<p><b>PMID:31249236</b> <b>PMC</b> <b>Impact Factor: 0.26</b> <b>(RG-2018)</b> <b>H-Index: 24</b></p>
49.	<p>Arun, S., Kumar, M., Paul, T., Thomas, N., Mathai, S. and Rebekah, G. An Open-label Randomized Controlled Trial to Compare Weight Gain of Very Low Birth Weight Babies with or without Addition of Coconut Oil to Breast Milk Journal of Tropical Pediatrics; 2019, 65 (1): 63-70</p> <p><b>Address:</b> Department of Neonatology, <b>Christian Medical College, Vellore, Tamil Nadu, 632004, India</b> Department of Endocrinology, <b>Christian Medical College, Vellore, Tamil Nadu, 632004, India</b></p>	INT	JAN TO JUN	Neonatology, Endocrinology, Child Health, Biostatistics	<p><b>WOS:000462552800009</b> <b>PMC</b> <b>Impact Factor: 1.187</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 47</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Child Health, <b>Christian Medical College, Vellore, Tamil Nadu, 632004, India</b>                      Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu, 632004, India</b></p> <p>Background Nutritional guidelines involving the feeding of very low birth weight babies (VLBW) recommend addition of Human Milk Fortifiers to breast milk. Owing to financial constraints, it is a practice in low- and middle-income countries (LMIC) to add coconut oil to aid better weight gain. There are inadequate data on improvement of growth parameters with oral coconut oil supplementation of breast milk. Methods In this randomized controlled trial, we measured growth parameters and body composition of 60 babies who received either breast milk with coconut oil or breast milk alone. Randomization was stratified according to intrauterine growth appropriate for gestational age (n = 30) and small for gestational age (n = 30). Results There was no difference in weight gain between the two groups. The weight gain velocity was <math>15 \pm 3.6</math> and <math>14.4 \pm 3.4</math> g/kg/day (p value = 0.49) in the breast milk alone and in the breast milk with coconut oil group, respectively. There was no difference in increase in head circumference and length. Triceps skinfold thickness (n = 56) was similar in both groups, but subscapular skinfold thickness was significantly more in the coconut oil group. Total body fat percentage did not differ between the groups (<math>25.2 \pm 4.3</math> vs. <math>25.5 \pm 4.3\%</math>, p = 0.79). Conclusion Oral supplementation of coconut oil along with breast milk did not increase growth parameters or result in change in body composition in very low birth weight (VLBW) babies. © 2018 The Author(s).</p>				
50.	<p>Arunachalam, A. K., Suresh, H., Edison, E. S., Korula, A., Aboobacker, F. N., George, B., Shaji, R. V., Mathews, V. and Balasubramanian, P.                      Screening of genetic variants in ELANE mutation negative congenital neutropenia by next generation sequencing                      J Clin Pathol; 2019,                      DOI: 10.1136/jclinpath-2019-206306</p> <p><b>Address:</b> Clinical Haematology, <b>Christian Medical College, Vellore, India.</b>                      Clinical Haematology, <b>Christian Medical College, Vellore, India</b>  <a href="mailto:bpoonkuzhali@cmcvellore.ac.in">bpoonkuzhali@cmcvellore.ac.in</a></p> <p>AIMS: Congenital neutropenia (CN) is a rare inherited disease that results in recurrent, life-threatening bacterial infections due to a</p>	INT	JUL TO DEC	Clinical Haematology	<p><b>PMID:</b> 31732620  <b>Impact Factor:</b> 2.346  <b>(BIOXBIO – 2018/2019)</b>  <b>H-Index:</b> 116</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>deficiency of mature neutrophils. They are usually caused by heterozygous ELANE mutations although mutations in other genes like HAX-1, G6PC3 and GFI1 have also been reported. Identifying the causative mutation aids in the establishment of diagnosis and rules out other secondary causes of neutropenia like autoimmune cytopenia and evolving aplasia. We aimed to identify the molecular defects in CN patients who had no mutations in ELANE gene, by next generation sequencing (NGS) targeting a customised panel of genes. METHODS: DNA samples were sequenced with an Illumina NextSeq sequencer using an in-house customised panel of genes at <math>\geq 100x</math> depth. Bioinformatics analysis was carried out and the pathogenic variants were identified using a stepwise filtering and analysis strategy. Specific mutations identified were subsequently validated by Sanger sequencing. RESULTS: The pathogenic variants identified in the study includes previously reported variants in SBDS (compound heterozygous c.258+2T&gt;C and c.1A&gt;T), GATA2 (heterozygous c.1186C&gt;T) and novel variants in WAS (hemizygous c.812T&gt;C), JAGN1 (homozygous c.70G&gt;A) and RTEL1 (heterozygous c.2893G&gt;C) genes. CONCLUSION: This study highlights that the absence of ELANE mutations does not rule out the diagnosis of CN and this NGS based approach with a customised panel will help in diagnostic confirmation in such patients. The early onset of the disease, clinical severity and associated high risk of malignant transformation in CN strongly suggests the need for early diagnosis and therapeutic intervention.</p>				
51.	<p>Arunachalam, Arun Kumar, Sumithra, S., Maddali, Madhavi, Fouzia, N. A., Abraham, Aby, George, Biju and Edison, Eunice S. Molecular Characterization of G6PD Deficiency: Report of Three Novel G6PD Variants Indian Journal of Hematology and Blood Transfusion; 2019, G6PD deficiency is a monogenic, X-linked genetic defect with a worldwide prevalence of around 400 million people and an overall prevalence of 8.5% in India. Hemolytic anemia is encountered in only a small proportion of patients with G6PD variants and is usually triggered by some exogenous agent. Although G6PD deficiency was reported in India more than 50 years ago, there are very few studies on molecular characterization and phenotypic correlation in G6PD deficient patients. We aimed to study the epidemiology and correlate the phenotypic expression with molecular genotypes in symptomatic G6PD deficient patients. All symptomatic hemolytic anaemia patients with a possible etiology of G6PD deficiency based on the clinical, hematological and biochemical parameters and reduced G6PD enzyme levels were included in this study. Molecular analysis of the</p>	NAT	JUL TO DEC	Clinical Haematology	<p><b>PMID:</b> WOS:000490876800002 <b>Impact Factor:</b>0.474 (BIOXBIO-2018) <b>H-Index: 12</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	G6PD gene was done by direct Sanger sequencing. From a total of 38 patients with hemolytic anemia suspected for G6PD deficiency, 24 patients had reduced G6PD enzyme levels and were included for the molecular analysis and mutations in the G6PD gene were identified in 21 of them (83.3%). The different mutations identified in our study include 6 patients with c.131C > G (G6PD Orissa), 3 patients with c.563C > T (G6PD Mediterranean), two patients with c.825G > T (G6PD Bangkok), one patient each with c.208T > C (G6PD Namouru), c.487G > A (G6PD Mahidol), c.949G > A (G6PD Kerala-Kalyan), c.100 G > A (G6PD Chatham), c.1178C > G (G6PD Nashville), c.1361 G > A (G6PD Andalus) and 4 patients with novel mutations (2 patients with c.1186C > T and 1 patient each with c.1288-2A > T and c.1372C > T. No disease causing genetic variants were identified in the other three cases. Co-inheritance of other red cell and hemoglobin disorders can modify the clinical phenotype of G6PD patients and the diagnostic accuracy can be improved by molecular characterization of the variant.				
52.	<p>Arya, B. K., Bhattacharya, S. D., Harigovind, G., Das, R. S., Khan, T., Ganaie, F., Niyogi, S. K., Ravikumar, K. L., Manoharan, A., Bhattacharyya, S., Panda, S., Mandal, S. and Acharya, B.</p> <p>Streptococcus pneumoniae Acquisition and Carriage in Vaccine Naïve Indian Children with HIV and their Parents: A Longitudinal Household Study</p> <p>Indian Journal of Pediatrics; 2019,</p> <p><b>Address:</b> School of Medical Science &amp; Technology, Indian Institute of Technology-Kharagpur, IIT Kharagpur Campus, Kharagpur, West Bengal 721302, India</p> <p>Department of Microbiology, Kempegowda Institute of Medical Sciences, KR Road, VV Puram, Bengaluru, Karnataka, India</p> <p>National Institute of Cholera and Enteric Diseases (NICED)/Indian Council of Medical Research (ICMR), P- C.I.T. Scheme XM, Belegghata, 33, CIT Rd, Subhas Sarobar Park, Phool Bagan, Belegghata, Kolkata, West Bengal, India</p> <p>Medicine Unit I &amp; ID, <b>Christian Medical College &amp; Hospital, Vellore</b>, Ida Scudder Road, Vellore, Tamil Nadu, India</p> <p>CHILDS Trust Medical Research Foundation, Chennai, India</p> <p>Department of Pediatrics, Midnapore Medical College and Hospital, Vidyasagar Road, Paschim Medinipur, Medinipur, West Bengal, India</p> <p>Department of Pediatrics College of Medicine and Sagore Dutta Hospital, Kamarhati, Kolkata, India</p> <p>National AIDS Research Institute Pune (NARI/ICMR), Plot No 73, G-block, M I D C, Bhosari, Pune, Maharashtra, India</p>	NAT	JAN TO JUN	Medicine	<p><b>PMC Article</b></p> <p><b>Impact Factor: 1.046</b></p> <p><b>(BIOXBIO-2018)</b></p> <p><b>H-Index: 43</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Objectives: To investigate the difference in pneumococcal carriage, acquisition, antibiotic resistance profiles and serotype distribution, in human immunodeficiency virus (HIV) affected and unaffected families. Methods: A prospective cohort study was conducted in children with and without HIV in West Bengal from March 2012 through August 2014, prior to 13-valent pneumococcal conjugate vaccine (PCV-13) immunization. One thousand four hundred forty one nasopharyngeal swabs were collected and cultured at five-time points from children and their parents for pneumococcal culture, and serotyping by Quellung method. Results: One hundred twenty five HIV infected children and their parents, and 47 HIV uninfected children and their parents participated. Two hundred forty pneumococcal isolates were found. In children under 6 y, the point prevalence of colonization was 31% in children living with HIV (CLH) and 32% in HIV uninfected children (HUC), <math>p = 0.6</math>. The most common vaccine type (VT) serotypes were 6A, 6B and 19A. All isolates from parents and 71% from children in the HIV uninfected cohort were PCV-13 representative, compared to 33% of isolates from CLH and their parents. Acquisition rate in children was 1.77 times that of parents (OR = 1.77, 95%CI: 1.18–2.65). The HIV status of child or parent did not affect acquisition. Isolates from CLH were more frequently resistant to multiple antibiotics (<math>p = 0.02</math>). Conclusions: While the rate of pneumococcal carriage and acquisition did not differ between CLH and HUC, HIV affected families had exposure to a wider range of serotypes including non-vaccine type serotypes and antibiotic resistant serotypes, than HIV unaffected families. © 2019, Dr. K C Chaudhuri Foundation.</p>				
53.	<p>Atkuri, R., Zachariah, A. and D'souza, R. The health situation in Jammu and Kashmir: What is the obligation of health professionals? Indian J Med Ethics; 2019, 4 (NS) (4): 261-264 <b>Address:</b> Independent public health physician, BDA Colony, Shahpura , Bhopal, Madhya Pradesh, 462 039 INDIA. Professor, Department of Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b>, 632 004 INDIA. Public health physician and consultant, SOCHARA, Bengaluru, INDIA. We are witness today to a democratic country violating multiple rights of an entire state of its own citizens. Starting from August 5, 2019, it is now over two months that the state of Jammu and Kashmir has been under a lockdown, and there was also a communication blockade. Initially all modes of communication - landline telephones, cellphones and the internet were blocked, and there were severe physical restrictions on the movement of civilians,</p>	NAT	JUL TO DEC	Medicine	<p><b>PMID:31791934</b> <b>Impact Factor: 0.17</b> <b>(RG-2018)</b> <b>H-Index: 14</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	with concertina wire barricades manned by soldiers every few metres. The Central Government put these measures in place along with thousands of additional troops brought into the state, in addition to the troops already deployed there, as it abrogated Article 370 and 35A of the Indian Constitution, and downgraded the state into two union territories.				
54.	<p>Babu S, E. S., Peace B.S, T., Rafic K, M., Raj E, W. M., Christopher J, S. and Ravindran B, P.                      Escalation of optical transmittance and determination of diffusion co-efficient in low-bloom strength gelatin-based Fricke gel dosimeters                      Radiation Physics and Chemistry; 2019, 156 300-306</p> <p><b>Address:</b> Department of Radiation Oncology, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India</p> <p>The goal of this work was to explore the action of ethylenediaminetetraacetic (EDTA) in pursuit of escalating the optical transmittance of the Fricke gel dosimeter prepared with low bloom strength gelatin. The Fricke-xylene-gelatin (FXGConv) dosimeter recipe used in this study contained a mixture of 5% gelatin, 50 mM sulphuric acid (H<sub>2</sub>SO<sub>4</sub>), 0.3 mM ammonium ferrous sulphate (FAS), 0.05 mM xylenol orange (XO) and triple distilled water. Several batches of gels were prepared with varying concentrations of EDTA incorporated in the FXGConv gel. The gel cuvettes were stored at 4 °C for 12 h after preparation and irradiated using gamma rays from a telecobalt unit for doses ranging from 0 to 15 Gy. Dosimetric parameters including the optical background absorbance of the unirradiated gel, stability of dose after irradiation, self-oxygenation (auto-oxidation) and dose response were studied using a spectrophotometer at 585 nm. Based on the response of the EDTA infused FXGConv gels, further investigations were carried out on FXG-Glycine gels incorporated with EDTA. Diffusion coefficient measurements were performed on large volume phantoms irradiated in a linear accelerator. Optical transmittance of unirradiated FXG-Glycine gels improved approximately 40% with EDTA while maintaining acceptable control over Fe<sup>2+</sup> auto-oxidation as well as Fe<sup>3+</sup> diffusion. An optimal concentration of EDTA in the glycine-based FXG gel dosimeter can provide an overall benefit with low background absorbance and acceptable diffusion control while using lower bloom gelatin for preparation of gel dosimeters. © 2018 Elsevier Ltd</p>	INT	JAN TO JUN	Radiation Oncology	<p><b>WOS:000460717500039</b>  <b>PMC</b>  <b>Impact Factor: 1.435</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 72</b></p>
55.	Badsha, Humeira, Harifi, Ghita, Kirubakaran, Richard and Khan,	INT	JUL TO DEC	Cochrane South Asia	PMID:

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Bhavna Reasons For Discontinuation Of Biological Drug And Targeted Synthetic Drugs Among Patients With Inflammatory Arthritis In The United Arab Emirates (UAE) Annals of the Rheumatic Diseases; 2019, 78 1642-1643</p> <p><b>Address:</b> Dr Humeira Badsha Medical Center – Rheumatology and Arthritis, Dubai, United Arab Emirates; <b>Cochrane South Asia, Vellore, India;</b> Integrated Arthritis and Rheumatology Centre, Dubaai, United Arab Emirates</p>				<p>WOS:000472207105061 <b>Impact Factor: 14.299 (BIOXBIO - 2018)</b> <b>H-Index: 212</b></p>
56.	<p>Bagchi, Abhirup, Shaji, R. V., Murugesan, Mohankumar Kumarasampet, Nakamura, Yukio, Spencer, H. Trent and Srivastava, Alok Novel Lentiviral Vectors to Induce High Levels of HbF in Adult Human Haematopoietic Stem Cell Derived Cultured Erythroid Cells Molecular Therapy; 2019, 27 (4): 280-280</p>	INT	JAN TO JUN	Centre for Stem Cell Research, Cytogenetics Unit, General Pathology, Transfusion Medicine and Immunohematology, Hematology	<p><b>WOS:000464381003056</b> <b>PMC</b> <b>Impact Factor: 7.008 (BIOXBIO-2018)</b> <b>H-Index: 158</b></p>
57.	<p>Bakthavatchalam, Y. D., Arumugam, A. and Veeraraghavan, B. An invasive marker Staphylococcus epidermidis surface protein I (sesI) harbouring ST239 Methicillin Resistant Staphylococcus aureus J Glob Antimicrob Resist; 2019, <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India. Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India. Electronic <b>Address:</b> vbalaji@cmcvellore.ac.in.</p> <p>OBJECTIVES: Recently, a virulence factor sasX was described on the mobile genetic element phiSPbeta prophage in ST239-SCCmec III MRSA clone. The aim of this study is to identify sesI, a sasX homologue in ST239 MRSA strain. METHODS: MRSA (VB1490) was isolated from the patient with MRSA bacteraemia. SCC mec typing and shot-gun whole sequencing were performed. Phylogenetic analysis of VB1490 and ST239 reference genomes from NCBI database were performed. Amplification and sequencing of sasX gene was carried out to establish the allele homology. RESULT: The sasX gene identified in this isolate, which is more similar to the sesI of S. epidermidis RP62A strain than sasX of ST239 MRSA strain. Analysis of the genome revealed the presence of sasX gene on the phiSPbeta like prophage and exhibited high sequence identity to the of S. epidermidis strain RP62A. CONCLUSION: Our finding suggests that dissemination of invasive determining virulence factor sesI from S. epidermidis to ST239 MRSA strain.</p>	INT	JAN TO JUN	Clinical Microbiology	<p><b>PMID:30797090</b> <b>PMC</b> <b>Impact Factor: 0.91 (RG-2018)</b> <b>H-Index: 16</b></p>
58.	Bakthavatchalam, Y. D., Arumugam, A. and Veeraraghavan, B.	INT	JUL TO DEC	Clinical Microbiology	<b>PMID:</b> 30797090



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>An invasive marker Staphylococcus epidermidis surface protein I (SesI) harboured by a ST239 methicillin-resistant Staphylococcus aureus</p> <p>J Glob Antimicrob Resist; 2019, 18 122-125</p> <p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India.</p> <p>Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India. <b>Electronic Address:</b> vbalaji@cmcvellore.ac.in.</p> <p>OBJECTIVES: Recently, the virulence factor sasX was described on the mobile genetic element phiSPbeta prophage in a ST239-SCCmecIII methicillin-resistant Staphylococcus aureus (MRSA) clone. The aim of this study was to identify sesI, an sasX homologue, in an MRSA ST239 strain. METHODS: MRSA strain VB1490 was isolated from a patient with MRSA bacteraemia in India. Staphylococcal cassette chromosomemec (SCCmec) typing and whole-genome shotgun sequencing were performed. Phylogenetic analysis of VB1490 and ST239 reference genomes from the NCBI database was performed. Amplification and sequencing of the sasX gene was performed to establish allele homology. RESULTS: The sasX gene identified in isolate VB1490 was more similar to the sesI gene of Staphylococcus epidermidis RP62A than the sasX gene of ST239 MRSA strain. Whole-genome analysis revealed the presence of the sasX gene on a phiSPbeta-like prophage that exhibited high sequence identity to that of S. epidermidis strain RP62A. CONCLUSION: These finding suggests the dissemination of the invasion-determining virulence factorsesI from S. epidermidis to a ST239 MRSA strain.</p>				<p><b>Impact Factor: 0.91 (RG-2018)</b></p> <p><b>H-Index: 16</b></p>
59.	<p>Bakthavatchalam, Y. D., Babu, P., Munusamy, E., Dwarakanathan, H. T., Rupali, P., Zervos, M., John Victor, P. and Veeraraghavan, B.</p> <p>Genomic insights on heterogeneous resistance to vancomycin and teicoplanin in Methicillin-resistant Staphylococcus aureus: A first report from South India</p> <p>PLoS One; 2019, 14 (12): e0227009</p> <p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, India.</b></p> <p>Department of Orthopaedics, <b>Christian Medical College, Vellore, India.</b></p> <p>Infectious Diseases Training and Research Center (IDTRC), <b>Christian Medical College, Vellore, India.</b></p> <p>Infectious Diseases, Henry Ford Health System, Detroit, Michigan, United States of America.</p> <p>Department of critical care unit, <b>Christian Medical College,</b></p>	INT	JUL TO DEC	Clinical Microbiology, Orthopaedics, Infectious Diseases Training and Research Centre (IDTRC)	<p><b>PMID:31887179</b></p> <p><b>PMC ID:6936811</b></p> <p><b>Impact Factor: 2.776 (BIOXBIO-2018-2019)</b></p> <p><b>H-Index: 268</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Vellore, India.</b> Methicillin-resistant Staphylococcus aureus (MRSA) infection is an important clinical concern in patients, and is often associated with significant disease burden and metastatic infections. There is an increasing evidence of heterogeneous vancomycin-intermediate S. aureus (hVISA) associated treatment failure. In this study, we aim to understand the molecular mechanism of teicoplanin resistant MRSA (TR-MRSA) and hVISA. A total of 482 MRSA isolates were investigated for these phenotypes. Of the tested isolates, 1% were identified as TR-MRSA, and 12% identified as hVISA. A highly diverse amino acid substitution was observed in tcaRAB, vraSR, and graSR genes in TR-MRSA and hVISA strains. Interestingly, 65% of hVISA strains had a D148Q mutation in the graR gene. However, none of the markers were reliable in differentiating hVISA from TR-MRSA. Significant pbp2 upregulation was noted in three TR-MRSA strains, which had teicoplanin MICs of 16 or 32 mug/ml, whilst significant pbp4 downregulation was not noted in these strains. In our study, multiple mutations were identified in the candidate genes, suggesting a complex evolutionary pathway involved in the development of TR-MRSA and hVISA strains.</p>				
60.	<p>Bakthavatchalam, Y. D., Ralph, R., Veeraraghavan, B., Babu, P. and Munusamy, E. Evidence from an In Vitro Study: Is Oxacillin Plus Vancomycin a Better Choice for Heteroresistant Vancomycin-Intermediate Staphylococcus aureus? Infectious Diseases and Therapy; 2019, 8 (1): 51-62</p> <p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India</b> Department of Medicine (Unit II), <b>Christian Medical College, Vellore, Tamil Nadu, India</b></p> <p>Introduction: Heteroresistant vancomycin-intermediate Staphylococcus aureus (hVISA) bacteremia may result in clinical failure of vancomycin therapy, together with prolonged infection and hospitalization. This clinical problem has resulted in a search for more effective treatment options. The current study was designed to further investigate the synergistic effect of oxacillin plus vancomycin against methicillin-resistant S. aureus (MRSA) and hVISA using checkerboard and time-kill assays. Methods: Non-duplicate S. aureus isolates including hVISA (n = 29), MRSA (n = 10) and methicillin susceptible S. aureus (MSSA, n = 11) were used for</p>	INT	JAN TO JUN	Clinical Medicine      Microbiology,	<b>PMC Article Impact Factor: H-Index: 18</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>combinational testing using checkerboard and time-kill assays. Results: Twenty-one isolates, 15 hVISA and 6 MRSA, showed synergy between oxacillin and vancomycin by checkerboard assay with fractional inhibitory concentration indices of <math>\leq 0.5</math>. The addition of oxacillin to vancomycin resulted in a reduction in baseline vancomycin MIC from 1–2 to 0.06–0.5 <math>\mu\text{g/ml}</math> against MRSA and hVISA isolates. In the time-kill assay, the combination of oxacillin and vancomycin resulted in synergistic activity against hVISA (<math>n = 23</math>) and MRSA (<math>n = 7</math>) isolates. Regrowth was observed in six hVISA isolates exposed to combination in the time-kill assay, but none of them reached the original inoculum density at 24 h. All re-growth isolates showed a onefold increase in vancomycin MIC (from 1 to 2 <math>\mu\text{g/ml}</math>) and were re-confirmed as hVISA using the population-analysis profile experiment. Overall, for hVISA and MRSA, the combination of oxacillin plus vancomycin had greater antibacterial effect than each individual drug alone. Conclusion: The present study showed the potential activity of vancomycin plus oxacillin combination against hVISA and MRSA isolates. Further, continued evaluation of this combination is warranted and may have therapeutic benefits in treating complicated MRSA infections. © 2018, The Author(s).</p>				
61.	<p>Bakthavatchalam, Y. D., Triplicane Dwarakanathan, H., Munusamy, E., Jennifer, L. and Veeraraghavan, B. A Distinct Geographic Variant of sasX in Methicillin-Resistant Staphylococcus aureus ST239 and ST368 Lineage from South India Microbial Drug Resistance; 2019, 25 (3): 413-420</p> <p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b>, 632 004, India Department of Orthopaedics, <b>Christian Medical College, Vellore, India</b></p> <p>Staphylococcal surface protein sasX is a colonization mediating virulence factor in ST239 methicillin-resistant Staphylococcus aureus (MRSA) strains, which potentially contribute to its successful establishment. We aimed to study the presence and dissemination of sasX in clinical MRSA isolates and among MRSA carriers. A total of 450 nonduplicate clinical MRSA isolates recovered from blood cultures between 2013 and 2017 were included in this study. In addition, 93 nasal swabs were collected from patients receiving hemodialysis, after obtaining consent and screening for MRSA colonization. sasX polymerase chain reaction and sequencing were carried out for all isolates. Multilocus sequence typing was performed</p>	INT	JAN TO JUN	Clinical Microbiology, Orthopaedics	<p><b>WOS:000463645500012</b> <b>PMC</b> <b>Impact Factor: 2.344</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 62</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	for all sasX-positive isolates. Of the tested clinical MRSA isolates, 11% (n = 48) were positive for sasX gene. Among hemodialysis patients, 26% (n = 24) were characterized as MRSA carriers. However, all MRSA strains isolated from nasal swab were negative for sasX gene. Overall, we observed 10% (11% in clinical MRSA isolates and 0% in MRSA carriers) of sasX-positive MRSA in this study. ST239 and ST368 were the predominant sasX carrying MRSA lineages. The majority of sasX carrying MRSA strains were characterized as Staphylococcus epidermidis surface protein I (sesI; 71%), a sasX homolog native to S. epidermidis. This study highlights the dissemination of sasX/sesI to ST368 (CC8), ST3324 (CC8), ST772 (CC1), and ST22 (CC22). The presence of S. epidermidis-specific invasive factor sesI in clinical MRSA strains provides evidence for horizontal transfer between these closely related species. © 2019, Mary Ann Liebert, Inc., publishers.				
62.	<p>Balaji, B. S. and Karl, I. S. Mature cystic teratoma of renal pelvis: An unusual presentation at an uncommon site Journal of Indian Association of Pediatric Surgeons; 2019, 24 (3): 216-218</p> <p><b>Address:</b> Department of Paediatric Surgery, <b>CMC, Vellore</b>, Tamil Nadu, 632 004, India</p> <p>Teratoma of the kidney is uncommon. We report a case of a young boy with a large, right-sided retroperitoneal cyst suspected as lymphangioma causing hydronephrosis. His renal pelvis was dilated, containing purulent fluid, and a nephrectomy was performed. Histopathology revealed a mature cystic teratoma of the renal pelvis. © 2019 Journal of Indian Association of Pediatric Surgeons.</p>	NAT	JAN TO JUN	Paediatric Surgery	<p><b>PMCArticle Impact Factor: 0.23 (RG-2018)</b> <b>H-Index: 14</b></p>
63.	<p>Balakrishnan, B. and David, E. Biopolymers augment viral vectors based gene delivery J Biosci; 2019, 44 (4): <b>Address:</b> Department of Haematology, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India.</p> <p>The success of viral vectors mediated gene therapy is still hampered by immunogenicity and insufficient transgene expression. Alternatively, non-viral vectors mediated gene delivery has the advantage of low immunogenicity despite showing low transgene expression. By carefully considering the advantages of each approach, hybrid vectors are currently being developed by modifying the viral vectors using non-viral biopolymers. This review provides an overview of the hybrid vectors currently being developed.</p>	INT	JUL TO DEC	Haematology	<p><b>PMID: 31502562</b> <b>Impact Factor: 1.823 (BIOXBIO – 2018/2019)</b> <b>H-Index: 66</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
64.	<p>Balamurugan, R., Pugazhendhi, S., Balachander, G. M., Dharmalingam, T., Mortimer, E. K., Gopalsamy, G. L., Woodman, R. J., Meng, R., Alpers, D. H., Manary, M., Binder, H. J., Brown, I. L., Young, G. P. and Ramakrishna, B. S.</p> <p>Effect of Native and Acetylated Dietary Resistant Starches on Intestinal Fermentative Capacity of Normal and Stunted Children in Southern India</p> <p>Int J Environ Res Public Health; 2019, 16 (20): <b>Address:</b> Wellcome Research Unit (Biochemistry), <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India. balaramadass1@gmail.com.</p> <p>Wellcome Research Unit (Biochemistry), <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India. pugazhs@gmail.com.</p> <p>Wellcome Research Unit (Biochemistry), <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India. gowribalachandar@gmail.com.</p> <p>Wellcome Research Unit (Biochemistry), <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India. dtamil_selvan8@yahoo.co.in.</p> <p>College of Medicine and Public Health, Flinders University of South Australia, Bedford Park 5045, South Australia, Australia. elissa.mortimer@flinders.edu.au.</p> <p>College of Medicine and Public Health, Flinders University of South Australia, Bedford Park 5045, South Australia, Australia. gopa0006@gmail.com.</p> <p>College of Medicine and Public Health, Flinders University of South Australia, Bedford Park 5045, South Australia, Australia. richard.woodman@flinders.edu.au.</p> <p>College of Medicine and Public Health, Flinders University of South Australia, Bedford Park 5045, South Australia, Australia. Rosie.Meng@sa.gov.au.</p> <p>Washington University School of Medicine, Saint Louis, MO 63110, USA. DAlpers@DOM.wustl.edu.</p> <p>Washington University School of Medicine, Saint Louis, MO 63110, USA. Manary@kids.wustl.edu.</p> <p>Yale University School of Medicine, New Haven, CT 06510, USA. Henry.binder@yale.edu.</p> <p>Australian Cancer Research Foundation, Sydney 2000, Australia. mrbmrsb1@gmail.com.</p> <p>College of Medicine and Public Health, Flinders University of South Australia, Bedford Park 5045, South Australia, Australia. graeme.young@flinders.edu.au.</p> <p>Department of Gastroenterology, <b>Christian Medical College,</b></p>	INT	JUL TO DEC	Wellcome Research Unit (Biochemistry)	<p><b>PMID:</b> 31618992</p> <p><b>PMC ID:</b>6843365</p> <p><b>Impact Factor: 2.468</b></p> <p><b>(BIOXBIO – 2018/2019)</b></p> <p><b>H-Index: 78</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Vellore,</b> Tamil Nadu 632004, India. wurama@hotmail.com.                      The health benefits of dietary amylase resistant starch (RS) arise from intestinal microbial fermentation and generation of short chain fatty acids (SCFA). We compared the intestinal fermentative capability of stunted and nonstunted ('healthy') children in southern India using two types of RS: high amylose maize starch (HAMS) and acetylated HAMS (HAMSA). Twenty children (10 stunted and 10 healthy) aged 2 to 5 years were fed biscuits containing HAMS (10 g/day) for two weeks followed by a 2-week washout and then HAMSA biscuits (10 g/day) for 2 weeks. Fecal samples were collected at 3-4 day intervals and pH and SCFA analyzed. At entry, stunted children had lower SCFA concentrations compared to healthy children. Both types of RS led to a significant decrease in fecal pH and increase in fecal acetate and propionate in both healthy and stunted children. However, while HAMS increased fecal butyrate in both groups of children, HAMSA increased butyrate in healthy but not stunted children. Furthermore, healthy children showed a significantly greater increase than stunted children in both acetate and butyrate when fed either RS. No adverse effects were reported with either RS. Stunted children have impaired capacity to ferment certain types of RS which has implications for choice of RS in formulations aimed at improving microbial function in stunted children.</p>				
65.	<p>Bandini M(1)(2), Sekulovic S(3), Spiridonescu B(3), Krishnappa P(4), Dangi AD(5), Slavkovic M(3), Pesic V(3), Salonia A(6), Briganti A(6), Montorsi F(6), Djinovic R(3).                      Prevalence, assessment and surgical correction of penile curvature in hypospadias patients treated at one European Referral Center: description of the technique and surgical outcomes.                      World J Urol. 2019 Oct 25. doi: 10.1007/s00345-019-02961-x. [Epub ahead of print]</p> <p><b>Author information:</b>                      (1)Sava Perovic Foundation, Center for Genito-Urinary Reconstructive Surgery, Belgrade, Serbia. bandini.marco@hsr.it.                      (2)Unit of Urology, Urological Research Institute (URI), IRCCS San Raffaele Hospital, Vita-Salute San Raffaele University, Via Olgettina 60, 20132, Milan, MI, Italy. bandini.marco@hsr.it.                      (3)Sava Perovic Foundation, Center for Genito-Urinary Reconstructive Surgery, Belgrade, Serbia.                      (4)Department of Urology, NU Hospitals, Bangalore, India.                      (5)Department of Urology, <b>Christian Medical College and Hospital, Vellore,</b> Tamil Nadu, India.                      (6)Unit of Urology, Urological Research Institute (URI), IRCCS San</p>	INT	JUL TO DEC	Urology	<p><b>PMID: 31654219</b>  <b>Impact Factor: 2.761</b>  <b>(BIOXBIO-2018-2019)</b>  <b>H-Index: 75</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Raffaele Hospital, Vita-Salute San Raffaele University, Via Olgettina 60, 20132, Milan, MI, Italy.</p> <p>PURPOSE: Penile curvature (PC) is a common component of hypospadias, but its presence is inconstantly assessed. We aim to report prevalence of PC in hypospadias patients, as well as to report our method to assess and correct PC, with the associated postoperative outcomes. METHODS: We scrutinized 303 pediatric hypospadias patients operated (2013-2018) at our referral center. PC was routinely assessed and eventually corrected with dorsal plications (DP) as one-stage procedure, or ventral tunica attenuations ± DP as two-stage repair. PC severity and surgical treatment of PC were compared between primary and failed hypospadias. Finally, PC severity, failed repair and PC treatment were tested as predictors of perioperative complications. RESULTS: PC (&gt; 10°) was identified in 274/303 (90.4%) patients, 86.1% with distal, 91.8% with midshaft, and 100% with proximal hypospadias, respectively. PC was found in 51/64 (79.7%) of failed hypospadias. One-stage and two-stage procedures were adopted in 211/274 (77%) and 63/274 (23%) children, respectively. PC severity (p = 0.1) and PC treatment (p = 0.4) did not differ between primary and failed hypospadias. PC severity (all p &gt; 0.2), failed repair (p = 0.8), and PC treatment (all p &gt; 0.09) were not predictors of perioperative complications. 95.6% of patients achieved a straight penis. CONCLUSION: Less than 1/10 patients did not require PC correction. High rate of residual PC in failed hypospadias and similar severity between failed and primary suggest that PC was usually under-corrected. It is possible to correct PC completely and the resulting complication would not be associated with PC severity, failed repair or treatment adopted. DOI: 10.1007/s00345-019-02961-x</p>				
66.	<p>Bankar, Aniket, Korula, Anu, Kulkarni, Uday P., Devasia, Anup J., Fouzia, N. A., Lionel, Sharon, Abraham, Aby, Balasubramanian, Poonkuzhali, Janet, Nancy Beryl, Nair, Sukesh C., Sezlian, S., Jeyaseelan, Visali, Jeyaseelan, N., Prasad, Jasmine, George, Biju and Mathews, Vikram</p> <p>Resource utilization and cost effectiveness of treating acute promyelocytic leukaemia using generic arsenic trioxide Br J Haematol. 2019 Dec 21. doi: 10.1111/bjh.16343. [Epub ahead of print]</p> <p><b>Author information:</b> (1)Department of Hematology, <b>Christian Medical College, Vellore, India.</b></p>	INT	JUL TO DEC	Hematology, Immunohematology and Transfusion Medicine, Accounts, Biostatistics, Community Medicine	<p><b>PMID: 31863602</b> <b>WOS:000503651900001</b> <b>Impact Factor: 5.206</b> <b>(BIOXBIO-2018-2019)</b> <b>H-Index: 172</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>(2)Department of Immunohematology and Transfusion Medicine, <b>Christian Medical College, Vellore, India.</b></p> <p>(3)Accounts Department, <b>Christian Medical College, Vellore, India.</b></p> <p>(4)Department of Biostatistics, <b>Christian Medical College, Vellore, India.</b></p> <p>(5)Department of Community Medicine, <b>Christian Medical College, Vellore, India.</b></p> <p>Arsenic trioxide (ATO)-based regimens are the standard of care for treating acute promyelocytic leukaemia (APL) and have replaced chemotherapy-based approaches. However, the cost of "patented" ATO is prohibitive because of patent rights. "Generic" ATO has been used in a few countries, but its implications for health resource utilization (HRU) and cost of treatment are unknown. We hypothesized that treating APL patients using generic ATO (APL-ATO) will be cost effective compared to the chemotherapy-based regimen (APL-CT). In a single-centre retrospective study, we used a bottom-up costing method to compare the direct medical cost of treatment and HRU between APL-ATO and APL-CT. These costs and the survival and relapse probabilities were imputed in a three-state Markov decision model to estimate the cost effectiveness of APL-ATO compared to APL-CT. The mean cost of treatment for APL-ATO (n = 30, \$8500 +/- 2078) was significantly less than for APL-CT (n = 30, \$22 600 +/- 5528) (P &lt; 0 center dot 001). APL-ATO reduced hospitalization, antibiotic and antifungal usage (P &lt; 0 center dot 001). In the Markov model, five-year treatment costs were significantly lower for APL-ATO (\$11 131) than for APL-CT (\$17 926) (P &lt; 0 center dot 001). Treatment cost and health resource utilization were significantly lower for generic ATO-treated APL patients compared to the chemotherapy-based regimen.</p>				
67.	Beebeejaun, Y., Kamath, M., Sarris, I., Khalaf, Y. and Sunkara, S. Risk of breast cancer in women treated with ovarian stimulation drugs for infertility: a systematic review and meta-analysis Human Reproduction; 2019, 34 473-473	INT	JUL TO DEC	Reproductive Medicine Unit	<b>PMID:</b> WOS:000484057200995 <b>Impact Factor: 5.506</b> <b>(BIOXBIO – 2018/2019)</b> <b>H-Index: 209</b>
68.	Benjamin Earnest Williams Changes in quality of life in idiopathic interstitial pneumonitis "QOLINI study" <a href="#">Lung India</a> . 2019 Nov; 36(Suppl 3): S121. <b>Christian Medical College And hospital, Vellore, Tamil Nadu,</b>	NAT	JUL TO DEC	Respiratory Medicine	<b>PMCID: PMC6891926</b> <b>Impact Factor: 0.58</b> <b>(RG-2018)</b> <b>H-Index: 18</b>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>India. E-mail: doc.benjamin12@gmail.com</p> <p><b>Background:</b> Quality of Life (QoL) is profoundly impaired in Chronic Fibrosing IIP's like IPF and NSIP. Though there are studies on the patient response outcome, data on longitudinal determinations of QoL in IPF/NSIP patients are sparse. <b>Aim:</b> To study the changes with appropriate management, in the Symptom, Physiological, Exercise testing and Radiological parameters with changes in the QoL in IIP patients. <b>Methodology:</b> Observational, prospective study of diagnosed IPF and idiopathic NSIP patients. Baseline to 3-6 months changes in Symptom score, PFT, 6MWT, ABG and CT score by Goldin. et al were correlated with QoL changes by SGRQ (Saint George Respiratory questionnaire). <b>Results:</b> 80 patients [60(75%) NSIP and 20(25%) IPF] included. At baseline the mean SGRQ total score was 54.92±20.26 and 46.21±17.97 at 3-6 months. The differences were significant for Symptom (p 0.013), Activity (p 0.04) and Total SGRQ (p 0.031) domains. After partial correlation the change in FEV1% predicted -0.330(.037), TLC% predicted -0.402(.028) and DLCO% pred -0.482(.031) had moderate negative correlation with changes in the QoL SGRQ total score. CT Fibrosis score showed moderate positive correlation .377(0.034) with SGRQ Symptom domain. A composite score (0-3) derived from Minimum important difference change in DLCO, FVC and 6MWD showed in treatment responders, score 0 had 100% Specificity and PPV, score 1 had 90% Specificity and PPV.</p>				
69.	<p>Benjamin, J., Hephzibah, J., Cherian, A. J., Mathew, D., Shanthly, N. and Oommen, R. Is hemi-thyroidectomy adequate in low risk differentiated thyroid cancer? World J Nucl Med; 2019, 18 (2): 171-175</p> <p><b>Address:</b> Department of Nuclear Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Endocrine Surgery, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>In low-risk differentiated thyroid carcinoma (LRDTC), appropriate surgical procedure in terms of hemi/total thyroidectomy (TT) has been an area of debate. The aim was to determine whether in LRDTC patients, hemithyroidectomy would be an adequate treatment, determine incidence of disease in contralateral lobe and evaluate the effect of radioactive iodine ablation (RAIA). Retrospective study was done from 2008 to 2014 at a single institution. Preoperative</p>	INT	JAN TO JUN	Nuclear Medicine, Endocrine Surgery	<p><b>PMID:31040749</b> <b>PMC ID:6476241</b> <b>Impact Factor:</b> <b>H-Index: NA</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	ultrasound (USG) and histopathology reports of all LRDTc patients following total/completion thyroidectomy were recorded. Details of postthyroidectomy, thyroid whole body scan, and stimulated serum thyroglobulin (sTg) levels were also documented and results analyzed. A total of 114/562 patients met inclusion criteria. Of these, 25/114 (22%) underwent hemithyroidectomy followed by a completion thyroidectomy while remaining 89/114 (78%) underwent TT initially. Preoperative USG detected single-lobe involvement in 44 patients; however, among them, histopathology revealed bilateral lobe disease in 17 (38.6%). There was a significant fall of sTg level following RAIA as compared to that before RAIA in T1b-T2 (P = 0.009 and 0.012, respectively). Median follow-up was 2 years (range: 1-7 years) with no distant metastasis or deaths recorded till 2017, except for one local recurrence 4 years after RAIA. In conclusion, the role of TT in LRDTc patients is important as 46% of patients were found to have tumor in contralateral lobe as well. Significant fall in sTg levels following RAIA justifies RAIA of remnant lobe even in LRDTc (T > 1a). It facilitates early detection of recurrence when sTg alone is used for follow-up.				
70.	<p>Bercu, J., Berlam, S. C., Berridge, J., Cherney, B., Cowley, D., Laughton, H. W., Mcloughlin, D., McMahan, M., Moore, C. M. V., Murti, C., O'neill, J., Parsons, R., Peng, D. Y., Quan, R. W., Subashi, A. K., Teasdale, A., Tyler, S. M. and Watson, T. J. Establishing Patient Centric Specifications for Drug Substance and Drug Product Impurities Journal of Pharmaceutical Innovation; 2019, 14 (1): 76-89</p> <p>In this paper, we remind readers of several ICH guideline documents such as ICH Q3A, Q3B, Q3C, Q3D, Q6A, Q6B, M7, and ICH S9 which are related to the drug substance and drug product impurity limit setting. In particular, ICH Q6A clearly states that "specifications should focus on those characteristics found to be useful in ensuring the safety and efficacy of the drug substance and drug product"; however, recent negotiations between health authority and applicants (company) related to proposed marketing applications show that on a global level, batch experience, even when limited, plays an overwhelming role in developing impurity acceptance criteria rather than clinical relevance. The drawback of such practice and the great need to establish patient centric specifications (PCS)</p>	INT	JAN TO JUN	Pharmacology	<p><b>WOS:000459039700008</b>  <b>PMC</b>  <b>Impact Factor: 1.934</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 25</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID	
	are highlighted. Secondly, this paper proposes approaches on how to establish patient centric criteria for drug substance and drug product impurity limits based on the principles outlined in ICH guideline documents and scientific literature. Three case studies are presented to illustrate the challenges in establishing PCS and the divergence of regulatory acceptance to such specifications. We propose some approaches that can be considered for specification setting based on clinical relevance in the drug development, registration and post-approval phases of a product life-cycle. Lastly, we give thoughts on the future perspective of this movement and offer recommendations to foster discussions between regulatory agencies and pharmaceutical industry on getting medicinal products that are safe and effective to the patient sooner to meet unmet medical needs without supply interruption concerns.					
71.	<p>Berendes, D. M., Leon, J. S., Kirby, A. E., Clennon, J. A., Raj, S. J., Yakubu, H., Robb, K. A., Kartikeyan, A., Hemavathy, P., Gunasekaran, A., Roy, S., Ghale, B. C., Kumar, J. S., Mohan, V. R., Kang, G. and Moe, C. L.</p> <p>Associations between open drain flooding and pediatric enteric infections in the MAL-ED cohort in a low-income, urban neighborhood in Vellore, India</p> <p>BMC Public Health. 2019 Jul 10;19(1):926. doi: 10.1186/s12889-019-7268-1.</p> <p><b>Address:</b> Department of Environmental Health, Rollins School of Public Health, Emory University, Atlanta, GA, USA. dberendes@cdc.gov. Center for Global Safe Water, Sanitation, and Hygiene, Rollins School of Public Health, Emory University, Atlanta, GA, USA. dberendes@cdc.gov. Present <b>Address:</b> Waterborne Disease Prevention Branch, Division of Foodborne, Waterborne, and Environmental Diseases, Centers for Disease Control and Prevention, Atlanta, GA, USA. dberendes@cdc.gov. Center for Global Safe Water, Sanitation, and Hygiene, Rollins School of Public Health, Emory University, Atlanta, GA, USA. Hubert Department of Global Health, Rollins School of Public Health, Emory University, Atlanta, GA, USA. Department of Biostatistics, Rollins School of Public Health, Emory University, Atlanta, GA, USA. Wellcome Research Laboratory, <b>Christian Medical College, Vellore, India.</b> Department of Community Health, <b>Christian Medical College,</b></p>	INT	JUL TO DEC	Wellcome Laboratory, Health	Research Community	<p><b>PMID:</b> 31291914 <b>Impact Factor:</b> 2.567 <b>(BIOXBIO - 2018)</b> <b>H-Index:</b> 117</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Vellore, India.</b>            BACKGROUND: Open drains are common methods of transporting solid waste and excreta in low-income urban neighborhoods. Open drains can overflow due to blockages with solid waste and during rainfall, posing exposure risks. The goal of this study was to evaluate whether pediatric enteric infection was associated with open drains and flooding in a dense, low-income, urban neighborhood. METHODS: As part of the MAL-ED study in Vellore, India, a cohort of 230 children provided stool specimens at 14-17 scheduled home visits and during diarrheal episodes in the first two years of life. All specimens were analyzed for enteric pathogens. Caregivers in 100 households reported on flooding of drains and households and monthly frequency of contact with open drains and flood water. Household GPS points were collected. Monthly rainfall totals for the Vellore district were collected from the Indian Meteorological Department. Clustering of reported drain and house flooding were identified by Kulldorff's Bernoulli Spatial Scan. Differences in enteric infection were assessed for household responses and spatial clusters, with interactions between reported flooding and rainfall to approximate monthly drain flooding retrospectively, using multivariable, mixed-effects logistic regression models. RESULTS: Coverage of household toilets was low (33%), and most toilets (82%) discharged directly into open drains, suggesting poor neighborhood fecal sludge management. Odds of enteric infection increased significantly with total monthly rainfall for children who lived in households that reported that the nearby drain flooded (4% increase per cm of rain: OR: 1.04, 95% CI: 1.00-1.08) and for children in households in a downstream spatial cluster of reported drain flooding (5% increase per cm of rain: OR: 1.05, 95% CI: 1.01-1.09). There was no association between odds of enteric infection and frequency of reported contact with drain or floodwater. CONCLUSIONS: Children in areas susceptible to open drain flooding had increased odds of enteric infection as rainfall increased. Results suggested that infection increased with rainfall due to neighborhood infrastructure (including poor fecal sludge management) and not frequency of contact. Thus, these exposures may not be mitigated by changes in personal behaviors alone. These results underscore the importance of improving the neighborhood environment to improve children's health in low-income, urban settings.</p>				
72.	Bharat, A., Mehta, A., Tiwari, H. C., Sharma, B., Singh, A. and Singh, V. Spectrum and Immediate Outcome of Acute Kidney Injury in a Pediatric Intensive Care Unit: A Snapshot Study from Indian	NAT	JUL TO DEC	Pediatrics	<b>PMID:</b> 31485103 <b>Impact Factor: 0.59 (RG - 2018)</b> <b>H-Index: 25</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Subcontinent                      Indian J Crit Care Med; 2019, 23 (8): 352-355  <b>Address:</b> Department of Pediatrics, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Department of Pediatrics, BRD Medical College, Gorakhpur, Uttar Pradesh, India.                      Department of SPM, BRD Medical College, Gorakhpur, Uttar Pradesh, India.</p> <p>Background and aims: Acute kidney injury (AKI) became an important cause of mortality and morbidity in critically ill children, despite advancement in its management. In developing countries etiology of AKI are different from that of developed countries. Materials and methods: This observational study was carried out in pediatric intensive care unit (PICU) in 2 months to 18 years of critically ill children. Kidney injury was defined and categorized by the pRIFLE criteria. Results: Out of 361 children, 86 children (23.8%) developed AKI at some point during admission, 275 children (age and sex matched) who did not develop kidney injury during hospitalization served as non-AKI children. Maximum cases of AKI were seen in 1-5 years of age. Maximum children of AKI were of viral encephalitis (n = 43, 50.0%) followed by scrub typhus (n = 14, 16.3%). Risk factors for the development of AKI were shock, PRISM score and longer hospital stay. In our study the mortality in AKI children (n = 30, 34.8%) was significantly higher (p = 0.005) as compared to non-AKI children (n = 56, 20.3%). Duration on mechanical ventilation, PICU stay and hospital stay were also significantly (p = 0.001) higher in AKI children. Conclusion: AKI is common in critically ill children and associated with high mortality and morbidity. How to cite this article: Bharat A, Mehta A, Tiwari HC, Sharma B, Singh A, Singh V. Spectrum and Immediate Outcome of Acute Kidney Injury in a Pediatric Intensive Care Unit: A Snapshot Study from Indian Subcontinent. Indian J Crit Care Med 2019;23(8):352-355.</p>				
73.	<p>Bharath Kumar, C., Chowdhury, S. D., Ghatak, S. K., Sreekar, D., Kurien, R. T., David, D., Dutta, A. K., Simon, E. G. and Joseph, A. J. Immediate and long-term outcome of corrosive ingestion                      Indian J Gastroenterol; 2019, 38 (4): 356-361  <b>Address:</b> Department of Gastroenterology, <b>Christian Medical College, Vellore</b>, 632 004, India.                      Department of Gastroenterology, <b>Christian Medical College, Vellore</b>, 632 004, India. sudiptadharchowdhury@gmail.com.                      BACKGROUND: Corrosive ingestion (CI) has short- and long-term consequences. The aim of this study was to assess the outcome of</p>	NAT	JUL TO DEC	Gastroenterology	<p><b>PMID:</b> 31643028  <b>Impact Factor: 0.74 (RG- 2018)</b>  <b>H-Index: 37</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>mucosal injury grade <math>\geq</math> 2A. METHODS: Consecutive patients between January 2008 and January 2015 who presented within 48 h of CI were included. Details of substance ingested, intent, symptoms, injury grade at endoscopy, and treatment were obtained by a review of medical records. Patients aged less than 15 years or injury grade less than 2A were excluded. Patients were followed up using a structured symptom-based questionnaire and barium swallow. RESULTS: A total of 112 patients were admitted with CI during the study period. Eighty-two patients were included in the study. There was no relationship between the presence of symptoms or oral mucosal injury and the grades of gastrointestinal mucosal injury. Grades 2B and 3A were the most common grades of mucosal injury. Five patients died at index hospitalization. Patients were followed up for a median period of 31 months (6-72) during which 11 patients were lost to follow up. During follow up, 2 patients with high-grade injury died as a consequence of CI and 4 died of unrelated causes. Sixteen (26.6%) patients remained symptomatic. Forty-three patients underwent barium swallow. Esophageal stricture was identified in 11 patients, gastric stricture in 8, and combined esophageal and gastric in 2. High-grade esophageal mucosal injury was associated with a high risk of stricture formation (<math>p = 0.02</math>). CONCLUSIONS: CI is associated with high immediate and long-term morbidity and mortality.</p>				
74.	<p>Bhati, P., Samynathan, K., Sebastian, A., Thomas, A., Chandy, R. and Peedicayil, A.                      Proximal Partial Vaginectomy for Vaginal Intraepithelial Neoplasia                      J Obstet Gynaecol India; 2019, 69 (Suppl 2): 160-164  <b>Address:</b> Dept of Gynaecologic Oncology, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004 India.grid.11586.3b00000004 1767 8969                      Objective: The purpose of this study was to evaluate the use of proximal partial vaginectomy for the treatment of VaIN. Study design: Descriptive. Methods: Between May 2009 and December 2017, 20 patients were identified who underwent partial vaginectomy for VaIN. The electronic medical records were reviewed and information collated. Operative technique: A circular incision in mid-vagina, was taken for all these patients and the upper vagina was closed over a gauze pack. The proximal vagina was then excised with the gauze inside. Results: None of the patients had previously been treated for VaIN. The diagnosis was made on cytology/biopsy. Twelve of the 13 patients who were tested, were positive for high-risk HPV DNA, while one was negative. Thirteen (65%) had previous gynaecological surgery for cervical neoplasia (invasive</p>	NAT	JUL TO DEC	Gynaecologic Oncology	<p><b>PMID:</b> 31686750  <b>PMC ID:</b>6801277  <b>Impact Factor:</b> 0.79  <b>(RG - 2018)</b>  <b>H-Index:</b> 12</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	cancer 6 and CIN 7) and the remaining 7 for apparent benign disease. There was one patient who went on to have a cone biopsy, and one had a modified radical hysterectomy at the same sitting. None of the patients had post-operative complications. Median hospital stay was 3 days (range 2-9). Follow-up (median 7 months, range 0-60) was available in 19 patients out of whom five had abnormal cytology, five were HPV DNA positive, and three had recurrent VaIN on follow-up biopsy and had re-excision for recurrence. One patient had vulvar intraepithelial neoplasia (VIN 3) and underwent excision. Another had CIN 3 and underwent excision of cervical stump. Conclusions: Vaginectomy appears to be a safe and efficacious procedure for treatment of VaIN. Patients have to be followed up with cytology, HPV testing, and biopsy to exclude vagina recurrence and HPV-related lesion at another site.				
75.	<p>Bhatia, Anuradha, Kanish, Bimal, Badyal, Dinesh Kumar, Kate, Prajakta and Choudhary, Swati</p> <p>Efficacy of oral terbinafine versus itraconazole in treatment of dermatophytic infection of skin - A prospective, randomized comparative study</p> <p>Indian Journal of Pharmacology; 2019, 51 (2): 116-119</p> <p>OBJECTIVES: Dermatophytic infections are the common fungal infections aggravated by hot and humid climate. Terbinafine and itraconazole are commonly used oral antifungal agents for the same. However, resistance to these drugs is being seen increasingly when used in the conventional doses and duration. Therefore, this study was designed to compare the efficacy of terbinafine and itraconazole in increased dosages and duration in the treatment of tinea corporis and tinea cruris. MATERIALS AND METHODS: In this randomized comparative study, patients of tinea cruris and tinea corporis were randomly divided into two groups of 160 each and were given oral terbinafine (Group I) and oral itraconazole (Group II) for 4 weeks. The scores and percentage change in scores of pruritus, scaling, and erythema were evaluated at 2 and 4 weeks. RESULTS: At the end of week 4, mycological cure was seen in 91.8% after 4 weeks in the itraconazole group as compared to 74.3% of patients in the terbinafine group. There was a significant improvement in percentage change in pruritus, scaling, and erythema in both the groups from 0 to 4 weeks. On comparing groups, the percentage change was significantly different in scaling from 0 to 2 weeks (5.4 vs. -4.8) and 2-4 weeks (16.7 vs. 29.6) between Group I and Group II, respectively. Clinical global improvement was better with itraconazole. Mild adverse effects such as gastrointestinal upset,</p>	NAT	JAN TO JUN	Pharmacology	<p><b>WOS:000468921400006</b></p> <p><b>PMC</b></p> <p><b>Impact Factor: 0.80</b></p> <p><b>(RG-2018)</b></p> <p><b>H-Index: 52</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	headache, and taste disturbances were observed which were comparable in both the groups. CONCLUSIONS: Itraconazole and terbinafine seem to be equally effective and safe in the treatment of tinea cruris and tinea corporis.				
76.	<p>Bhatt, Aditi, Mehta, Sanket S., Zaveri, Shabber, Rajan, Firoz, Ray, Mukurdipi, Sethna, Kayomarz, Katdare, Ninad, Patel, Mahesh D., Kammar, Praveen, Prabhu, Robin, Sinukumar, Snita, Mishra, Suniti, Rangarajan, Bharath, Rangole, Ashvin, Damodaran, Dileep, Penumadu, Prasanth, Ganesh, Mandakulutur, Peedicayil, Abraham, Raj, Hemant and Seshadri, Ramakrishnan</p> <p>Treading the beaten path with old and new obstacles: a report from the Indian HIPEC registry International Journal of Hyperthermia; 2019, 35 (1): 361-369</p> <p>Background: The Indian HIPEC registry is a self-funded registry instituted by a group of Indian surgeons for patients with peritoneal metastases (PM) undergoing surgical treatment. This work was performed to center dot Evaluate outcomes of cytoreductive surgery +/- HIPEC in patients enrolled in the registry. center dot Identify operational problems. Methods: A retrospective analysis of patients enrolled in the registry from March 2016 to September 2017 was performed. An online survey was performed to study the surgeons' attitudes and existing practices pertaining to the registry and identify operational problems. Results: During the study period, 332 patients were enrolled in 8 participating centres. The common indication was ovarian cancer for three centres and pseudomyxoma peritonei for three others. The median PCI ranged from 3 to 23. A CC-0/1 resection was obtained in 94.7%. There was no significant difference in the morbidity (p = .25) and mortality (p = .19) rates between different centres. There was a high rate of failure-to-rescue (19.3%) patients with complications and the survival in patients with colorectal PM was inferior. A lack of dedicated personnel for data collection and entry was the main reason for only 10/43 surgeons contributing data. The other problem was the lack of complete electronic medical record systems at all centres. Conclusions: These results validate existing practices and identify country-specific problems that need to be addressed. Despite operational problems, the registry is an invaluable tool for audit and research. It shows the feasibility of fruitful collaboration between surgeons in the absence of any regulatory body or funding for the project.</p>	INT	JAN TO JUN	Obstetrics and Gynecology	<p><b>WOS:000456375800001</b>  <b>PMC</b>  <b>Impact Factor: 3.440</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 73</b></p>
77.	Bhatt, S., Isaac, R., Finkel, M., Evans, J., Grant, L., Paul, B. and Weller, D.	INT	JAN TO JUN	RUHSA	<p><b>PMID:30603075</b>  <b>PMC ID:6304168</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Mobile technology and cancer screening: Lessons from rural India Journal of global health; 2018, 8 (2): 020421</p> <p><b>Address:</b> Medic Mobile, Mumbai, India. RUHSA Department <b>Christian Medical College, Vellore, India.</b> Weill Cornell Medical College, New York, New York, USA. Centre for Population Health Sciences, University of Edinburgh, Edinburgh, UK.</p> <p>Background: Rates of cervical and oral cancer in India are unacceptably high. Survival from these cancers is poor, largely due to late presentation and a lack of early diagnosis and screening programmes. Mobile Health ('mHealth') shows promise as a means of supporting screening activity, particularly in rural and remote communities where the required information infrastructure is lacking. Methods: We developed a mHealth prototype and ran training sessions in its use. We then implemented our mHealth-supported screening intervention in 3 sites serving poor, low-health-literacy communities: RUHSA (where cervical screening programmes were already established), Mungeli (Chhattisgarh) and Padhar (Madhya Pradesh). Screening was delivered by community health workers (CHWs - 10 from RUHSA, 8 from Mungeli and 7 from Padhar), supported by nurses (2 in Mungeli and Padhar, 5 in RUHSA): cervical screening was by VIA; oral cancer screening was by mouth inspection with illumination. Our evaluation comprised an analysis of uptake in response to screening and follow-up invitations, complemented by qualitative data from 8 key informant interviews and 2 focus groups. Results: 8686 people were screened through the mHealth intervention - the majority (98%) for oral cancer. Positivity rates were 28% for cervical screening (of whom 37% attended for follow-up) and 5% for oral cancer screening (of whom 31% attended for follow-up). The mHealth prototype was very acceptable to CHWs, who felt it made the task of screening more reliable. A number of barriers to screening and follow-up in test-positive individuals were identified. Use of the mHealth prototype has had a positive effect on the social standing of the CHWs delivering the interventions. Conclusions: mHealth approaches can support cancer screening in poor rural communities with low levels of health literacy. However, they are not sufficient to overcome the range of social, cultural and financial barriers to screening and follow-up. Approaches which combine mHealth with extensive community education, tailored to levels of health literacy in the target population, and well-defined diagnostic and treatment pathways are the most likely to achieve a</p>				<p><b>Impact Factor: 1.25</b> <b>(RG-2018)</b> <b>H-Index: 20</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	good response in these communities. form at <a href="http://www.icmje.org/coi_disclosure.pdf">www.icmje.org/coi_disclosure.pdf</a> (available on request from the corresponding author), and declare no conflicts of interest.				
78.	<p>Bhaumik, S., Kirubakaran, R. and Chaudhuri, S. Primary closure versus delayed or no closure for traumatic wounds due to mammalian bite Cochrane Database of Systematic Reviews; 2019, 2019 (12): <b>Address:</b> The George Institute for Global Health, 311-312, Third Floor, Elegance Tower, Plot No. 8, Jasola District Centre, New Delhi, 110025, India <b>Christian Medical College,</b> Cochrane South Asia, Prof. BV Moses Centre for Evidence-Informed Healthcare and Health Policy, Carman Block II Floor, CMC Campus, Bagayam, Vellore, 632002, India <b>Christian Medical College,</b> Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, Ida Scudder Road, Vellore, Tamil Nadu PIN 632004, India</p> <p>Background: Mammalian bites are a common presentation in emergency and primary healthcare facilities across the world. The World Health Organization recommends postponing the suturing of a bite wound but this has not been evaluated through a systematic review. Objectives: To assess the effects of primary closure compared with delayed closure or no closure for mammalian bite wounds. Search methods: In July 2019 we searched the Cochrane Wounds Specialised Register; the Cochrane Central Register of Controlled Trials (CENTRAL); Ovid MEDLINE (including In-Process &amp; Other Non-Indexed Citations); Ovid Embase and EBSCO CINAHL Plus. We also searched clinical trials registries for ongoing and unpublished studies, and scanned reference lists of relevant included studies as well as reviews, meta-analyses and health technology reports to identify additional studies. There were no restrictions with respect to language, date of publication or study setting. Selection criteria: We included randomised controlled trials which compared primary closure with delayed or no closure for traumatic wounds due to mammalian bite. Data collection and analysis: Two review authors independently screened titles, abstracts and full-text publications, applied the inclusion criteria, and extracted data. We pooled data using a random-effects model, as appropriate. We used the Cochrane 'Risk of bias' tool and assessed the certainty of the evidence using the GRADE approach. Main results: We found three trials (878 participants) that compared primary closure with no closure for dog bites and one trial (120 participants) that compared primary closure with delayed closure. No other mammalian bite studies were identified. The trials were from</p>	INT	JUL TO DEC	Cochrane South Asia, Wellcome Trust Research Laboratory	<p><b>PMID: 31805611</b>  <b>PMCID: PMC6894945</b>  <b>PMC Review 22372</b>  <b>Impact Factor: 6.754</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 244</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>the UK (one trial), Greece (one trial) and China (two trials). Overall, participants from both sexes and all age groups were represented. We are uncertain whether primary closure improves the proportion of wounds which are infection-free compared with no closure, as the certainty of evidence for this outcome was judged to be very low (risk ratio (RR) 1.01, 95% confidence interval (CI) 0.97 to 1.05; 2 studies, 782 participants; I<sup>2</sup> = 0%). We downgraded the evidence by one level for high risk of bias and two levels for imprecision. There is no clinically important difference in cosmesis (acceptable physical/cosmetic appearance) of dog bite wounds when primary closure is compared with no closure (mean difference (MD) -1.31, 95% CI -2.03 to -0.59; 1 study, 182 participants). The certainty of evidence for this outcome was judged to be moderate (we downgraded our assessment by one level for imprecision). We are uncertain whether primary closure improves the proportion of dog bite wounds that are infection-free compared with delayed closure, as the evidence for this outcome was judged to be very low (RR 0.98, 95% CI 0.90 to 1.07; 1 study, 120 participants; I<sup>2</sup> = 0%). We downgraded the evidence by one level for high risk of bias and two levels for imprecision. None of the four trials reported any adverse outcomes such as death or rabies but they were, in any case, unlikely to have been large enough to have satisfactory power to provide precise estimates for these. Important outcomes like time to complete wound healing, proportion of wounds healed, and length of hospital stay were not evaluated. Authors' conclusions: All the studies we identified concerned dog bites. There is no high-certainty evidence to support or refute existing recommendations concerning primary closure for dog bites. The potential benefits and harms of primary closure compared with delayed or no closure for mammalian bites remain uncertain and more robust trials are needed. Copyright © 2019 The Cochrane Collaboration. Published by John Wiley &amp; Sons, Ltd. [Available on 2020-12-06] DOI: 10.1002/14651858.CD011822.pub2</p>				
79.	<p>Bhowmick, K. and Boopalan, P. R. J. V. C.            Saving the ankle in distal fibular giant cell tumour – A case report  <i>J Clin Orthop Trauma</i>; 2019, 10 (6): 1054-1058</p> <p><b>Address:</b> Department of Orthopaedics Unit 3, <b>Christian Medical College, Vellore, India</b>            Centre for Stem Cell Research, <b>Christian Medical College, Vellore, India</b></p> <p>Distal Fibula Giant cell tumour (GCT) is a rare condition. The</p>	INT	JAN TO JUN	Orthopaedics, Centre for Stem Cell Research	<p><b>PMID:</b>31708627  <b>PMC ID:</b>6834935  <b>Impact Factor: 0.35 (RG-2018)</b>  <b>H-Index: 12</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	described methods of treatment for distal fibula GCT include excision of tumour and ankle arthrodesis, replacement of distal fibula with ipsilateral proximal fibula and autograft or allograft reconstruction. This case report describes treatment of distal fibula grade 3 GCT with involvement of syndesmosis with tumour excision, proximal fibular slide and reconstruction of ankle joint. With this technique the ankle joint movements are preserved and stability is maintained. © 2019				
80.	<p>Bhowmick, K., Boopalan, Prjvc, Gunasekeran, C., Livingston, A. and Jepeganam, T. S.  Management of Chronic Infected Intra-Articular Fractures of the Proximal Tibia with Ilizarov Ring Fixation  J Knee Surg; 2019,  <b>Address:</b> Department of Orthopaedics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Infected nonunion and malunion of tibial plateau are rare injuries with no standardized protocols for treatment. This study assessed the outcome of chronic infected intra-articular proximal tibial fractures with and without metaphyseal bone loss managed with the Ilizarov ring fixator. A series of six patients of intra-articular infected nonunion of the tibial plateau and two patients with malunited plateau with metaphyseal nonunion were treated in a tertiary care hospital. Three of these eight patients had a metaphyseal bone loss or bone gap after debridement and underwent internal transport with distal corticotomy to obtain the bone length. The remaining five patients underwent static ring fixation after correction of the articular deformity. Clinical evaluation was done by Knee Society Score, Rasmussen radiological and Association for the Study and Application of Methods of Ilizarov scores. All patients but one achieved union with the ring fixator. The average follow-up was 33 months (range, 12-120 months). Average time to achieve union was 11.5 months (range, 3-30). The scores were good in four patients and poor in the rest four, out of which three had undergone internal transport. Proximal tibia intra-articular infected nonunion and malunion with or without metaphyseal bone loss can be treated successfully with the Ilizarov fixator. Malunion of the tibial plateau has to be addressed in cases with varus alignment of the limb or articular step-off of <math>\geq</math> 5mm between the two tibial surfaces. Patients with associated metaphyseal bone loss tend to have complications and take a longer duration to heal. Single-stage treatment avoids intra-articular malunion and loss of limb alignment.</p>	INT	JAN TO JUN	Orthopaedics	<b>PMID:30650438</b> <b>PMC</b> <b>Impact Factor: 0.53</b> <b>(RG-2018)</b> <b>H-Index: NA</b>
81.	<p>Bhowmick, K., Matthai, T., Boopalan, P. R. J. and Jepeganam, T. S.  Decision making in the management of malunion and nonunion of</p>	INT	JUL TO DEC	Orthopaedics	<b>PMID: 31304795</b> <b>Impact Factor: 1.250</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>intertrochanteric fractures of the hip Hip Int; 2019, 1120700019863410 <b>Address:</b> Department of Orthopaedics, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India. AIM: Intertrochanteric fractures account for almost 50% of hip fractures. Nonunion and malunion of these fractures are relatively uncommon. This study reviews the outcome of 31 cases of intertrochanteric fracture failures. An algorithm for the management of these injuries is also proposed. METHODS: 19 patients with intertrochanteric malunion and 12 patients with non-union were included in this study. Treatment of these injuries was initiated according to the algorithm proposed in this study. Treatment outcomes were evaluated by assessing union, pre and postoperative shortening and HSA (head-shaft angle). Functional outcomes were assessed by the Parker mobility scale and presence or absence of pain. RESULTS: All the patients with intertrochanteric malunion with follow-up had united. The postoperative shortening in all patients were 2.5 cms. Patients having intertrochanteric nonunion with follow-up, who underwent internal fixation had united with an acceptable Parker mobility scale score, except in 1 patient who sustained an ipsilateral distal femur fracture. The average HSA correction obtained was 21 degrees (range 3-60 degrees ). CONCLUSION: The algorithm proposed in this study helps streamline the treatment according to each case scenario. It helps in planning and managing patients with intertrochanteric fracture failures.</p>				(BIOXBIO - 2018) H-Index: 31
82.	<p>Binu, A. J., Cherian, K. E., Kapoor, N., Jebasingh, F. K., Asha, H. S. and Paul, T. V. Bone Health after Fifth Decade in Rural Ambulatory South Indian Postmenopausal Women Indian J Community Med; 2019, 44 (3): 205-208 <b>Address:</b> Department of Internal Medicine, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India. Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India. Background: The incidence of postmenopausal osteoporosis continues to rise, as population ages. The morbidity and mortality associated with osteoporotic fractures have a significant negative impact on the economy and quality of life of the affected individual and the community, at large. Objectives: We aimed to study the prevalence of osteoporosis in ambulant rural postmenopausal women, and to look at their dietary calcium intake (DCI) and Vitamin D status. Subjects and Methods: This was a cross-sectional study conducted in 1565 ambulant South Indian rural postmenopausal</p>	NAT	JUL TO DEC	Internal Medicine, Endocrinology, Diabetes and Metabolism.	PMID: 31602103 Impact Factor: 1.07 (RG - 2018) H-Index: 23

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	women. Bone mineral density was estimated by a dual-energy X-ray absorptiometry scan at the femoral neck (FN) and lumbar spine (LS). DCI was calculated by recall for the previous week, and the blood bone biochemical profile was measured. Results: The mean standard deviation (SD) age and body mass index of this population were 60.7 (7.2) years and 26.2 (4.8) kg/m(2), respectively. The prevalence of osteoporosis was 22% at the FN and 39% at the LS. An increase in the prevalence of osteoporosis was noted at both sites, in successive age categories. Mean (SD) DCI was 420 (282) mg/24 h. Fifty-four percent had Vitamin D deficiency (VDD) (<20 ng/ml) and 6% had severe VDD (<10 ng/ml). Conclusion: A significant proportion of this large cohort of south Indian healthy rural postmenopausal women had osteoporosis at either site with advancing age. Most of them had a suboptimal DCI, and over half of them had VDD.				
83.	<p>Binu, A. J., Rajan, S. J., Rathore, S., Beck, M., Regi, A., Thomson, V. S. and Sathyendra, S.</p> <p>Peripartum cardiomyopathy: An analysis of clinical profiles and outcomes from a tertiary care centre in southern India Obstetric Medicine; 2019,</p> <p><b>Address:</b> Department of General Medicine, Unit – III (Obstetric Medicine), <b>Christian Medical College, Vellore, India</b> Department of Obstetrics, <b>Christian Medical College, Vellore, India</b> Department of Cardiology, <b>Christian Medical College, Vellore, India</b></p> <p>Peripartum cardiomyopathy is a syndrome of maternal heart failure with decreased left ventricular ejection fraction affecting maternal and fetal well-being. We analysed clinical profiles and outcomes in women with peripartum cardiomyopathy enrolled retrospectively from a tertiary care centre in southern India (1 January 2008–31 December 2014). The incidence of peripartum cardiomyopathy was one case per 1541 live births. Fifty-four women with a mean age of 25.5 years and mean gestational age of 35.4 weeks were recruited; 35 were primigravidae. Maternal and fetal deaths occurred in 9.3% and 24.1% of subjects, respectively. Mild-to-moderate maternal anaemia (80–110 g/L) was associated with fetal mortality (<math>p = 0.02</math>). Reduced left ventricular ejection fraction (&lt;30%, <math>p = 0.04</math>) and cardiogenic shock (<math>p = 0.01</math>) were significantly associated with adverse maternal outcomes. Forty per cent of women were followed up after <math>24.2 \pm 17.7</math> months, and in these women a significant increase in left ventricular ejection fraction was seen (mean 16.4%, <math>p &lt; 0.01</math>); all were asymptomatic. Peripartum cardiomyopathy with</p>	INT	JAN TO JUN	General Medicine, Obstetrics, Cardiology	<b>PMCArticle Impact Factor: 0.34 (RG-2018) H-Index: 8</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	poor left ventricular ejection fraction and shock is associated with adverse maternal outcomes, while non-severe maternal anaemia predisposes to adverse fetal outcomes. Significant left ventricular ejection fraction recovery occurred on follow-up. © The Author(s) 2019.				
84.	<p>Binu, Aditya John, Mishra, Ajay Kumar, Gunasekaran, Karthik and Iyadurai, Ramya Cardiovascular manifestations and patient outcomes following snake envenomation: a pilot study Tropical Doctor; 2019, 49 (1): 10-13</p> <p>Cardiotoxicity in snake envenomation has not been adequately explored in the literature. This retrospective, observational study analysed clinical profiles and cardiovascular effects (CVE), with associated outcomes, in snake envenomation. Thirty-four patients were recruited between April 2014 and October 2017. Cardiovascular involvement was seen in 24 (70.6%) patients. Electrocardiographic changes included prolonged QTc (62.5%), T-wave inversion (37.5%) and tall T-waves (12.5%). Hospital stay was 7.2 (SD = 5.3) days and 4.4 (SD = 2.4) days in CVE and non-CVE groups respectively (P value = 0.04). Mechanical ventilation was required only in nine of the CVE group (37.5%; P value = 0.03). Shock was observed in seven patients (20.6%). Two of the patients in the CVE group (5.9%) died (P value = 1.0); the majority had good outcomes with early administration of anti-venom serum and appropriate supportive measures. Thus, inpatient stay and mechanical ventilation were significantly increased in snake envenomation with CVEs, especially where an underlying co-morbidity existed.</p>	INT	JAN TO JUN	Neonatology, Neurology Pediatric	<p>WOS:000457495800004 Impact Factor: 0.36 (RG-2018) H-Index: 31</p>
85.	<p>Boaz, J., Chandrasingh, J., Kumar, S. and Devasia, A. Percutaneous nephrolithotomy in autosomal polycystic kidney disease Bju International; 2019, 123 29-30</p>	INT	JAN TO JUN	Urology	<p>WOS:000464354600050 Impact Factor: 4.688 (BIOXBIO-2018) H-Index: 133</p>
86.	<p>Boaz, R. J., Phukan, C., Mandeep, S. and Devasia, A. Sebaceous carcinoma of the penis: As aggressive as it is rare Urol Ann; 2019, 11 (2): 226-228</p> <p><b>Address:</b> Department of Urology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India. Department of Pathology, <b>Christian Medical College, Vellore,</b></p>	INT	JAN TO JUN	Urology, Pathology	<p>PMID:31040615 PMC ID:6476223 Impact Factor: 1.14 (RG-2018) H-Index: 15</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Tamil Nadu</b>, India.</p> <p>Malignant neoplasm of the penis is a rare cancer in industrialized countries but is not uncommon in India. Nearly 95% of penile cancer is squamous cell carcinoma. Malignant neoplasms of the sebaceous glands, which are mostly confined to the head and neck region, are even rarer. We present a 74-year-old male with sebaceous cell carcinoma of the penis. He underwent excision of the primary lesion with bilateral inguinal lymph node dissection followed by adjuvant chemotherapy. © 2019 Urology Annals   Published by Wolters Kluwer - Medknow.</p>				
87.	<p>Boddu D(1), Verghese VP(1), Michael JS(2), Chacko A(1), Jeyaseelan V(3).                      Utility of QuantiFERON®-TB gold In-Tube test compared with tuberculin skin test in diagnosing tuberculosis in Indian children with malnutrition.                      Indian J Med Microbiol. 2019 Jul-Sep;37(3):433-437.                      doi:10.4103/ijmm.IJMM_19_227.</p> <p><b>Author information:</b>                      (1)Department of Paediatrics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.                      (2)Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.                      (3)Department of Biostatistics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</p> <p>This prospective cohort study was conducted to compare the accuracy of QuantiFERON®-TB (QFT) Gold In-Tube test and tuberculin skin test (TST) in diagnosing tuberculosis (TB) in predominantly bacille Calmette-Guerin-vaccinated children with a high incidence of malnutrition. The sensitivity of the QFT versus the TST was 69.6% versus 52.9% for WHO-defined TB, with specificity of 86% versus 78.3%, respectively. The concordance of the TST and QFT was 79% overall (<math>\kappa = 0.430</math>), 62.5% in those with WHO-defined TB and 85.7% in those without TB. Majority of the QFT+/TST - discordance was seen in children with TB, whereas majority of the TST+/QFT - discordance was seen in those without TB. The TST was more likely to be negative in children with moderate-to-severe malnutrition (P = 0.003) compared to the QFT, which was more likely to be positive in younger children. The significantly better performance of the QFT in malnourished children and those at</p>	NAT	JUL TO DEC	Pediatrics, Clinical Microbiology, Biostatistics	<p><b>PMID:</b> 32003347  <b>Impact Factor:</b> 0.950  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 41</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	younger ages supports its use for TB diagnosis in these subpopulations. DOI: 10.4103/ijmm.IJMM_19_227				
88.	<p>Bondu, J. D., Nellickal, A. J., Jeyaseelan, L. and Geethanjali, F. S. Assessing Diagnostic Accuracy of Serum Holotranscobalamin (Active-B12) in Comparison with Other Markers of Vitamin B12 Deficiency                      Indian Journal of Clinical Biochemistry; 2019,  <b>Address:</b> Department of Clinical Biochemistry, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India                      Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu,</b> India</p> <p>About 15–40% India is Vitamin B12 deficient (commonly diagnosed by total Vitamin B12) but, as only holoTC (active form) is taken up by body cells, thus measuring holoTC is more reflective of Vitamin B12 status than the former. We aimed to assess diagnostic accuracy of serum holoTC in comparison with total Vitamin B12 and total Homocysteine (HCY) as indicator of serum Vitamin B12 status. 217 human subjects (99 males and 118 females) ranging from 17 to 83 years were divided into Vitamin B12 deficient (n = 70), borderline (n = 100) and sufficient groups (n = 47) who were further assessed for markers of Vitamin B12 deficiency—holoTC, HCY, Mean Corpuscular Volume (MCV), Folate, hemoglobin and creatinine. Samples were analysed using Siemens Advia Centaur Xpi. Total Vitamin B12 deficient group had – 84.3% holoTC deficient; 15.7% holoTC sufficient; 72.9% with elevated HCY; 27.1% with normal HCY; 11.4% with megaloblastic anaemia. Borderline group had – 34% holoTC deficient; 28% elevated HCY. A strong positive correlation was found between Total Vitamin B12 and holoTC (r = 0.754, p = &lt;0.001) but strong negative correlation existed between holoTC and HCY (r = – 0.471, p = &lt;0.001). Concordance between Total Vit B12 and HCY (Kappa index = 0.51, p &lt; 0.001); between holoTC and HCY (Kappa index = 0.52, p = &lt;0.001) were statically significant but the latter had a better sensitivity and specificity. Also, statically significant association exists between Total Vitamin B12 and holoTC with HCY (p = &lt;0.001). Therefore, it is ascertained that Active Vitamin B12 assay is a better test and can be considered as an early marker of vitamin B12 deficiency. © 2019, Association of Clinical Biochemists of India.</p>	NAT	JAN TO JUN	Clinical Biochemistry, Biostatistics	<b>PMC Article Impact Factor: 0.42 (RG-2018)</b> <b>H-Index: 34</b>
89.	<p>Bondu, J. D., Seshadri, M. S., Selvakumar, R. and Fleming, J. J. Effects of Fluoride on Bone in an Animal Model of Vitamin D Deficiency                      Indian Journal of Clinical Biochemistry; 2019, 34 (1): 60-67</p>	NAT	JAN TO JUN	Clinical Biochemistry, Endocrinology	<b>PMC Article Impact Factor: 0.42 (RG-2018)</b> <b>H-Index: 34</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> Department of Clinical Biochemistry, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India Department of Endocrinology, <b>Christian Medical College,</b> Tamil Nadu, Vellore, India</p> <p>We investigated the combined effect of fluoride exposure and Vitamin D deficiency in causing bone damage as a precursor to development of Fluorotoxic Metabolic Bone Disease. Thirty-six male Sprague–Dawley rats were divided into 6 groups of six; 3 groups received a Vitamin D deficient diet whereas the other 3 received a Vitamin D adequate diet. Serum total 25-hydroxyvitamin D (25OHD), calcium, phosphorus, creatinine, Alkaline phosphatase (ALP), albumin, Parathyroid hormone (PTH), Osteocalcin and C terminal telopeptide (CTx) were measured following exposure to varying levels of fluoride in drinking water (&lt; 1.0, 15 and 50 ppm). Full body Dual-energy X-ray Absorptiometry (DXA) scans were used to examine changes in bone morphology pre and post exposure to fluoride. Renal tubular function was assessed using serum creatinine and urine Cystatin C. Histopathological examination of sections of bone and kidney tissues were also performed. Prior to fluoride exposure, DXA scans revealed a significant decrease in Bone Mineral Density (BMD) and Bone Mineral content (BMC) (<math>p &lt; 0.05</math>) but a significant increase in fat mass (<math>p &lt; 0.05</math>) and fat percentage (<math>p &lt; 0.01</math>) among Vitamin D deficient rats, with no significant change in biochemical parameters. Following exposure to fluoride, BMD was significantly increased (<math>p &lt; 0.05</math>) in both groups with a corresponding increase in serum ALP, bone fluoride content, Osteocalcin, CTx and urine fluoride with increasing levels of fluoride exposure. Serum creatinine calcium and phosphate and urinary cystatin C levels showed no significant changes. Light microscopy examination revealed mild thickening and increased osteoid in 80% of the Vitamin D deficient rats exposed to high levels of fluoride but renal tubular changes were found only in one experimental and one control animal. Fluoride deposited in rat bone affects both osteoblastic and osteoclastic activity. Also, these effects are accentuated in the presence of Vitamin D deficiency. © 2017, Association of Clinical Biochemists of India.</p>				
90.	<p>Bright, H. R., Chandu, S. J., Chacko, R. T. and Backianathan, S.</p> <p>Intercycle Unplanned Hospital Admissions Due to Cisplatin-based Chemotherapy Regimen-induced Adverse Reactions: A Retrospective Analysis</p>	INT	JAN TO JUN	Pharmacology, Pharmacy	<p><b>PMID:31250766</b> <b>PMCImpact Factor: 0.41</b> <b>(RG-2018)</b> <b>H-Index: 31</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Curr Drug Saf; 2019, 14 (3): 182-191  <b>Address: Christian Medical College &amp; Hospital, Vellore 632 004. India.</b></p> <p>BACKGROUND: Cisplatin is a commonly used chemotherapy agent known to induce serious adverse reactions that may require hospital readmission. We aimed to analyze the extent and factors associated with unplanned hospital admissions due to cisplatin-based chemotherapy regimen-induced adverse reactions. METHOD: Retrospective review of medical records of those patients who received at least one cycle of chemotherapy with cisplatin-based regimen during a six-month period from March to August 2017. RESULTS: Of the 458 patients who received cisplatin during the study period, 142 patients did not meet inclusion criteria. The remaining 316 patients had a total of 770 episodes of primary admissions for chemotherapy administration. Overall, 187 episodes (24%) of intercycle unplanned hospital admission were recorded of which a major proportion (n=178; 23%) was due to chemotherapy-induced adverse reactions. Underweight patients had higher odds of unplanned admission (OR 1.77, 95% confidence interval [CI] 1.11 to 1.77). Significantly more number of patients with cancers of head and neck and cancers of musculoskeletal were readmitted (p&lt;0.001). Compared to high-dose cisplatin, low- and intermediate-dose cisplatin had lesser odds of unplanned admission (OR 0.52 and 0.77; 95% CI, 0.31 to 0.88 and 0.41 to 1.45 respectively). Patients without concomitant radiotherapy, drug-drug interaction and initial chemotherapy cycles had lesser odds of unplanned admission (OR 0.38, 0.50 and 0.52; 95% CI, 0.26 to 0.55, 0.25 to 0.99 and 0.32 to 0.84 respectively). Unplanned admissions were mainly due to blood-related (31%) and gastrointestinal (19%) adverse reactions. Among chemotherapy regimens, cisplatin monotherapy (34%) and cisplatin with doxorubicin (20%) regimens resulted in a major proportion of unplanned admissions. CONCLUSION: These findings identified high-risk patients and suggest that therapy modifications may reduce hospital readmissions due to cisplatin-based chemotherapy-induced adverse reactions.</p>				
91.	<p>Britto, C. D., John, J., Verghese, V. P. and Pollard, A. J.  A systematic review of antimicrobial resistance of typhoidal Salmonella in India  Indian Journal of Medical Research; 2019, 149 (2): 151-163</p>	NAT	JAN TO JUN	Paediatrics	<p><b>PMCRewiew  Impact Factor: 1.508  (BIOXBIO-2018)  H-Index: 75</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> Department of Paediatrics, University of Oxford, NIHR Oxford Biomedical Research Centre, Oxford, United Kingdom Department of Community Medicine, Vellore, Tamil Nadu 632 002, India Department of Paediatrics, <b>Christian Medical College, Vellore, India</b></p> <p>Background &amp; objectives: The temporal trends in the development of antimicrobial resistance (AMR) among Salmonella Typhi and Salmonella Paratyphi in India have not been systematically reported. We aimed to systematically review the temporal AMR trends (phenotypic and molecular mechanisms) in bacterial isolates from patients with enteric fever over two decades in India. Methods: To identify trends in AMR in India, resistance patterns among 4611 individual S. Typhi isolates and 800 S. Paratyphi A isolates, reported from 1992 to 2017 in 40 publications, were analysed. Molecular resistance determinants were extracted from 22 publications and also reviewed in accordance with the PRISMA guidelines. Articles were sourced using a predefined search strategy from different databases. Results: The analyses suggested that multidrug-resistant (MDR) enteric fever was declining in India and being replaced by fluoroquinolone (FQ) resistance. Mutations in gyrA and parC were key mechanisms responsible for FQ resistance, whereas MDR was largely driven by resistance determinants encoded on mobile genetic elements (plasmids, transposons). Interpretation &amp; conclusions: The results reflect the effect of antimicrobial pressure which has been driving AMR in typhoidal Salmonella in India. Understanding these trends is important in planning future approaches to therapy, which serve as a baseline for assessment of the impact of new typhoid conjugate vaccines against these resistant organisms. © 2019 Indian Journal of Medical Research.</p>				
92.	<p>Brogie, L., Fretham, C., Al-Seraihy, A., George, B., Kurtzberg, J., Loren, A., Macmillan, M., Martinez, C., Davies, S. M. and Pasquini, M. C.</p> <p>Pulmonary Complications in Pediatric and Adolescent Patients Following Allogeneic Hematopoietic Cell Transplantation Biol Blood Marrow Transplant; 2019, 25 (10): 2024-2030</p> <p><b>Address:</b> Department of pediatrics, Columbia University Medical Center, New York, New York. National Marrow Donor Program/Be the Match, CIBMTR (Center for International Blood and Marrow Transplant Research), Minneapolis,</p>	INT	JUL TO DEC	Hematology	<p><b>PMID:</b> 31201861 <b>Impact Factor:</b> 3.599 <b>(BIOXBIO - 2018)</b> <b>H-Index: 107</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Minnesota. Department of pediatrics, King Faisal Specialist Hospital &amp; Research Center, Riyadh, Saudi Arabia. Department of hematology, <b>Christian Medical College, Vellore, India.</b> Division of Pediatric-Blood &amp; Marrow Transplantation, Department of Pediatrics, Duke University Medical Center, Durham, North Carolina; Carolinas Cord Blood Bank, Durham, North Carolina. Division of Hematology/Oncology, Department of Medicine, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, Pennsylvania. Blood and Marrow Transplant Program-Pediatrics, University of Minnesota, Minneapolis, Minnesota. Center for Cell and Gene Therapy, Baylor College of Medicine, Houston, Texas. Department of pediatrics, Cincinnati Children's Hospital, Cincinnati, Ohio. Department of Medicine, CIBMTR (Center for International Blood and Marrow Transplant Research), Medical College of Wisconsin, Milwaukee, Wisconsin. Electronic <b>Address:</b> mpasquini@mcw.edu. Pulmonary complications after hematopoietic cell transplantation (HCT) can lead to significant morbidity and mortality. Limited evaluation of the true incidence of these complications in children and subsequent outcomes of these complications have not been evaluated recently. In April 2018, the National Heart, Lung, and Blood Institute; the Eunice Kennedy Shriver National Institute of Child Health and Human Development; and the National Cancer Institute cosponsored a meeting of experts to describe the status of pulmonary complications in children after HCT, identify critical gaps in knowledge, and explore avenues for research to advance care and optimize outcomes. The Center for International Blood and Marrow Transplant Research was used to evaluate the cumulative incidence of pulmonary complications in children and their respective survival. Of the 5022 children included in this analysis who received allogeneic HCT from 2010 to 2016, 606 developed pulmonary complications within the first year after HCT. Pneumonitis occurred in 388 patients, 125 patients developed pulmonary hemorrhage, and 200 patients had lung graft-versus-host disease (GVHD). For those developing pulmonary complications within 1 year, overall survival 100 days after diagnosis of pulmonary complications was 49% (95% confidence interval [CI], 43% to 54%) for patients with pneumonitis, 23% (95% CI, 16% to 31%) in patients with pulmonary hemorrhage, and 87% (95% CI, 81% to 91%) in patients with pulmonary GVHD.</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	This study demonstrates the approximate incidence of these complications, as well as their significant effects on survival, and can serve as a baseline for future research.				
93.	<p>Bronowski, C., Parker, E. P. K., Sindhu, K. N. C., Praharaj, I., Babji, S., Chinyama, E., Darby, A. C., Grassly, N., Kang, G., Iturriza-Gomara, M. and Ro, V. I. Consortium Impact of the Gut Microbiota on Rotavirus Vaccine Response in Indian, African and European Infants: A Prospective Cohort Study</p> <p>Transactions of the Royal Society of Tropical Medicine and Hygiene; 2019, 113 S65-S66</p>	INT	JUL TO DEC	Clinical Microbiology	<p><b>PMID:</b> WOS:000493064400164 <b>Impact Factor:</b> 2.307 <b>(BIOXBIO - 2018)</b> <b>H-Index: 97</b></p>
94.	<p>Brunet, M., Van Gelder, T., Åsberg, A., Haufroid, V., Hesselink, D. A., Langman, L., Lemaitre, F., Marquet, P., Seger, C., Shipkova, M., Vinks, A., Wallemacq, P., Wieland, E., Woillard, J. B., Barten, M. J., Budde, K., Colom, H., Dieterlen, M. T., Elens, L., Johnson-Davis, K. L., Kunicki, P. K., Macphee, I., Masuda, S., Mathew, B. S., Millán, O., Mizuno, T., Moes, D. J. A. R., Monchaud, C., Noceti, O., Pawinski, T., Picard, N., Van Schaik, R., Sommerer, C., Vethe, N. T., De Winter, B., Christians, U. and Bergan, S. Therapeutic Drug Monitoring of Tacrolimus-Personalized Therapy: Second Consensus Report Therapeutic Drug Monitoring; 2019, 41 (3): 261-307</p> <p><b>Address:</b> Pharmacology and Toxicology Laboratory, Biochemistry and Molecular Genetics Department, Biomedical Diagnostic Center, Hospital Clinic of Barcelona, University of Barcelona, IDIBAPS, CIBERehd, Barcelona, Spain Department of Internal Medicine and Hospital Pharmacy, Erasmus MC, University Medical Center Rotterdam, Rotterdam, Netherlands Department of Transplantation Medicine, Section of Nephrology, Oslo University Hospital-RikshospitaletOslo, Norway Louvain Center for Toxicology and Applied Pharmacology (LTAP), Institut de Recherche Expérimentale et Clinique, Université Catholique de Louvain, Brussels, Belgium Department of Clinical Chemistry, Cliniques Universitaires Saint-Luc, Brussels, Belgium Department of Internal Medicine, Division of Nephrology and Transplantation, Erasmus MC, University Medical Center Rotterdam, Rotterdam, Netherlands Department of Laboratory Medicine and Pathology, Mayo Clinic, Rochester, MN, United States Rennes University Hospital &amp; INSERM, Department of Clinical and</p>	INT	JAN TO JUN	Clinical Pharmacology	<p><b>PMCArticle</b> <b>Impact Factor:</b> 2.092 <b>(BIOXBIO-2018)</b> <b>H-Index: 87</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Biological Pharmacology and Pharmacovigilance, Pharmacoevidence and Drug Information Center, Clinical Investigation Center CIC-P 1414, Rennes, France</p> <p>INSERM, University of Limoges, CHU Limoges, IPPRIT, U1248, Limoges, France</p> <p>Division of Mass Spectrometry and Chromatography, Institute of Medical and Chemical Laboratory Diagnostics (ZIMCL), University Hospital Innsbruck, Innsbruck, Austria</p> <p>SYNLAB Holding Germany GmbH, Competence Center for Therapeutic Drug Monitoring, MVZ Leinfelden-Echterdingen GmbH, Stuttgart, Germany</p> <p>Division of Clinical Pharmacology, Cincinnati Children's Hospital Medical Center, Cincinnati, OH, United States</p> <p>Department of Pediatrics, University of Cincinnati College of Medicine, Cincinnati, OH, United States</p> <p>Clinical Chemistry Department, Center for Toxicology and Applied Pharmacology, Cliniques Universitaires Saint-Luc Université Catholique de Louvain, Brussels, Belgium</p> <p>Department of Pharmacology and Toxicology, CHU Limoges, Limoges, France</p> <p>Department of Cardiovascular Surgery, University Heart Center Hamburg Hamburg, Germany</p> <p>Department of Nephrology and Medical Intensive Care, Charité-Universitätsmedizin Berlin, Berlin, Germany</p> <p>Pharmacy and Pharmaceutical Technology and Physical Chemistry Department, University of Barcelona, Barcelona, Spain</p> <p>Department for Cardiac Surgery, Heart Center Leipzig, University of Leipzig, Leipzig, Germany</p> <p>Louvain Drug Research Institute, Integrated Pharmacometrics, Pharmacogenomics and Pharmacokinetics, Université Catholique de Louvain, Brussels, Belgium</p> <p>Department of Pathology, University of Utah Health Sciences Center, Salt Lake City, UT, United States</p> <p>Clinical Pharmacology Unit, Department of Medical Biology, Institute of Cardiology, Warsaw, Poland</p> <p>Department of Drug Chemistry, Faculty of Pharmacy, Medical University of Warsaw, Warsaw, Poland</p> <p>St George's Hospital, London, United Kingdom</p> <p>Department of Pharmacy, Kyushu University Hospital, Fukuoka, Japan</p> <p>Department of Pharmacology and Clinical Pharmacology, <b>Christian Medical College, Vellore, India</b></p> <p>Department of Clinical Pharmacy &amp; Toxicology, Leiden University</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Medical Center, Leiden, Netherlands                      National Center for Liver Transplantation and Liver Diseases, South America, Uruguay                      Department of Clinical Chemistry, Erasmus University Medical Center, Rotterdam, Netherlands                      Department of Nephrology, University of Heidelberg, Heidelberg, Germany                      Department of Pharmacology, Oslo University HospitalOslo, Norway                      Department of Hospital Pharmacy, Erasmus MC, University Medical Center Rotterdam, Rotterdam, Netherlands                      iC42 Clinical Research and Development, Department of Anesthesiology, University of Colorado Denver Anschutz Medical Campus, Aurora, CO, United States</p> <p>Ten years ago, a consensus report on the optimization of tacrolimus was published in this journal. In 2017, the Immunosuppressive Drugs Scientific Committee of the International Association of Therapeutic Drug Monitoring and Clinical Toxicity (IATDMCT) decided to issue an updated consensus report considering the most relevant advances in tacrolimus pharmacokinetics (PK), pharmacogenetics (PG), pharmacodynamics, and immunologic biomarkers, with the aim to provide analytical and drug-exposure recommendations to assist TDM professionals and clinicians to individualize tacrolimus TDM and treatment. The consensus is based on in-depth literature searches regarding each topic that is addressed in this document. Thirty-seven international experts in the field of TDM of tacrolimus as well as its PG and biomarkers contributed to the drafting of sections most relevant for their expertise. Whenever applicable, the quality of evidence and the strength of recommendations were graded according to a published grading guide. After iterated editing, the final version of the complete document was approved by all authors. For each category of solid organ and stem cell transplantation, the current state of PK monitoring is discussed and the specific targets of tacrolimus trough concentrations (predose sample C0) are presented for subgroups of patients along with the grading of these recommendations. In addition, tacrolimus area under the concentration-time curve determination is proposed as the best TDM option early after transplantation, at the time of immunosuppression minimization, for special populations, and specific clinical situations. For indications other than transplantation, the potentially effective tacrolimus concentrations in systemic treatment are discussed without formal grading. The importance of consistency, calibration, proficiency testing, and the requirement for standardization and</p>				



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

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	<p>need for traceability and reference materials is highlighted. The status for alternative approaches for tacrolimus TDM is presented including dried blood spots, volumetric absorptive microsampling, and the development of intracellular measurements of tacrolimus. The association between CYP3A5 genotype and tacrolimus dose requirement is consistent (Grading A I). So far, pharmacodynamic and immunologic biomarkers have not entered routine monitoring, but determination of residual nuclear factor of activated T cells-regulated gene expression supports the identification of renal transplant recipients at risk of rejection, infections, and malignancy (B II). In addition, monitoring intracellular T-cell IFN-g production can help to identify kidney and liver transplant recipients at high risk of acute rejection (B II) and select good candidates for immunosuppression minimization (B II). Although cell-free DNA seems a promising biomarker of acute donor injury and to assess the minimally effective CO of tacrolimus, multicenter prospective interventional studies are required to better evaluate its clinical utility in solid organ transplantation. Population PK models including CYP3A5 and CYP3A4 genotypes will be considered to guide initial tacrolimus dosing. Future studies should investigate the clinical benefit of time-to-event models to better evaluate biomarkers as predictive of personal response, the risk of rejection, and graft outcome. The Expert Committee concludes that considerable advances in the different fields of tacrolimus monitoring have been achieved during this last decade. Continued efforts should focus on the opportunities to implement in clinical routine the combination of new standardized PK approaches with PG, and valid biomarkers to further personalize tacrolimus therapy and to improve long-term outcomes for treated patients.</p>				
95.	<p>Brunstein, C. G., Pasquini, M. C., Kim, S., Fei, M., Adekola, K., Ahmed, I., Aljurf, M., Agrawal, V., Auletta, J. J., Battiwalla, M., Bejanyan, N., Bubalo, J., Cerny, J., Chee, L., Ciurea, S. O., Freytes, C., Gadalla, S. M., Gale, R. P., Ganguly, S., Hashmi, S. K., Hematti, P., Hildebrandt, G., Holmberg, L. A., Lahoud, O. B., Landau, H., Lazarus, H. M., De Lima, M., Mathews, V., Maziarz, R., Nishihori, T., Norkin, M., Olsson, R., Reshef, R., Rotz, S., Savani, B., Schouten, H. C., Seo, S., Wirk, B. M., Yared, J., Mineishi, S., Rogosheske, J. and Perales, M. A.</p> <p>Effect of Conditioning Regimen Dose Reduction in Obese Patients Undergoing Autologous Hematopoietic Cell Transplantation Biology of Blood and Marrow Transplantation; 2019, 25 (3): 480-487</p>	INT	JAN TO JUN	Hematology	<p><b>PMCArticle Impact Factor:4.484 (BIOXBIO-2018) H-Index: 107</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> Blood and Marrow Transplant Program, University of Minnesota, Minneapolis, MN, United States            CIBMTR® (Center for International Blood and Marrow Transplant Research), Department of Medicine, Medical College of Wisconsin, Milwaukee, WI, United States            Division of Biostatistics, Institute for Health and Society, Medical College of Wisconsin, Milwaukee, WI, United States            Division of Hematology/Oncology, Department of Medicine and Robert H. Lurie Comprehensive Cancer Center, Feinberg School of Medicine, Northwestern University, Chicago, IL, United States            Department of Hematology Oncology and Bone Marrow Transplantation, The Children's Mercy Hospitals and Clinics, Kansas City, MO, United States            Department of Oncology, King Faisal Specialist Hospital Center &amp; Research, Riyadh, Saudi Arabia            Division of Hematology/Oncology, Indiana University Simon Cancer Center, Indianapolis, IN, United States            Blood and Marrow Transplant Program and Host Defense Program, Divisions of Hematology/Oncology/Bone Marrow Transplant and Infectious Diseases, Nationwide Children's Hospital, Columbus, OH, United States            Hematology Branch, Sarah Cannon BMT Program, Nashville, TN, United States            Department of Blood and Marrow Transplantation, H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL, United States            Adult Blood and Marrow Stem Cell Transplant Program, Knight Cancer Institute, Oregon Health and Science University, Portland, OR, United States            Division of Hematology/Oncology, Department of Medicine, University of Massachusetts Medical Center, Worcester, MA, United States            The Royal Melbourne Hospital, Melbourne, Australia            University of Texas and MD Anderson Cancer Center, Houston, TX, United States            Texas Transplant Institute, San Antonio, TX, United States            Division of Cancer Epidemiology &amp; Genetics, NIH-NCI Clinical Genetics Branch, Rockville, MD, United States            Hematology Research Centre, Division of Experimental Medicine, Department of Medicine, Imperial College London, London, United Kingdom            Division of Hematological Malignancy and Cellular Therapeutics, University of Kansas Health System, Kansas City, KS, United States</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Internal Medicine, Mayo ClinicMN, United States                      Division of Hematology/Oncology/Bone Marrow Transplantation, Department of Medicine, University of Wisconsin Hospital and Clinics, Madison, WI, United States                      Markey Cancer Center, University of Kentucky, Lexington, KY, United States                      Fred Hutchinson Cancer Research Center, Seattle, WA, United States                      Bone Marrow Transplant Service, Division of Hematology, Department of Medicine, Memorial Sloan Kettering Cancer Center, New York, NY, United States                      Case Western Reserve University, Cleveland, OH, United States                      Department of Medicine, Seidman Cancer Center, University Hospitals Case Medical Center, Cleveland, OH, United States                      Department of Hematology, <b>Christian Medical College &amp; Hospital, Vellore, India</b>                      Division of Hematology/Oncology, University Florida College of Medicine, Gainesville, FL, United States                      Division of Therapeutic Immunology, Department of Laboratory Medicine, Karolinska Institutet, Stockholm, Sweden                      Centre for Clinical Research Sormland, Uppsala University, Uppsala, Sweden                      Blood and Marrow Transplantation Program and Columbia Center for Translational Immunology, Columbia University Medical Center, New York, NY, United States                      Cincinnati Children's Hospital Medical Center, Cincinnati, OH, United States                      Division of Hematology/Oncology, Department of Medicine, Vanderbilt University Medical Center, Nashville, TN, United States                      Department of Hematology, Academische Ziekenhuis, Maastricht, Netherlands                      Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Research Center, Seattle, WA, United States                      Stony Brook University Medical Center, Stony Brook, NY, United States                      Blood &amp; Marrow Transplantation Program, Division of Hematology/Oncology, Department of Medicine, Greenebaum Cancer Center, University of Maryland, Baltimore, MD, United States                      Penn State Health Hershey Medical Center, Hershey, PA, United States                      Adult Bone Marrow Transplant Services, Department of Medicine, Memorial Sloan-Kettering Cancer Center, New York, NY, United States</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Data are limited on whether to adjust high-dose chemotherapy before autologous hematopoietic cell transplant (autoHCT) in obese patients. This study explores the effects of dose adjustment on the outcomes of obese patients, defined as body mass index (BMI) <math>\geq 30</math> kg/m<sup>2</sup>. Dose adjustment was defined as a reduction in standard dosing <math>\geq 20\%</math>, based on ideal, reported dosing and actual weights. We included 2 groups of US patients who had received autoHCT between 2008 and 2014. Specifically, we included patients with multiple myeloma (MM, n = 1696) treated with high-dose melphalan and patients with Hodgkin or non-Hodgkin lymphomas (n = 781) who received carmustine, etoposide, cytarabine, and melphalan conditioning. Chemotherapy dose was adjusted in 1324 patients (78%) with MM and 608 patients (78%) with lymphoma. Age, sex, BMI, race, performance score, comorbidity index, and disease features (stage at diagnosis, disease status, and time to transplant) were similar between dose groups. In multivariate analyses for MM, adjusting for melphalan dose and for center effect had no impact on overall survival (P = .894) and treatment-related mortality (TRM) (P = .62), progression (P = .12), and progression-free survival (PFS; P = .178). In multivariate analyses for lymphoma, adjusting chemotherapy doses did not affect survival (P = .176), TRM (P = .802), relapse (P = .633), or PFS (P = .812). No center effect was observed in lymphoma. This study demonstrates that adjusting chemotherapy dose before autoHCT in obese patients with MM and lymphoma does not influence mortality. These results do not support adjusting chemotherapy dose in this population. © 2018 American Society for Blood and Marrow Transplantation</p>				
96.	<p>Chacko B(1), Peter JV(1). Antidotes in Poisoning. Indian J Crit Care Med. 2019 Dec;23(Suppl 4):S241-S249. doi: 10.5005/jp-journals-10071-23310. <b>Author information:</b> (1). Medical Intensive Care Unit, Division of Critical Care, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</p> <p>Introduction: Antidotes are agents that negate the effect of a poison or toxin. Antidotes mediate its effect either by preventing the absorption of the toxin, by binding and neutralizing the poison, antagonizing its end-organ effect, or by inhibition of conversion of the toxin to more toxic metabolites. Antidote administration may not only result in the reduction of free or active toxin level, but also in the mitigation of end-organ effects of the toxin by mechanisms that include competitive inhibition, receptor blockade or direct</p>	NAT	JUL TO DEC	Medical Intensive Care Unit	<b>PMCID: PMC6996653</b> <b>PMID: 32020997</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>antagonism of the toxin. Mechanism of action of antidotes: Reduction in free toxin level can be achieved by specific and non-specific agents that bind to the toxin. The most commonly used non-specific binding agent is activated charcoal. Specific binders include chelating agents, bioscavenger therapy and immunotherapy. In some situations, enhanced elimination can be achieved by urinary alkalization or hemadsorption. Competitive inhibition of enzymes (e.g. ethanol for methanol poisoning), enhancement of enzyme function (e.g. oximes for organophosphorus poisoning) and competitive receptor blockade (e.g. naloxone, flumazenil) are other mechanisms by which antidotes act. Drugs such as N-acetyl cysteine and sodium thiocyanate reduce the formation of toxic metabolites in paracetamol and cyanide poisoning respectively. Drugs such as atropine and magnesium are used to counteract the end-organ effects in organophosphorus poisoning. Vitamins such as vitamin K, folic acid and pyridoxine are used to antagonise the effects of warfarin, methotrexate and INH respectively in the setting of toxicity or overdose. This review provides an overview of the role of antidotes in poisoning. How to cite this article: Chacko B, Peter JV. Antidotes in Poisoning. Indian J Crit Care Med 2019;23(Suppl 4):S241-S249. Copyright © 2019; Jaypee Brothers Medical Publishers (P) Ltd. DOI: 10.5005/jp-journals-10071-23310 Conflict of interest statement: Source of support: Nil Conflict of interest: None</p>				
97.	<p>Chacko, B., Peter, J. V. and Subramani, K. Reversal of Anticoagulants in Critical Care Indian J Crit Care Med; 2019, 23 (Suppl 3): S221-S225 <b>Address:</b> Department of Critical Care Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> There has seen an increase in anticoagulant consumption worldwide over the past few decades. With this widespread utilization of anticoagulants, clinicians are increasingly likely to encounter situations where anticoagulants would need to be withheld. This includes emergency and elective procedures or surgeries as well as major or minor bleeding as a direct result of over anticoagulation or consequent to other intercurrent illnesses such as sepsis or trauma with multiorgan failure, where the anticoagulant may contribute to coagulation abnormalities. Clinicians are required to have a thorough understanding of the indications for anticoagulant prescription, drug interactions and monitoring, indications and options of reversal of anticoagulation and management of bleeding in the situations described above. Once the acute process is managed, the ongoing need and timing of reinitiation of anticoagulation is also crucial. This</p>	NAT	JUL TO DEC	Critical Care Medicine	<p><b>PMID:</b> 31656383 <b>Impact Factor: 0.59 (RG - 2018)</b> <b>H-Index: 25</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	article provides an overview on the indications for reversal of anticoagulation, the agents used for reversal and the timing of reinitiation of anticoagulants. How to cite this article: Chacko B, Peter JV, Subramani K. Reversal of Anticoagulants in Critical Care. Indian J Crit Care Med 2019;23(Suppl 3):S221-S225.				
98.	Chacko, S. R. and Chacko, A. G. Antiprogesterone therapy in recurrent meningiomas: A disappointing end to four decades of research? Neurol India; 2019, 67 (3): 706-707 <b>Address:</b> Department of Neurological Sciences, Section of Neurosurgery, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>	NAT	JUL TO DEC	Neurological Sciences	<b>PMID:</b> 31347539 <b>Impact Factor:</b> 2.708 <b>(BIOXBIO - 2018)</b> <b>H-Index:</b> 2.708
99.	Chaganty, S. S. and James, D. Bilateral sequential femoral neck stress fractures in young adult with HIV infection on antiretroviral therapy: A case report World J Orthop; 2019, 10 (6): 247-254 <b>Address:</b> Faculty of Medicine and Dentistry, University of Plymouth, Plymouth PL6 8BU, United Kingdom. saisunder.chaganty@students.plymouth.ac.uk. Assistant Professor, Department of Orthopedics, <b>Christian Medical College, Vellore, Vellore 632004, Tamil Nadu, India.</b> BACKGROUND: Femoral neck stress fractures are rarely encountered among young adults and are often associated with either repetitive excessive loading or underlying bone pathology. Preliminary research has indicated human immunodeficiency virus (HIV)/antiretroviral therapy (ART) as predisposing agents to osteopenia and osteoporosis related complications. We report a case of HIV/ART induced insufficiency fracture in a resource limited setting in Central India. Our aim is to increase awareness and promote screening of HIV/ART related osteopenia and osteoporosis in order to prevent catastrophic orthopaedic complications. CASE SUMMARY: A 35-year-old HIV positive male presented with a stress fracture of left femoral neck. The patient was on ART and reported no comorbidities. He went on to be successfully managed surgically. However, during work-up osteopenia of the contralateral proximal femur was recognised using Singh's Index. Six months post-op the patient presented with right-sided femoral - neck stress fracture. At this stage the patient was nonconcordant with ART and denied surgical fixation. CONCLUSION: In the absence of co-morbidities, several mechanisms of HIV/antiretroviral therapy may have played a role in predisposing our patient towards such a presentation. We recommend routine screening all HIV-infected patients for osteopenia, especially in younger individuals. In low resource	INT	JUL TO DEC	Orthopedics	<b>PMID:</b> 31259148 <b>Impact Factor:</b> 1.14 <b>(RG - 2018)</b> <b>H-Index:</b> 31

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	settings and district hospitals, pelvis radiograph & Singh's index can be used for screening.				
100.	<p>Chakrabarti, A., Kaur, H., Savio, J., Rudramurthy, S. M., Patel, A., Shastri, P., Pamidimukkala, U., Karthik, R., Bhattacharya, S., Kindo, A. J., Bhattacharya, P., Todi, S., Gopalakrishnan, R., Singh, P., Pandey, A. and Agarwal, R.</p> <p>Epidemiology and clinical outcomes of invasive mould infections in Indian intensive care units (FISF study) Journal of Critical Care; 2019, 51 64-70</p> <p><b>Address:</b> Department of Medical Microbiology, Postgraduate Institute of Medical Education and Research, Chandigarh, India Department of Microbiology, St John's Medical College, Bengaluru, India Infectious Diseases Clinic, Sterling Hospital, Ahmedabad, India Department of Critical Care Medicine, Sir Gangaram Hospital, Delhi, India Department of Microbiology, Nizam's Institute of Medical Sciences, Hyderabad, India Department of Infectious Diseases, <b>Christian Medical College, Vellore, India</b> Department of Microbiology, Tata Medical Center, Kolkata, India Department of Microbiology, Sri Ramachandra Medical University, Chennai, India Department of Critical Care Medicine, Chirayu Medical College, Bhopal, India Department of Critical Care, AMRI Hospital, Kolkata, India Department of Infectious Diseases, Apollo Hospital, Chennai, India Department of Pulmonary Medicine, Postgraduate Institute of Medical Education and Research, Chandigarh, India</p> <p>Background and aim: Due to limited data on invasive mould infections (IMIs) in the intensive care units (ICUs) of developing countries, we ascertain epidemiology and management of IMIs at 11 ICUs across India. Methods: Consecutive patients with proven or probable/putative IMIs were enrolled during the study period. Subjects were categorized into classical (neutropenia, malignancy, transplant recipients on immunosuppression) and non-classical (chronic obstructive pulmonary disease, diabetes, liver disease and glucocorticoids) risk groups. We analyzed the demographic, laboratory variables and outcomes of these patients. Results: 398 patients with IMIs (96 proven, 302 probable) were identified, amounting to a prevalence of 9.5 cases/1000 ICU admissions. The</p>	INT	JAN TO JUN	Infectious Diseases	<p><b>PMC Article Impact (RG-2018) H-Index: 73</b></p> <p><b>Factor: 1.56</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	mean $\pm$ SD age of the participants was 45.6 $\pm$ 21.9 years. The mean $\pm$ SD APACHE II score was 14.3 $\pm$ 11.4. The IMIs were diagnosed at a median of 4 days after ICU admission. There were 145 and 253 subjects with classical and non-classical risk groups, respectively. Although Aspergillus spp. were the commonest (82.1%) isolates, Mucorales were detected in 14.4% subjects. A high APACHE II score and IMI due to mucormycosis were significant predictors of mortality. Conclusions: The study highlights the distinct epidemiology of IMIs in India ICUs with high burden, new susceptible patient groups and considerable number of non-Aspergillus mould infections. [clinicaltrials.gov: NCT02683642]. © 2019 Elsevier Inc.				
101.	<p>Chandy A(1), Waanbah B(1), Yadav B(1), Kunjummen AT(1), Riley DJS(2), Kamath MS(1).            Knowledge and attitudes of subfertile couples towards disposition of supernumerary cryopreserved embryos: an Indian perspective.            Reprod Biomed Soc Online. 2019 Oct 27;9:11-16.            doi: 10.1016/j.rbms.2019.10.002. eCollection 2019 Dec.</p> <p><b>Author information:</b>            (1)Christian Medical College, Vellore, India.            (2)Trinity Graduate School, Trinity International University, Deerfield, IL, USA.</p> <p>In many cases, supernumerary embryos are cryopreserved for future use following assisted reproductive technology (ART) treatment. Once a couple has completed their family following treatment, the fate of these excess cryopreserved embryos becomes uncertain. The options available for the disposition of cryopreserved embryos are donation to other infertile couples, donation to research and discontinuation of cryostorage. In order to evaluate the knowledge and attitudes of subfertile couples from the Indian subcontinent regarding the fate of their excess cryopreserved embryos, a cross-sectional study was planned at a university-level infertility unit. A two-stage structured interview was conducted with the couples. Some questions in the interview were hypothetical in nature. In total, 87 couples were interviewed, of which 33 (37.9%) were unaware of the options for disposition of supernumerary embryos. Forty (46%) couples indicated a preference to donate their embryos to other subfertile couples, while 10 (11.5%) couples preferred donation to research. Twenty-four (27.6%) couples opted for donation to both other couples and research, while three (3.4%) couples indicated a preference to discontinue storage. Penalized bivariable logistic regression showed that none of the factors</p>	INT	JUL TO DEC	Reproductive Medicine Unit	<p><b>PMID: 31938735</b>  <b>PMCID: PMC6953766</b>  <b>Impact Factor:2.930</b>  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 7</b></p>



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	examined (i.e. age, education, income or presence of a living child) influenced the couple's decision regarding embryo donation. The majority of subfertile couples preferred to donate the embryos rather than discontinue storage. The donation of embryos to other subfertile couples was the most preferred option for disposition of embryos. © 2019 The Authors. DOI: 10.1016/j.rbms.2019.10.002				
102.	Chandy, M. J. and Prakash, Shankar FROM THE TREASURE TROVE OF NEUROLOGY INDIA: Bhatoo: Pathophysiology of neurovascular syndromes - Microsurgical Anatomy of the Root Entry Zone of the Fifth Nerve in Trigeminal Neuralgia Neurology India; 2019, 67 (2): 386-388 <b>Address:</b> Department of Neurological Sciences, <b>Christian Medical College and Hospital, Vellore</b>  In sixty-five consecutive patients with trigeminal neuralgia operated by the senior author, microsurgical findings at the root entry zone of the fifth nerve were carefully studied. Arterial loop indentation was seen in 34 patients, and arterial loop contact in 11 patients. Other findings included venous sling, venous contact at the root entry zone, adhesions and tumors. Normal findings were seen in five patients.	INT	JAN TO JUN	Neurology	<b>WOS:000468100900008</b> <b>Impact Factor: 0.45 (RG-2018)</b> <b>H-Index: 43</b>
103.	Chandy, V. J., Ajith, K., Krishnamoorthy, V. P., Oommen, A. T., Tyagraj, P., George, J., Hariharan, T. D., George, S. P. and Poonnoose, P. M. How effective is periarticular drug infiltration in providing pain relief following Total Knee Replacement as compared to epidural analgesia? Journal of Arthroscopy and Joint Surgery; 2019, 6 (2): 103-107  <b>Address:</b> Department of Orthopaedics, <b>Christian Medical College, Vellore, Tamil Nadu 632004, India</b> Physiotherapist from Department of Physical Medicine and Rehabilitation, <b>Christian Medical College, Vellore, Tamil Nadu 632004, India</b> Department of Anaesthesia, <b>Christian Medical College, Vellore, Tamil Nadu 632004, India</b>  Introduction: The aim of the study was to compare the efficacy of pericapsular injection of analgesic drugs (PAI) with epidural analgesia (EA), in providing post-operative pain relief and early functional improvement of following Total Knee Arthroplasty. Materials and methods: 50 patients were randomized to 2 arms of 25	INT	JAN TO JUN	Orthopaedics, Physical Medicine and Rehabilitation, Anaesthesia	<b>PMC Article</b> <b>Impact Factor:</b> <b>H-Index: 2</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>patients each, receiving either pericapsular injection or epidural analgesia. The Visual Analogue Scale (VAS), functional outcomes and side effects related to the EA and PAI groups were assessed. Results: The PAI group had significantly better pain relief on the first post-operative day with a mean VAS on 3.6 as opposed to 7 in the epidural group(p = 0.006). Functional outcomes in the PAI group were significantly better in the early post-operative period with patients taking less time to achieve the same physiotherapy goals – straight leg raising, climb 14 steps and walking 50 m. Side effects like nausea, vomiting, pruritus and urinary retention were less with PAI. However, by the 5th postoperative day, functional independence and pain control were similar in both groups. Conclusion: Pericapsular injection of analgesic drugs in total knee arthroplasty provides better pain control and functional recovery than epidural analgesia in the early post-operative period, and can be the choice method for analgesia following total knee replacement. © 2019</p>				
104.	<p>Chaudhary, N. K., John, R. R., Boddu, D., Mahasampath, G., Nesadeepam, N. and Mathew, L. G.                      Palonosetron is a Better Choice Compared with Ondansetron for the Prevention of Chemotherapy-induced Nausea and Vomiting (CINV) in a Resource-limited Pediatric Oncology Center: Results from a Randomized Control Trial                      Journal of Pediatric Hematology/Oncology; 2019, 41 (4): 294-297</p> <p><b>Address:</b> Department of Pediatrics, All India Institute of Medical Sciences, Bhopal, India                      Pediatric Hematology Oncology Unit, Department of Child Health, <b>Christian Medical College, Vellore,</b> Tamilnadu, 632004, India                      Department of Biostatistics, <b>Christian Medical College, Vellore,</b> Tamilnadu, India</p> <p>Palonosetron (PG) is a newer, safe, and effective long-acting 5-HT<sub>3</sub> antagonist commonly used in adults, but data in children are limited. A randomized controlled trial was carried out among children with cancer during their first cycle of moderate or highly emetogenic chemotherapy to receive either PG or ondansetron (OG) with the aim of comparing their efficacy, safety, and cost-effectiveness. In total, 200 children (mean age, 8 y, male:female=1.8:1) were recruited, 100 in each arm. Complete response, defined as no vomiting, in acute (&lt;24 h), delayed (24 to 120 h), and overall phases (0 to 120</p>	INT	JAN TO JUN	Child Health, Biostatistics	<p><b>PMCConference Paper</b>  <b>Impact Factor: 1.060</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 72</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	h) was observed in 88%, 88%, and 81% of cases, respectively, for PG versus 84%, 79%, and 72%, respectively, for OG (P=0.42, 0.09 and 0.21, respectively). Complete protection rates, defined as no nausea and vomiting in children above 6 years of age, in acute, delayed, and overall phases were 84%, 81%, and 73%, respectively, for PG versus 79%, 67%, and 60%, respectively, for OG (P=0.44, 0.06 and 0.10, respectively). Overall, the efficacy and safety of PG in the prevention of chemotherapy-induced nausea and vomiting was comparable with OG, but PG was a more cost-effective and suitable choice for busy centers in resource-limited countries. © 2018 Wolters Kluwer Health, Inc. All rights reserved.				
105.	<p>Cherian, Anish Jacob, Chakravarthy, Siddhartha, Muhammed, Noamaan, Chinadurai, Suchitra, Gowri, Mahasampath, Paul, M. J. and Abraham, Deepak Thomas</p> <p>Thyroidectomy Audit: Effects of Specialised, High Volume Work on Key Performance Indicators</p> <p>Indian Journal of Surgery; 2019, 81 (5): 432-438</p> <p>We conducted this audit to assess and improve the quality of care for patients undergoing thyroid surgery at our institution. The audit process began in 2012. Key performance indicators assessed were rates of hypocalcemia (immediate postoperative, temporary and permanent), recurrent laryngeal nerve (RLN) injury, chyle leak rate, re-exploration for chyle leak and post-thyroidectomy haemorrhage. Data of patients undergoing thyroidectomy from 1st January to 31st December 2011 was retrospectively collected from the electronic database. Performance indicators were assessed and compared to international standards. Actions to correct the short falls were implemented and retrospective re-audits were performed on prospectively collected data in subsequent years until 2015. The data was analysed using STATA IC/13.1. There has been a steady increase in the number of thyroidectomies performed/year from 357 in 2011 to 577 in 2015. The most common procedure performed was total thyroidectomy (~70%) and histopathology revealed thyroid malignancy in the majority of patients. Over 5 years, a significant improvement in the rates of post-thyroidectomy immediate and temporary hypocalcemia was witnessed (<math>p &lt; 0.001</math>) as well as a near significant fall in permanent hypocalcemia and RLN injury rate (<math>p = 0.06</math>). In 2014 and 2015, no patients were re-explored for a chyle leak. The rate of post-thyroidectomy haemorrhage (1.2-1.8%) has remained static over 5 years. This audit portrays specialisation in</p>	NAT	JUL TO DEC	Endocrine Surgery	<p><b>PMID:</b> WOS:000494686600005</p> <p><b>Impact Factor:</b> 0.550 <b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 17</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	endocrine surgery and high volumes of patients treated have resulted in a significant improvement in outcomes for patients following thyroid surgery that meet international standards.				
106.	<p>Cherian, K. E., Kapoor, N. and Paul, T. V.                      Utility of FRAX (fracture risk assessment tool) in primary care and family practice setting in India                      J Family Med Prim Care; 2019, 8 (6): 1824-1827  <b>Address:</b> Department of Endocrinology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>The prevalence of osteoporosis in postmenopausal women is about 35 to 50% and the mortality associated with hip fractures is about 20%. Despite these figures, osteoporosis continues to be under diagnosed in the primary care setting. One of the reasons for this is attributed to the poor availability of DXA (Dual Energy X-ray Absorptiometry) scanners in rural areas. The fracture risk assessment tool (FRAX) is an online web-based tool that takes into account multiple factors that help in predicting the 10-year risk of developing hip or major osteoporotic fractures. The tool was developed and validated in independent cohorts. The advantages of using the FRAX tool are that, it is inexpensive, easily available, and does not need the technical expertise that is required in the use of a DXA scanner. Besides these merits, it is a tool that is easy to use for the rural health care worker as well as the family physician in identifying those subjects at risk for developing osteoporotic fractures. These benefits make it a suitable fracture prediction tool in the primary care setting in India.</p>	NAT	JUL TO DEC	Endocrinology	<p><b>PMID:</b> 31334139  <b>Impact Factor:</b> 0.21  <b>(BIOXBIO - 2018)</b>  <b>H-Index:</b> NA</p>
107.	<p>Cherian, K. E., Kapoor, N., Devasia, A. J., Mathews, V., Srivastava, A., Thomas, N., George, B. and Paul, T. V.                      Do bone density, bone microarchitecture and body composition differ in recipients of allogeneic haematopoietic stem cell transplant? A cross-sectional study from southern India                      Biol Blood Marrow Transplant; 2019, <b>Address:</b> Departments of Endocrinology, <b>Christian Medical College and Hospital, Vellore</b>, India.                      Clinical Haematology, <b>Christian Medical College and Hospital, Vellore</b>, India.                      Departments of Endocrinology, <b>Christian Medical College and Hospital, Vellore</b>, India. Electronic <b>Address:</b> thomasvpaul@yahoo.com.</p> <p>The significant advancements made in the field of allogeneic haematopoietic stem cell transplantation (allo-HSCT) have ensured increased longevity in transplant recipients. However, they do suffer from late effects that may adversely affect the endocrine system,</p>	INT	JUL TO DEC	Endocrinology, Clinical Haematology	<p><b>PMID:</b> 31712194  <b>Impact Factor:</b> 3.599  <b>(BIOXBIO-2018)</b>  <b>H-Index:</b> 107</p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	bone health and body composition. This study was undertaken to evaluate bone mineral density (BMD), trabecular bone score (TBS) and body composition in recipients of allo-HSCT and compare them with age, gender and body mass index (BMI) matched control subjects. This was a cross-sectional study done in 63 cases and 65 matched controls. The mean femoral neck BMD was found to be lower in cases than in controls[0.777(0.119) vs 0.846(0.122) g/cm(2), P= 0.002]. Among cases, the mean BMD at the neck of femur was lower in subjects who had received myeloablative conditioning compared to those who had received non-myeloablative regimen[0.731(0.090) vs 0.802(0.126) g/cm(2), P=0.014]. The mean (SD) bone density at the lumbar spine was significantly lower in the group that had received TBI as compared to the group that did not [0.930 (0.111) vs 0.993 (0.127) P=0.044]. Trabecular bone score did not differ between cases and controls [1.383(0.877) vs 1.389(0.750), P=0.670]. The lean mass was significantly lower [15.9 (2.4) vs18.6 (4.8) kg/m(2) P < 0.001]and the prevalence of sarcopenia (42% vs 11%, P<0.001)significantly higher in cases than in controls. Normal weight obesity (NWO) was also noted to be higher among those with sarcopenia than in those without (12/26 vs 5/36; P=0.009). The procedure of allo-HSCT may thus cause an impairment of bone health and alterations in body composition well after the cure of the primary disease.				
<b>108.</b>	<p>Cherian, Kripa Elizabeth, Kapoor, Nitin, Devasia, Anup J., Mathews, Vikram, Srivastava, Alok, Thomas, Nihal, George, Biju and Paul, Thomas V. Endocrine Challenges and Metabolic Profile in Recipients of Allogeneic Haematopoietic Stem Cell Transplant: A Cross-Sectional Study from Southern India Indian Journal of Hematology and Blood Transfusion; 2019,</p> <p>Although haematopoietic stem cell transplant has been successfully employed in the cure of several malignant and non-malignant conditions, survivors often suffer from delayed effects involving the endocrine system and cardio-metabolic risk factors. In this cross-sectional study, we aimed to assess the prevalence of endocrine dysfunction and alterations in metabolic profile in 63 recipients of allogeneic stem cell transplantation as compared to 65 age, sex and body mass index matched controls. Hypogonadism emerged as the most prevalent endocrinopathy, present in 23/60 (38.3%) of subjects, followed by overt and subclinical hypothyroidism in 10/63 (15.9%) of cases. The metabolic parameters, that included plasma glucose and lipid profile were not</p>	<b>NAT</b>	<b>JUL TO DEC</b>	Endocrinology, Hematology  Clinical	<p><b>PMID:</b> WOS:000490876800003 <b>Impact Factor:</b>0.474 (BIOXBIO-2018) <b>H-Index: 12</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	significantly different between cases and controls. However, insulin resistance, as assessed by surrogate markers employing HOMA IR (3.82 vs. 1.97) and QUICKI (0.338 vs. 0.373) was significantly higher among cases than in controls (P < 0.05). Abnormal glucose tolerance was observed in about one-third of the study cohort. The prevalence of overt diabetes (7%) was similar to that in the general population across India (8%); the prevalence of pre-diabetes (21%) was however considerably higher than the national average of 10%. Thus, although the process of haematopoietic stem cell transplant is often curative for the primary haematological disease, it may be associated with various delayed effects on the endocrine system and metabolic profile. Therefore, it is imperative that recipients be screened for the potential development of these late effects subsequent to the transplantation procedure.				
109.	<p>Chichra, A., Abhijnhan, A. and Tharyan, P.                      Job stress and satisfaction in faculty of a teaching hospital in south India: A cross-sectional survey                      J Postgrad Med; 2019, 65 (4): 201-206  <b>Address:</b> Department of Psychiatry, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Background: There are multiple economic, psychological, and physical consequences of high job stress, low job satisfaction and burnout in faculty of a teaching hospital in South India. Data from developing countries on these domains are sparse. Materials and Methods: In a cross-sectional study we assessed the prevalence and sources of perceived job stress, job satisfaction and burnout in faculty, as well as ways of coping with stress among consenting faculty of a large, private, charitable, teaching hospital in India using standardized, self-rated questionnaires. Results: A total of 304 respondents, 156 (51.3%) were Assistant Professors; 71 (23.4%) were Associate Professors, and 77 (25.3%) were Professors. The majority (175; 58%) were male, younger than 45 years (235; 76%) and from clinical departments (248; 81.5%) A third (96; 31%) reported high overall levels of perceived job stress. In multivariate analyses, age less than 45 years, designation as Assistant or Associate Professor, and working in a clinical department were associated with perceived high job stress; reporting high perceived job satisfaction was protective. Nearly two-thirds (217; 71.4%) of faculty reported high levels of job satisfaction. In multivariate analysis, age less than 45 years and reporting high job stress were associated with low perceived job satisfaction. Causes of stress and satisfaction differed by age, gender and designation. On the Maslach</p>	INT	JAN TO JUN	Psychiatry	<b>PMID:31204727</b> <b>PMC: 6813678</b> <b>Impact Factor: 0.60</b> <b>(RG-2018)</b> <b>H-Index: 49</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Burnout Inventory (MBI), 88 (29%) had high scores on the emotional exhaustion subscale, 63 (20.8%) had high scores on the depersonalization subscale, and 90 (29.7%) had low scores on the personal achievement subscales. High job stress and low job satisfaction were significantly associated with burnout on the three domains. Conclusions: High job stress and low job satisfaction were inversely related in this survey of medical faculty and were significantly associated with levels of burnout. The sources of job stress and job satisfaction identified provide insights that could inform formal institutional mechanisms to prevent burnout in doctors.				
110.	<p>Chichra, Abhinav Empathy in doctors and its association with job stress, satisfaction and burnout Indian Journal of Psychiatry; 2019, 61 (9): S470-S470</p> <p><b>AUTHOR-Dr. Abhinav Chichra, Assistant Professor, Christian Medical College, Vellore</b></p> <p>Keywords: Empathy, stress, burnout, satisfaction</p> <p>Background: Empathy is widely recognized as a desirable trait in doctors and is often described as an essential attribute of a 'good doctor'. Burnout is commonly defined as "a psychological response to chronic interpersonal job stressors, characterized by overwhelming exhaustion, feelings of cynicism and detachment from the job". The medical profession is considered to be at particular risk of this syndrome. It has been shown to be associated with multiple negative outcomes at both the organizational and the individual level. The association between empathy and the burnout syndrome is unclear, with contradictory findings in several studies. There is a paucity of data in this area, in the Indian setting.</p> <p>Methodology: This study was a cross-sectional observational study, using standardized self-administered questionnaires, done among consultants in a large tertiary care hospital in India. Consenting clinicians completed questionnaires to assess levels of job stress, satisfaction, burnout and empathy. The instruments used were the Consultants Job Stress and Satisfaction Questionnaire, Maslach Burnout Inventory and Jefferson Scale for Physician Empathy. Descriptive and bivariate statistical analysis was used to test for significant associations.</p>	NAT	JAN TO JUN	Psychiatry	<p><b>WOS:000456064200333</b>  <b>PMC</b>  <b>Impact Factor: 0.53</b>  <b>(RG-2018)</b>  <b>H-Index: 26</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Results: There were 232 respondents to the study. There was no significant difference in levels of empathy by age, gender, type of work or designation. Higher levels of empathy had a highly significant association with higher scores on the Emotional Exhaustion (p value=0.008) and lower scores on the Personal Achievement domains (p value= 0.0001) of the Maslach Burnout Inventory. No significant association was seen between extent of job satisfaction and levels of empathy.</p> <p>Discussion: Though an objectively desirable trait, higher levels of empathy may contribute to higher levels of burnout in doctors. This has implications on any interventions focussing on preventing burnout in doctors.</p>				
111.	<p>Chiramel, M. J., George, R., Daniel, D., Das, R. Sam Arul, Mani, V., Antonisamy, B. and Muliylil, J. P. Case-control study measuring the association between HLA-B*13:01 and dapsone hypersensitivity syndrome in Indian patients Leprosy Review; 2019, 90 (4): 371-377 Objectives: Dapsone hypersensitivity syndrome (DHS) is associated with HLA-B*13:01 in Chinese and south-east Asians. This association has not been studied among Indians. The objective was to study the association between HLA-B*13:01 and DHS in Indian patients. Methodology: A case - control study was done in south India (January 2016 to March 2018). Prevalence of HLA-B*13:01 in 8 DHS cases was compared to its prevalence in 324 controls (113 patient controls, 211 population controls). HLA-B*13 typing was done in 2 steps: First, HLA-B*13 positivity was determined using intermediate resolution PCR (SSOP HLA typing kit, Luminex platform) in the 332 study participants followed by Sanger sequence-based typing on 17 HLA-B*13 positive patients (7cases, 10 patient controls). 1 DHS case (HLA-B*13:01 negative) was also screened for HLA-DRB*15:01 and 16:02. Odds ratio, CI and population attributable risk were calculated. Results: There were 8 cases of DHS and 324 controls including 113 patient controls and 211 population controls. 7/8 cases (87.5%) of DHS and 9/113 of patient controls (7.96%) were HLA-B*13:01 positive. Among those in whom high resolution typing was done, 1/17 (5.7%) were HLA-B*13:02 positive. Among population controls, 9.9% (21/211) were HLA-B*13 positive. HLA-DRB*15:01 and 16:02 were negative in the 1 patient tested. Two HLA-B*13:01 positive patient controls were dapsone tolerant. HLA-B*13 and specifically HLA_B*13:01 was significantly associated with DHS. (Odds ratio of 66.16 for HLA-B*13 and 80.89 for HLA-B*13:01). Population attributable risk was 86.2%. Conclusion:</p>	INT	JUL TO DEC	Radiodiagnosis, Biostatistics, Community Medicine	<p><b>WOS:000500923600004</b>  <b>PMC 35441</b>  <b>Impact Factor: 0.31</b>  <b>(RG-2018-2019)</b>  <b>H-Index: 40</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	HLA-B*13:01 appears to be a significant risk factor for DHS in Indians. Implementation of a pre-treatment screening strategy may decrease the incidence of DHS.				
112.	<p>Choudhary, T. S., Reddy, N. S., Apte, A., Sinha, B., Roy, S., Nair, N. P., Sindhu, K. N., Patil, R., Upadhyay, R. P. and Chowdhury, R. Delayed vaccination and its predictors among children under 2years in India: Insights from the national family health survey-4 Vaccine; 2019, 37 (17): 2331-2339</p> <p><b>Address:</b> Research Scientist and PRERNA Young Investigator, Centre for Health Research and Development, Society for Applied Studies, New Delhi, India. Electronic <b>Address:</b> tarun.choudhary@sas.org.in.</p> <p>PRERNA Young Investigator, <b>Christian Medical College, Vellore, India.</b></p> <p>PRERNA Young Investigator, KEM Hospital Research Centre, Pune, India.</p> <p>Research Scientist and PRERNA Young Investigator, Centre for Health Research and Development, Society for Applied Studies, New Delhi, India.</p> <p>OBJECTIVE: Delayed vaccination increases the susceptibility window for vaccine preventable diseases. Our analysis estimates the proportion of children between 10 and 23months of age with delayed vaccination in India and the associated socio-demographic, maternal and child related factors. METHODS: We used individual level data from the National Family and Health Survey 4, conducted in 2015-2016. The primary outcome of the study was delayed vaccination for BCG, DPT- 1st dose and Measles. Delayed vaccination for each vaccine was defined as administration of the vaccine dose after 28days of the minimum recommended age, as per the national immunization schedule in India. We estimated the proportion of children with delayed vaccination for each vaccine and used multivariable logistic regression to explore associated factors. FINDINGS: In the current analysis, 23.1%, 29.3% and 34.8% of children aged 10 to 23months had delayed vaccination for BCG, DPT-1st dose and Measles respectively. Children from Muslim families (aOR 1.36 for BCG; aOR 1.45 for DPT-1; aOR 1.26 for Measles); birth weight&lt;2000g (aOR 2.33 for BCG; aOR 1.53 for DPT-1; aOR 1.36 for Measles) had higher odds of delayed vaccination. Lower maternal education and belonging to a family from lower wealth quintile had higher odds of delayed vaccination. Children of mothers who had tetanus toxoid immunization during pregnancy had lower odds of delayed vaccination (aOR 0.69 for BCG;</p>	INT	JUL TO DEC	Wellcome Research Unit	<p><b>PMID:</b> 30914221</p> <p><b>Impact Factor:</b> 3.269</p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 164</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	aOR 0.76 for DPT-1; aOR 0.78 for Measles). CONCLUSION: The proportion of children with delayed vaccination is high in India. Vaccine timeliness should be a core indicator of the immunization program with greater focus on groups with higher chances of delayed vaccination i.e. home birth, low birth weight new-borns, poorer households, children of mothers with lower education and children from Muslim families.				
113.	<p>Chowdhury, S. D., George, G., Ramakrishna, K., Ramadass, B., Pugazhendhi, S., Mechenro, J., Jeyaseelan, L. and Ramakrishna, B. S.</p> <p>Prevalence and factors associated with gastroesophageal reflux disease in southern India: A community-based study Indian Journal of Gastroenterology; 2019, 38 (1): 77-82</p> <p><b>Address:</b> Department of Gastrointestinal Sciences, <b>Christian Medical College, Vellore</b>, 632 004, India Department of Biostatistics, <b>Christian Medical College, Vellore</b>, 632 004, India</p> <p>Background and Aim: Gastroesophageal reflux disease (GERD) is common worldwide with significant expenditure for health care. Community-based data on the prevalence of GERD in India remains scarce. This study was conducted to determine the prevalence of GERD and to identify potential associations. Methods: A community-based survey of adults (aged ≥18 years) was done through population proportionate to size sampling in urban and rural areas of Vellore district, Tamil Nadu, India. GERD was defined as heartburn and regurgitation occurring at least twice per week. Associations between GERD and gender, age, anthropometric measures, and consumption of tobacco, alcohol, meat, and milk were evaluated. Odds ratios (OR) with 95% confidence intervals were derived from logistic regression models. Results: Of 6174 participants (3157 urban, 2599 male), 8.2% had GERD. The prevalence was higher in urban (11.1%) compared to rural areas (5.1%) (p&lt; 0.001). Among patients with GERD, 34.3% used medications daily for symptom relief. On univariate analysis, GERD was associated with female gender, living in an urban area, age &gt;30, BMI &gt;25, and infrequent milk consumption. On multivariate analysis, female gender (OR 1.3; 95% CI 1.1–1.6), living in urban area (OR 2.3; 95% CI 1.9–2.8), age &gt;30 years (OR 1.9; 95% CI 1.4–2.5), BMI ≥ 25 kg/m<sup>2</sup> (OR 1.3; 95% CI 1.1–1.6), and infrequent milk intake (OR 1.6; 95% CI 1.3–1.9) were independently associated with GERD. Conclusion: Symptomatic</p>	NAT	JAN TO JUN	Gastrointestinal Sciences, Biostatistics	<p><b>PMCArticle Impact Factor: 0.74 (RG-2018)</b> <b>H-Index: 37</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	GERD was found in 8.2% of respondents in this representative southern Indian community, being more prevalent in urban residents, women, older, and obese individuals.[MediaObject not available: see fulltext.]. © 2019, Indian Society of Gastroenterology.				
114.	Chowdhury, Sudipta, Kurien, Reuben, Simon, Ebby, Dutta, Amit, Jaleel, Rajeeb, John, Anoop, Rajeev, S. A., Rajesh, S. and Joseph, Anjilivelil The impact of anorectal manometry and balloon expulsion test in the management of chronic constipation - a single centre experience Journal of Gastroenterology and Hepatology; 2019, 34 798-798	INT	JUL TO DEC	Gastroenterology	<b>PMID:</b> WOS:000495492606227 <b>Impact Factor: 3.632</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 117</b>
115.	Colston, J. M., Zaitchik, B., Kang, G., Peñataro Yori, P., Ahmed, T., Lima, A., Turab, A., Mduma, E., Sunder Shrestha, P., Bessong, P., Peng, R. D., Black, R. E., Moulton, L. H. and Kosek, M. N. Use of earth observation-derived hydrometeorological variables to model and predict rotavirus infection (MAL-ED): a multisite cohort study The Lancet Planetary Health; 2019, 3 (6): e248-e258  <b>Address:</b> Department of International Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States Department of Earth and Planetary Sciences, Johns Hopkins Krieger School of Arts and Sciences, Baltimore, MD, United States <b>Christian Medical College, Vellore, India</b> Nutrition & Clinical Services Division, International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b), Dhaka, Bangladesh Federal University of Ceará, Fortaleza, Brazil Interactive Research and Development, Maternal and Child Health (MCH) Program, Karachi, Pakistan Haydom Global Health Institute, Haydom, Tanzania Department of Child Health, Institute of Medicine of Tribhuvan University, Kathmandu, Nepal University of Venda, Thohoyandou, South Africa  Background: Climate change threatens to undermine recent progress in reducing global deaths from diarrhoeal disease in children. However, the scarcity of evidence about how individual environmental factors affect transmission of specific pathogens makes prediction of trends under different climate scenarios challenging. We aimed to model associations between daily	INT	JAN TO JUN	Wellcome Research Unit	<b>PMID:</b> 31229000 <b>PMC:</b> 35365  <b>Impact Factor: 2.736</b> <b>H-Index: 10</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>estimates of a suite of hydrometeorological variables and rotavirus infection status ascertained through community-based surveillance. Methods: For this analysis of multisite cohort data, rotavirus infection status was ascertained through community-based surveillance of infants in the eight-site MAL-ED cohort study, and matched by date with earth observation estimates of nine hydrometeorological variables from the Global Land Data Assimilation System: daily total precipitation volume (mm), daily total surface runoff (mm), surface pressure (mbar), wind speed (m/s), relative humidity (%), soil moisture (%), solar radiation (W/m<sup>2</sup>), specific humidity (kg/kg), and average daily temperatures (°C). Lag relationships, independent effects, and interactions were characterised by use of modified Poisson models and compared with and without adjustment for seasonality and between-site variation. Final models were created with stepwise selection of main effects and interactions and their validity assessed by excluding each site in turn and calculating Tjur's Coefficients of Determination. Findings: All nine hydrometeorological variables were significantly associated with rotavirus infection after adjusting for seasonality and between-site variation over multiple consecutive or non-consecutive lags, showing complex, often non-linear associations that differed by symptom status and showed considerable mutual interaction. The final models explained 5.9% to 6.2% of the variability in rotavirus infection in the pooled data and their predictions explained between 0.0% and 14.1% of the variability at individual study sites. Interpretation: These results suggest that the effect of climate on rotavirus transmission was mediated by four independent mechanisms: waterborne dispersal, airborne dispersal, virus survival on soil and surfaces, and host factors. Earth observation data products available at a global scale and at subdaily resolution can be combined with longitudinal surveillance data to test hypotheses about routes and drivers of transmission but showed little potential for making predictions in this setting. Funding: Bill &amp; Melinda Gates Foundation; Foundation for the National Institutes of Health, National Institutes of Health, Fogarty International Center; Sherrilyn and Ken Fisher Center for Environmental Infectious Diseases, Johns Hopkins School of Medicine; and NASA's Group on Earth Observations Work Programme. © 2019 The Author(s). Published by Elsevier Ltd. This is an Open Access article under the CC BY 4.0 license DOI: 10.1016/S2542-5196(19)30084-1</p>				
116.	<p>Crabtree, A., Sundararaj, J. J. and Pease, N. Clinical Audit?-invaluable! BMJ Support Palliat Care; 2019, <b>Address:</b> Palliative Medicine</p>	INT	JUL TO DEC	Palliative Care Unit	<p><b>PMID:</b> 31488419 <b>Impact Factor:</b> 0.16 <b>(RG - 2018)</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Department, Velindre Cancer Centre, Cardiff, UK. Palliative Care Unit, <b>Christian Medical College and Hospital, Vellore</b> , Tamil Nadu, India. Palliative Medicine Department, Velindre Cancer Centre, Cardiff, UK nikki.pease@wales.nhs.uk.				<b>H-Index: 21</b>
<b>117.</b>	Danda, D. Vasculitis special issue International Journal of Rheumatic Diseases; 2019, 22 5  <b>Address:</b> Department of Clinical Immunology and Rheumatology, <b>Christian Medical College and Hospital, Vellore, TN, India</b>	<b>INT</b>	<b>JAN TO JUN</b>	Clinical Immunology and Rheumatology	<b>PMCEditorial Impact Factor: 0.88 (RG-2018)</b> <b>H-Index: 33</b>
<b>118.</b>	Danda, D. and Pile, K. Letters from the outgoing and incoming Editor in Chief Int J Rheum Dis. 2018 Dec;21(12):2056.  doi: 10.1111/1756-185X.13471. <b>Address: Vellore, India.</b> Sydney, Australia.	<b>INT</b>	<b>JAN TO JUN</b>	Rheumatology	<b>PMID:30681277</b> <b>Impact Factor: 2.423 (BIOXBIO-2018)</b> <b>H-Index: 33</b>
<b>119.</b>	Danda, S., Thomas, B. M., Paramasivam, G., Thomas, R., Mathew, J. and Danda, D. A descriptive pilot study of mitochondrial mutations & clinical phenotype in fibromyalgia syndrome Indian J Med Res; 2019, 149 (1): 47-50  <b>Address:</b> Department of Medical Genetics, <b>Christian Medical College &amp; Hospital, Vellore</b> , India. Department of Physical Medicine & Rehabilitation, <b>Christian Medical College &amp; Hospital, Vellore</b> , India. Department of Clinical Immunology & Rheumatology, <b>Christian Medical College &amp; Hospital, Vellore</b> , India.  Background & objectives: : Fibromyalgia syndrome (FMS) is one of the most common chronic pain conditions of unknown aetiology. Mitochondrial dysfunction has been reported in FMS with some studies reporting the presence of mitochondrial mutation namely A3243G, which also causes mitochondrial encephalomyopathy, lactic acidosis and stroke-like episodes. This pilot study was conducted to assess this mutation and also detect large deletions in mitochondrial DNA (mtDNA) in patients with FMS. Methods: : Thirty female patients with FMS participated and 30 matched controls were included. Genomic DNA was subjected to polymerase chain reaction (PCR) amplification using specific primers followed by restriction digestion with Apa I enzyme to detect the specific A3243G mtDNA	<b>NAT</b>	<b>JAN TO JUN</b>	Medical Genetics, Physical Medicine & Rehabilitation, Clinical Immunology & Rheumatology.	<b>PMID:31115374</b> <b>PMC ID:6507534</b> <b>Impact Factor: 1.508 (BIOXBIO-2018)</b> <b>H-Index: 75</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	mutation. Long-range PCR was done in two sets to detect the large deletions in the mtDNA. Biochemical parameters including thyroid-stimulating hormone and vitamin D levels were also looked at. Results: : None of the patients were found to carry the common mutation or large deletions. Low vitamin D level was a common finding. Hypothyroidism was found in a few patients. Interpretation & conclusions: : Although the common mutation or large mtDNA deletions were not detected in blood mtDNA in the FMS patients, mutations in the muscle and sequence variation in mtDNA remained a possibility. Future studies in both blood and muscle tissue including mtDNA sequencing are warranted in such patients to determine if a subset of FMS patients have mitochondrial myopathy.				
120.	Dangi, A. D. Author's Reply Cent European J Urol. 2019;72(1):78-79.  doi: 10.5173/ceju.2018.1888. Epub 2019 Feb 15. Address: <b>Christian Medical College and Hospital, Vellore, India.</b>	INT	JAN TO JUN	Urology	<b>PMID:31011450</b> <b>PMC ID:6469003</b> <b>Impact Factor: 0.50</b> <b>(RG-2018)</b> <b>H-Index: 15</b>
121.	Daniel, Hubert, Agbandje-Mckenna, Mavis, Gabriel, Nishanth, Kumar, Sanjay, Coleman, Kirsten, Srivastava, Arun, Kannangai, Rajesh, Abraham, Asha M. and Srivastava, Alok Development of a Peptide ELISA for the Screening of Pre-Existing Anti-AAV Antibodies Molecular Therapy; 2019, 27 (4): 218-218	INT	JAN TO JUN	Clinical Virology, Centre for Stem Cell Research	<b>WOS:000464381002124</b> <b>PMC</b> <b>Impact Factor: 7.008</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 158</b>
122.	Das, S., Iyadurai, R., Gunasekaran, K., Karuppusamy, R., Mathew, Z., Rajadurai, E., John, A. O., Mani, S. and George, T. Clinical characteristics and complications of skull base osteomyelitis: A 12-year study in a teaching hospital in South India J Family Med Prim Care; 2019, 8 (3): 834-839  <b>Address:</b> Department of Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Radiodiagnosis, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>  Context: Skull base osteomyelitis (SBO) is an uncommon disease with substantial morbidity and mortality. Aims: The aim of this study is to characterize clinical features, outcomes, and complications of SBO. We also looked at differences in clinical profile in otogenic and non-otogenic SBO. Materials and Methods: This is a single-center retrospective observational study. Patients aged more than 15 years	NAT	JAN TO JUN	Medicine, Radiodiagnosis	<b>PMID:31041210</b> <b>PMC ID:6482749</b>  <b>Impact Factor: 0.21</b> <b>(RG-2018)</b> <b>H-Index: NA</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	of age with clinical and radiological diagnosis of SBO admitted in general medicine department in a teaching hospital in South India from March 2006 to February 2018 were recruited. Results: A total of 41 patients with SBO were identified and included. Mean age was 56.9 +/- 10.7 years. In all, 90% of patients (37/41) had diabetes mellitus and 29% (12/41) had recent head/neck surgery. Only 19% (8/41) needed ICU care, and mortality was 21% (9/41). Most common symptom was headache seen in 73% (30/41) of patients. Majority, 61% (25/41), had otogenic infections. Otogenic infections were associated with longer duration of diabetes mellitus (mean = 11.5 vs. 5 years, P = 0.01), higher creatinine levels (mean = 1.66 vs. 0.9 mg/dL, P = 0.014, odds ratio [OR] = 3.8), and higher incidence of cranial nerve palsy (92% vs. 56%; OR = 8.9) compared to non-otogenic SBO. Cranial nerve palsy (78%), meningitis (63%), and cerebral venous thrombosis (43%) were frequent complications of SBO in this study. The causative organisms for SBO in our cohort was bacterial in 60% (15/25) and fungal in 40% (10/25) of the patients. Surgical debridement for source control was done in 54% of patients (22/41) and was associated with survival at discharge (P = 0.001). Conclusions: Bacterial infections are the most common cause of SBO. Otogenic SBO is associated with longer duration of diabetes mellitus and higher incidence of cranial nerve palsy. Therapeutic surgical debridement plays an important role in treatment of SBO and is associated with improved survival.				
123.	Das, S., Job, M., Kodiattu, T. and Iyadurai, R. Atypical presentation of intrahepatic cholangiocarcinoma---Fever and ascites in a postpartum lady J Family Med Prim Care; 2019, 8 (11): 3748-3751 <b>Address:</b> Department of Medicine, <b>Christian Medical College and Hospital, Vellore, India.</b> Department of General Pathology, <b>Christian Medical College and Hospital, Vellore, India.</b> Intrahepatic cholangiocarcinoma is an uncommon malignancy which usually occurs in the 7(th) decade. Here we present a postpartum patient with fever, hepatomegaly, and ascites, who was diagnosed to have metastatic intrahepatic cholangiocarcinoma.	NAT	JUL TO DEC	Medicine, General Pathology	<b>PMID:31803685</b> <b>PMC ID:6881913</b> <b>35236</b> <b>Impact Factor: 0.21</b> <b>(RG-2018)</b> <b>H-Index: NA</b>
124.	Dasgupta, R., Anoop, S., Samuel, P., Kurian, M. E., Inbakumari, M., Finney, G. and Thomas, N. Bioimpedance analysis with a novel predictive equation - A reliable technique to estimate fat free mass in birth weight based cohorts of Asian Indian males Diabetes and Metabolic Syndrome: Clinical Research and Reviews;	INT	JAN TO JUN	Endocrinology, Diabetes and Metabolism, Biostatistics, Biochemistry	<b>PMC Article</b> <b>Impact Factor: 1.61</b> <b>(RG-2018)</b> <b>H-Index: 25</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>2019, 13 (1): 738-742</p> <p><b>Address:</b> Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College, Vellore</b> (CMC), India                      Department of Biostatistics, <b>Christian Medical College, Vellore, India</b>                      Department of Biochemistry, <b>Christian Medical College, Vellore, India</b></p> <p>Aim: To validate bioimpedance based predictive equations for fat free mass (FFM) against DEXA and to derive a novel birth weight based predictive equation for FFM in a birth weight based cohort of healthy Asian Indian men. Methodology: Whole body composition was done using DEXA and bioimpedance in 117 young Asian Indian men, born of normal birth weight (n = 59, birth weight ≥2.5 kg) or low birth weight (n = 58, birth weight &lt; 2.5 kg). Predictive accuracy of 11 different bioimpedance based equations for FFM was evaluated using Pearson's correlation analysis and the root of mean squared prediction error (RMSE) analysis. Results: The mean FFM (on DEXA) and total lean mass &amp; impedance index (on bioimpedance) were significantly higher in the low birth weight cohort. Significantly higher body fat percentage was noted on bioimpedance, for the normal birth weight cohort, but not on DEXA. In addition, the mean values of predicted FFM were significantly higher in the low birth weight cohort for 9 different predictive equations. Specifically, the mean FFM values obtained using the predictive equations of Schaefer et al., Hoot cooper et al. and Hughes et al. were in close agreement with the actual FFM values on DEXA. A novel predictive equation (CMC equation) for FFM based on birth weight was derived. <math>FFM = 32.637 + (-0.222*age) + (-32.51*waist-to-hip\ ratio) + (0.33*body\ mass\ index) + (1.58 * 1\ or\ 2\ (1 = normal\ birth\ weight, 2 = low\ birth\ weight) + (0.510*waist\ circumference)</math>. Conclusions: Our study findings substantiate the validity of Bio-impedance analysis (BIA) as a reliable and noninvasive tool for estimating body composition measures in birth-weight based cohorts of Asian Indian males. Further, we have devised a novel BIA-based predictive equation that can be useful in larger epidemiological studies to look at alterations in body fat in this cohort. © 2018</p>				
125.	<p>Dasgupta, R., Anoop, S., Venkatesan, P., Inbakumari, M., Finney, G. and Thomas, N.</p> <p>Differential performance of surrogate indices of fasting insulin resistance in low-birthweight and normal-birth weight cohorts: Observations from Hyperinsulinaemic-Euglycaemic clamp studies in</p>	INT	JAN TO JUN	Endocrinology, Diabetes and Metabolism, Biochemistry	<p><b>PMC Article Impact Factor: 1.61 (RG-2018)</b></p> <p><b>H-Index: 25</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>young, Asian Indian males Diabetes and Metabolic Syndrome: Clinical Research and Reviews; 2019, 13 (1): 770-775</p> <p><b>Address:</b> Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College, Vellore</b> (CMC), India Department of Biochemistry, <b>Christian Medical College, Vellore, India</b></p> <p>Aim: To evaluate the predictive accuracy of surrogate measures of fasting insulin resistance/sensitivity like the Homeostasis model assessment for insulin resistance (HOMA -IR), Fasting glucose/insulin ratio (FG-IR), Quantitative insulin sensitivity check index (QUICKI), and the 20/fasting C peptide x fasting plasma glucose [20/(FCP x FPG)] index in comparison to M value derived from hyperinsulinaemic-euglycaemic clamp (HEC) studies in two birth weight based cohorts of Asian Indian males. Methods: HEC studies were performed in non-diabetic Asian Indian males (n = 117), born of normal birth weight (n = 59, birth weight &gt; 2.5 kgs) and low birth weight (n = 58, birth weight &lt; 2.5 kgs). Anthropometry and biochemical analysis were done. Surrogate indices of fasting insulin resistance were calculated and data were analysed by Pearson's correlation and Random calibration model analysis. Results: Amongst surrogate indices of fasting insulin resistance/sensitivity, the mean values for HOMA-IR, QUICKI, FG-IR, 20/(FCP x FPG) index and M value were similar between the two groups. Significant positive correlation was observed for FG-IR and QUICKI with M value (the gold standard measure of insulin sensitivity derived from HEC procedure) in the low birth weight cohort in contrast to the normal birth weight cohort, wherein no significant correlation was observed for any of the indices. Random calibration model analysis showed highest predictive accuracy for QUICKI in both the study groups. Conclusion: The QUICKI index showed highest predictive accuracy in the normal birth weight and the low birth weight cohorts of Asian Indian males. © 2018</p>				
126.	<p>Datta, A., Thomas, V., Sebastian, A., Thomas, A., Chandy, R. G., Peedicayil, A., Manoj Kumar, R. and Simon, B. Von Hippel-Lindau Syndrome and Steroid Cell Tumour of the Ovary: A Rare Association Indian Journal of Gynecologic Oncology; 2019, 17 (4):</p> <p>Address: Department of Gynaecologic Oncology, <b>Christian Medical College, Vellore, India</b></p>	NAT	JUL TO DEC	Gynecologic Oncology, Pathology, Radiology	PMC Article 22378

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Pathology, <b>Christian Medical College, Vellore, India</b>                      Department of Radiology, <b>Christian Medical College, Vellore, India</b></p> <p>Background: Steroid cell tumours of the ovary account for approximately 0.1% of all ovarian tumours. Association of these tumours with Von Hippel–Lindau syndrome is an extremely rare phenomenon. Case: A 24-year-old female, diagnosed with Von Hippel–Lindau syndrome, with previous surgeries for cervical haemangioblastomas and pheochromocytoma was evaluated in the Reproductive Medicine Unit for secondary infertility and abnormal uterine bleeding. She was referred to the Gynaecologic Oncology Department with the sonological diagnosis of a left-sided complex adnexal mass. After evaluation, patient underwent laparoscopy proceed, peritoneal washings, chromopertubation, left salpingo-oophorectomy and omental biopsy. Histopathology was reported as a pure stromal tumour consistent with a benign steroid cell tumour (alpha inhibin positive), not otherwise specified. At the last visit, the patient was asymptomatic. Discussion: Von Hippel–Lindau syndrome, an autosomal dominant inherited disorder, is characterized by the formation of tumours (haemangioblastomas in brain, spinal cord and retina), pheochromocytoma and cysts in many different parts of the body (kidneys, pancreas and genital tract). In women, broad ligament cystadenomas are commonly reported. Steroid cell tumours of the ovary are extremely rare. About 20% are malignant and nearly 95% unilateral. They can manifest at any age but majority occur in third or fourth decade. There are very few reported cases of steroid cell tumours in association with Von Hippel–Lindau syndrome. Conclusion: We present a case of an ovarian steroid cell tumour in a young patient of VHL syndrome. This focuses on the rarity of their association. © 2019, Association of Gynecologic Oncologists of India.</p>				
<b>127.</b>	<p>David, L. S., Beck, M. M., Kumar, M., Rajan, S. J., Danda, D. and Vijayaselvi, R.                      Obstetric and perinatal outcomes in pregnant women with Takayasu's Arteritis: single centre experience over five years                      J Turk Ger Gynecol Assoc; 2019, <b>Address:</b> Department of Obstetrics and Gynaecology, <b>Christian Medical College and Hospital, Vellore, South India</b>                      Department of Neonatology, <b>Christian Medical College and Hospital, Vellore, South India</b></p>	<b>INT</b>	<b>JUL TO DEC</b>	Obstetrics and Gynaecology, Neonatology, Obstetric Medicine, Rheumatology	<p><b>PMID:</b> 31564080  <b>Impact Factor:</b> 0.51  <b>(RG - 2018)</b>  <b>H-Index: 11</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Obstetric Medicine, <b>Christian Medical College and Hospital, Vellore</b>, South India                      Department of Rheumatology, <b>Christian Medical College and Hospital, Vellore</b>, South India</p> <p>Objective: To study the obstetric and perinatal outcomes among pregnant women with Takayasu's arteritis (TA), attending our hospital for pregnancy and childbirth between January 2011 to December 2016. Material and methods: Retrospective study carried out by abstracting clinical charts on all pregnant women with TA who underwent antenatal care and/or delivery in our hospital during this period. American college of Rheumatology criteria was used for diagnosis of TA. 16 women with TA were included in the study. Maternal demographic data, stage of disease, complications related to disease, details of treatment taken prior to pregnancy, pregnancy outcomes, and neonatal outcomes were studied. Results: Majority of our women(n=7,43.8%) belonged to Type V angiographic type, however almost half of our cohort (7/16) had undergone surgical corrections prior to pregnancy and most (15/16) were on medical management. Only 3 women (19%) were diagnosed during pregnancy. Most of our women didn't have disease activity both by Kerr's criteria (n=12,75%), and ITAS A scores. Chronic hypertension was the commonest antenatal complication(56.2 %), one-third women had growth restricted babies and a fourth had preterm labour. There were no cardiovascular events, no maternal deaths, nor fetal or neonatal deaths.Two-thirds of our women delivered by Caesarean Section. Conclusions: Preconceptional counselling is of paramount importance in women with TA. Good maternal and fetal outcomes are observed with close antenatal surveillance and multidisciplinary care. Pregnancy should be planned during disease remission, with good antenatal care, close monitoring of clinical symptoms , early diagnosis and treatment of complications.</p>				
<b>128.</b>	<p>David, S., Mathews, N. S., Singh, G. S., Korula, A., Aboobacker, F. N., Abraham, A., George, B., Srivastava, A., Mathews, V. and Nair, S. C.</p> <p>Evaluation of nonneutralizing antibodies against factor VIII in severe haemophilia A patients from India                      Blood Coagul Fibrinolysis; 2019, 30 (7): 337-340  <b>Address:</b> Department of Haematology.                      Department of Transfusion Medicine and Immunohaematology,  <b>Christian Medical College, Vellore, Tamil Nadu</b>, India:                      Haemophilia A is treated by replacement therapy with factor VIII (FVIII) concentrate. This strategy of treatment is ineffective in some patients due to the development of neutralizing antibodies (NNAs)</p>	<b>INT</b>	<b>JUL TO DEC</b>	Haematology, Transfusion Medicine and Immunohaematology	<b>PMID:</b> 31449137 <b>Impact Factor:</b> 1.120 <b>(BIOXBIO - 2018)</b> <b>H-Index: 67</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	against FVIII. The inhibitors have been identified to act against the functional domains of FVIII. The presence of NNAs against FVIII has also been identified. There is limited data on the prevalence and significance of NNA in haemophilia. To identify the presence of NNA in severe haemophilia A in our population, patients who were recruited from community-based camps were evaluated for FVIII activity. The patient's samples were further analysed for inhibitor activity with Nijmegen-Bethesda Assay and for NNAs using an in-house ELISA. 312 severe haemophilia patients were analysed for inhibitors and NNA. In-house ELISA picked up antibodies in 56 patients (17.9%). Of these 42 (13.7%) had inhibitory antibodies and in 14 patients (4.5%) there was no evidence of FVIII inhibitory activity. A substantial number of patients with severe haemophilia A have NNA. Continuous long-term follow-up is required in this cohort to evaluate the significance of this observation.				
129.	<p>David, S., Nair, S. C., Singh, G. S., Alex, A. A., Ganesan, S., Palani, H. K., Balasundaram, N., Lakshmi, K. M., Joshi, A., Kannan, S., Korula, A., Nambiatheyil Aboobacker, F., Abraham, A., George, B., Apte, S. J., Srivastava, A. and Mathews, V.</p> <p>Prevalence of FVIII inhibitors in severe haemophilia A patients: Effect of treatment and genetic factors in an Indian population Haemophilia; 2019, 25 (1): 67-74</p> <p><b>Address:</b> Department of Haematology, <b>Christian Medical College, Vellore, India</b> Department of Immunohaematology and Transfusion Medicine, <b>Christian Medical College, Vellore, India</b> Sahyadri Speciality Hospital, Pune, India</p> <p>Introduction: Factor replacement therapy in treatment of haemophilia A is complicated by the production of neutralising antibodies known as inhibitors. The formation of inhibitors is multifactorial being associated with both genetic and environmental factors. Aim: To document the prevalence of inhibitors in severe haemophilia in the community where most patients receive only infrequent episodic replacement therapy and evaluate the factors which could be contributing to it. Methods: Community based camps were conducted in different parts of the country. Patients were assessed through a structured questionnaire and blood samples were obtained for laboratory evaluation of inhibitors and defined immunological parameters. Results: Inhibitors were present in 87/447 (19.5%) of the evaluated patients. High-titre inhibitor (&gt;5 Bethesda Units [BU]) was identified in 31 (35.6%) patients. HLA</p>	INT	JAN TO JUN	Haematology, Immunohaematology and Transfusion Medicine	<p><b>WOS:000456688500022</b> <b>PMC</b> <b>Impact Factor: 2.768</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 84</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	DRB1-13-positive cases (RR = 2.04; 95% CI 1.06-3.911; P = 0.033) had an increased risk of inhibitor formation which was retained in the high-titre subset. A decreased risk of inhibitor formation was noted with heterozygous IL4-590 C/T allele (RR = 0.22; 95% CI 0.108-0.442: P = 0.000). There were no significant correlations between any of the evaluated environmental factors and the development of inhibitors in this study. Conclusion: The overall prevalence of inhibitors in patients with severe haemophilia A is similar to that reported among patients receiving regular replacement therapy. The data from this study, limited by its retrospective and cross-sectional study design, would suggest that genetic rather than environmental are more likely to impact the development of inhibitors. © 2018 John Wiley & Sons Ltd				
130.	<p>Demosthenes, J. P., Sachithanandham, J., Fletcher, G. J., Zachariah, U. G., Varghese, G. M., John Daniel, H. D., Jeyaseelan, L., Abraham, P. and Kannangai, R.</p> <p>Characteristics of treatment-naive HBV-infected individuals with HIV-1 coinfection: A cross-sectional study from South India Indian J Med Microbiol; 2019, 37 (2): 219-224</p> <p><b>Address:</b> Department of Clinical Virology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Hepatology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Infectious Diseases, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Purpose: Human immunodeficiency virus-1 (HIV-1) and hepatitis B virus (HBV) coinfection has become a major health problem across the globe. The increased life expectancy of HIV-1 patients due to antiretroviral therapy has led to the emergence of liver disease as a major mortality factor among them. The purpose of the study was to examine the baseline characteristics of HBV in treatment-naive HBV/HIV coinfection from southern India compared to monoinfected individuals. Materials and Methods: The study was cross sectional in design, and samples were examined from 80 HIV-1, 70 HBV and 35 HBV/HIV-coinfected individuals using chemiluminescent microparticle immunoassay, real-time polymerase chain reaction and flow cytometry assays. Results: There was a significant increase in HBV DNA (P = 0.0001), higher hepatitis B e antigen percentage difference (P = 0.027) and lower CD4 counts (P = 0.01) among the HBV/HIV-coinfected individuals, but no difference in the HIV-1 viral load compared to HIV-1-monoinfected individuals. Also, the</p>	NAT	JUL TO DEC	Clinical Virology, Hepatology, Infectious Diseases, Biostatistics	<p><b>PMID:</b> 31745022 <b>Impact Factor:</b> 0.950 <b>(BIOXBIO - 2018)</b> <b>H-Index: 41</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	aspartate aminotransferase levels, prothrombin time and the international normalised ratio were significantly high among coinfecting individuals. Conclusion: These findings conclude that HIV-1 coinfection can have serious implications on the outcome of HBV-related liver disease. To the contrary, HBV infection had no consequence on the progression of HIV-1 disease but distinctly lowered CD4+ T-cells.				
<b>131.</b>	<p>Deora H(1), Kim SH(2), Behari S(1), Rudrappa S(3), Rajshekhar V(4), Zileli M(5), Parthiban JKBC(6).                      Anterior Surgical Techniques for Cervical Spondylotic Myelopathy: WFNS Spine Committee Recommendations.                      Neurospine. 2019 Sep;16(3):408-420.                      doi: 10.14245/ns.1938250.125. Epub 2019 Sep 30.</p> <p><b>Author information:</b>                      (1)Department of Neurosurgery, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India.                      (2)Department of Neurosurgery, Korea University Ansan Hospital, Ansan, Korea.                      (3)Department of Neurosurgery, Sakra World Hospital, Bangalore, India.                      (4)Department of Neurological Sciences, Christian Medical College Hospital, Vellore, India.                      (5)Department of Neurosurgery, Ege University Faculty of Medicine, Izmir, Turkey.                      (6)Department of Neurosurgery, Kovai Medical Center and Hospital, Coimbatore, Tamil Nadu, India.</p> <p>OBJECTIVE: This study was performed to review the literature and to present the most up-to-date information and recommendations on the indications, complications, and success rate of anterior surgical techniques for cervical spondylotic myelopathy (CSM). The commonly performed anterior surgical procedures are multiple-level anterior cervical discectomy and fusion, anterior cervical corpectomy and fusion and its variants (skip corpectomy and hybrid surgery), and oblique corpectomy without fusion. METHODS: A comprehensive literature search and analysis were performed using MEDLINE (PubMed), the Cochrane Register of Controlled Trials, and the Web of Science for peer-reviewed articles published in English during the last 10 years. RESULTS: Corpectomy is mandated for ventral compression of fewer than 3 vertebral segments where single-level disc and osteophyte excision is inadequate to decompress the cord.</p>	<b>INT</b>	<b>JUL TO DEC</b>	Neurological Sciences	<p><b>PMID: 31607073</b>  <b>PMCID: PMC6790738</b>  <b>Impact Factor: NA</b>  <b>H-Index: NA</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Endoscopic or oblique partial corpectomy improves the agittal canal diameter by 67% and obviates the need for an additional bone graft procedure. CONCLUSION: The indications of anterior surgery in patients with CSM include a straightened or kyphotic spine with a compression level lower than 3. With an appropriate choice of implants and meticulous surgical technique, surgical complications can be seen only rarely. Improvements after anterior surgery for CSM have been reported in 70% to 80% of patients. DOI: 10.14245/ns.1938250.125				
132.	Dev, Anand Vimal, John, Anoop, Rajesh, S., Rajeev, S. A., Jaleel, Rajeeb, Thomas, Reuben, Dhar, Sudipta, Kumar, Amit, Simon, Ebby and Joseph, A. J. Case Series Of Groove Pancreatitis in a Tertiary centre Journal of Gastroenterology and Hepatology; 2019, 34 397-397	INT	JUL TO DEC	Gastroenterology	PMID:WOS:000495492603045 Impact Factor: 3.632 (BIOXBIO - 2018) H-Index: 117
133.	Devamani, C. S., Prakash, J. A. J., Alexander, N., Suzuki, M. and Schmidt, W. P. Hospitalisations and outpatient visits for undifferentiated fever attributable to scrub typhus in rural South India: Retrospective cohort and nested case-control study PLoS Neglected Tropical Diseases; 2019, 13 (2): <b>Address:</b> Department of RUHSA, <b>Christian Medical College, Vellore, India</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, India</b> MRC Tropical Epidemiology Group, London School of Hygiene and Tropical Medicine, London, United Kingdom Department of Clinical Medicine, Institute of Tropical Medicine, Nagasaki University, Nagasaki, Japan Department of Emergency Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India</b> Department for Disease Control, London School of Hygiene and Tropical Medicine, London, United Kingdom  The burden of scrub typhus in endemic areas is poorly understood. This study aimed at estimating the proportion of hospitalisations and outpatient visits for undifferentiated fever in the community that may be attributable to scrub typhus. Methodology and principal findings The study was a retrospective cohort with a nested case-control study conducted in the South Indian state of Tamil Nadu. We conducted house-to-house screening in 48 villages (42965 people, 11964 households) to identify hospitalised or outpatient cases due to undifferentiated fever during the preceding scrub typhus season. We used scrub typhus IgG to determine past	INT	JAN TO JUN	RUHSA, Clinical Microbiology, Emergency Medicine	PMC Article Impact Factor: 4.367 (BIOXBIO-2018) H-Index: 110

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	infection. We calculated adjusted odds ratios for the association between IgG positivity and case status. Odds ratios were used to estimate population attributable fractions (PAF) indicating the proportion of hospitalised and outpatient fever cases attributable to scrub typhus. We identified 58 cases of hospitalisation and 236 outpatient treatments. 562 people were enrolled as control group to estimate the background IgG seroprevalence. IgG prevalence was 20.3% in controls, 26.3% in outpatient cases and 43.1% in hospitalised cases. The PAFs suggested that 29.5% of hospitalisations and 6.1% of outpatient cases may have been due to scrub typhus. In villages with a high IgG prevalence (defined as $\geq 15\%$ among controls), the corresponding PAFs were 43.4% for hospitalisations and 5.6% for outpatients. The estimated annual incidence of scrub typhus was 0.8/1000 people (0.3/1000 in low, and 1.3/1000 in high prevalence villages). Evidence for recall error suggested that the true incidences may be about twice as high as these figures. Conclusions The study suggests scrub typhus as an important cause for febrile hospitalisations in the community. The results confirm the adequacy of empirical treatment for scrub typhus in hospitalised cases with undifferentiated fever. Since scrub typhus may be rare among stable outpatients, the use of empirical treatment remains doubtful in these. © 2019 Devamani et al.				
134.	<p>Devanga Ragupathi, N. K. and Veeraraghavan, B.                      Accurate identification and epidemiological characterization of Burkholderia cepacia complex: An update                      Annals of Clinical Microbiology and Antimicrobials; 2019, 18 (1):  <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, 632004, India</b></p> <p>Bacteria belonging to the Burkholderia cepacia complex (Bcc) are among the most important pathogens isolated from cystic fibrosis (CF) patients and in hospital acquired infections (HAI). Accurate identification of Bcc is questionable by conventional biochemical methods. Clonal typing of Burkholderia is also limited due to the problem with identification. Phenotypic identification methods such as VITEK2, protein signature identification methods like VITEK MS, Bruker Biotyper, and molecular targets such as 16S rRNA, recA, hisA and rpsU were reported with varying level of discrimination to identify Bcc. rpsU and/or 16S rRNA sequencing, VITEK2, VITEK MS and Bruker Biotyper could discriminate between Burkholderia spp. and non-Burkholderia spp. Whereas, Bcc complex level identification can be given by VITEK MS, Bruker Biotyper, and 16S rRNA/rpsU/recA/hisA sequencing. For species level identification</p>	INT	JAN TO JUN	Clinical Microbiology	<b>PMCRewiew                      Impact Factor: 2.79                      (RG-2018)                      H-Index: 45</b>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	within Bcc hisA or recA sequencing are reliable. Identification of Bcc is indispensable in CF patients and HAI to ensure appropriate antimicrobial therapy. © 2019 The Author(s).				
135.	<p>Devanga Ragupathi, N. K., Muthuirulandi Sethuvel, D. P., Gajendran, R., Anandan, S., Walia, K. and Veeraraghavan, B. Horizontal Transfer of Antimicrobial Resistance Determinants Among Enteric Pathogens Through Bacterial Conjugation Current Microbiology; 2019, <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore,</b> TN 632 004, India Division of Epidemiology and Communicable Diseases, Indian Council of Medical Research, New Delhi, 110 029, India</p> <p>Multi-drug resistance and transfer of mobile genetic elements among enteric pathogens is being reported to have increased rapidly. Commensal Escherichia coli was previously known to acquire mobile genetic elements from other genus/species. E. coli is also capable of disseminating these elements containing antimicrobial resistance determinants through horizontal transfer. Similarly, for Shigellae the antimicrobial resistance are on rise for fluoroquinolones and cephalosporins due to accumulation of mobile elements. Thus the study was hypothesized to investigate the role of transferable plasmids in commensal MDR E. coli vs Salmonella spp, and MDR Shigella flexneri vs Salmonella spp. pKP3-A plasmid containing qnrS1 was successfully transferred from E. coli to Salmonella spp. Similarly, a plasmid containing qnrS1 and bla CTX-M-15 was transferred from Shigella to Salmonella spp. However, bla CTX-M-15 was not transferred from E. coli as it was integrated into chromosome that was revealed by next-generation sequencing. This might be a reason that fluoroquinolone-resistant determinants are more frequently transferred than the cephalosporin resistant determinants. Findings from the study emphasize that mobile elements with AMR determinants are significant public health concern that has potential to rapidly disseminate. © 2019, Springer Science+Business Media, LLC, part of Springer Nature.</p>	INT	JAN TO JUN	Clinical Microbiology	<p><b>PMCArticle</b> <b>Impact Factor: 1.373</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 79</b></p>
136.	<p>Devarbhavi, H., Choudhury, A. K., Sharma, M. K., Maiwall, R., Al Mahtab, M., Rahman, S., Chawla, Y. K., Dhiman, R. K., Duseja, A., Taneja, S., Ning, Q., Jia, J. D., Duan, Z., Yu, C., Eapen, C. E., Goel, A., Tan, S. S., Hamid, S. S., Butt, A. S., Jafri, W., Kim, D. J., Hu, J., Sood, A., Midha, V., Shukla, A., Ghazinian, H., Sahu, M. K., Treeprasertsuk, S., Lee, G. H., Lim, S. G., Lesmana, L. A., Lesmana, C. R., Shah, S., Kalal, C., Abbas, Z., Sollano, J. D., Prasad, V. G. M.,</p>	INT	JAN TO JUN	Hepatology	<p><b>PMID: 31021832</b> <b>Impact Factor: 10.231</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 234</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Payawal, D. A., Dokmeci, A. K., Rao, P. N., Shrestha, A., Lau, G. K., Yuen, M. F., Saraswat, V. A., Shiha, G., Yokosuka, O., Kedarisetty, C. K., Jain, P., Bhatia, P., Sarin, S. K. and Party, Apasl Acfl Working Drug-Induced Acute-on-Chronic Liver Failure in Asian Patients The American journal of gastroenterology; 2019, 114 (6): 929-937</p> <p><b>Address:</b> Department of Gastroenterology and Hepatology, St John Medical College, Bangalore, India Department of Hepatology and Transplant, Institute of Liver and Biliary Sciences, New Delhi, India Department of Hepatology, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh Department of Hepatology, PGIMER, Chandigarh, India Institute and Department of Infectious Disease, Tongji Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China Liver Research Center, Beijing Friendship Hospital, Capital Medical University, Beijing, China Translational Hepatology Institute Capital Medical University, Beijing You'an Hospital, China Department of Hepatology, <b>CMC, Vellore</b>, India Department of Medicine, Hospital SelayangSelangor, Malaysia Department of Medicine, Aga Khan University Hospital, Karachi, Pakistan Department of Internal Medicine, Hallym University College of Medicine Department of Medicine, 302 Millitary Hospital Beijing, China Department of Gastroenterology, DMC, Ludhiana, India Department of Hepatology, KEM Hospital and Seth GSMC Department of Hepatology, Nork Clinical Hospital of Infectious Disease, Armenia Department of Hepatology, IMS &amp;SUM Hospital, Bhuvaneswar, India Department of Medicine, Chulalongkorn University, Bangkok, Thailand Department of Medicine, Yong Loo Lin School of Medicine, National University of Singapore, Austria Department of Medicine, Medistra Hospital, Jakarta, Indonesia Department of Hepatology, Global Hospital, Mumbai, India Department of Medicine, Ziauddin University Hospital, Karachi, Pakistan Department of Gastroenterology, VGM Hospital, Coimbatore, India Department of Medicine, Cardinal Santos Medical Center, Metro Manila, Philippines</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Medicine, Ankara University School of Medicine, Turkey                      Asian Institute of Gastroenterology, Hyderabad, India                      Department of Hepatology, Foundation Nepal Sitapaila Height, Kathmandu                      Department of Medicine, Humanity and Health Medical Group, Hong Kong                      Department of Medicine, Queen Mary Hospital Hong Kong, China                      Department of Hepatology, SGPGI, Lucknow, India                      Department of Internal Medicine, Egyptian Liver Research Institute and Hospital (ELRIAH), Mansoura, Egypt                      Department of Medicine, Chiba University, Japan                      Department of Hepatology, Global Hospitals, Chennai, India</p> <p>OBJECTIVES: Acute insults from viruses, infections, or alcohol are established causes of decompensation leading to acute-on-chronic liver failure (ACLF). Information regarding drugs as triggers of ACLF is lacking. We examined data regarding drugs producing ACLF and analyzed clinical features, laboratory characteristics, outcome, and predictors of mortality in patients with drug-induced ACLF. METHODS: We identified drugs as precipitants of ACLF among prospective cohort of patients with ACLF from the Asian Pacific Association of Study of Liver (APASL) ACLF Research Consortium (AARC) database. Drugs were considered precipitants after exclusion of known causes together with a temporal association between exposure and decompensation. Outcome was defined as death from decompensation. RESULTS: Of the 3,132 patients with ACLF, drugs were implicated as a cause in 329 (10.5%, mean age 47 years, 65% men) and other nondrug causes in 2,803 (89.5%) (group B). Complementary and alternative medications (71.7%) were the commonest insult, followed by combination antituberculosis therapy drugs (27.3%). Alcoholic liver disease (28.6%), cryptogenic liver disease (25.5%), and non-alcoholic steatohepatitis (NASH) (16.7%) were common causes of underlying liver diseases. Patients with drug-induced ACLF had jaundice (100%), ascites (88%), encephalopathy (46.5%), high Model for End-Stage Liver Disease (MELD) (30.2), and Child-Turcotte-Pugh score (12.1). The overall 90-day mortality was higher in drug-induced (46.5%) than in non-drug-induced ACLF (38.8%) (P = 0.007). The Cox regression model identified arterial lactate (P &lt; 0.001) and total bilirubin (P = 0.008) as predictors of mortality. DISCUSSION: Drugs are important identifiable causes of ACLF in Asia-Pacific countries, predominantly from complementary and alternative medications, followed by</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	antituberculosis drugs. Encephalopathy, bilirubin, blood urea, lactate, and international normalized ratio (INR) predict mortality in drug-induced ACLF. DOI: 10.14309/ajg.0000000000000201				
137.	<p>Dhanoop Abraham Varghese Prevalence of LTBI in patients with RA and AS <u>Lung India</u>. 2019 Nov; 36(Suppl 3): S124.</p> <p><b>CMC, Vellore</b>, Tamil Nadu, India. E-mail: <a href="mailto:dr.dhanoop@gmail.com">dr.dhanoop@gmail.com</a></p> <p>Background: The burden of TB in India is high despite the strict measures followed towards the effort to control it. Latent tuberculosis is the condition in which a patient is infected with mycobacterium tuberculi but not clinically ill. The risk of patients with rheumatologic diseases who are harboring LTBI to develop active tuberculosis is up to 4-fold compared with the general population. The risk of reactivation of LTBI was up to 25% in patients on biological therapy for the treatment of underlying rheumatologic diseases. This study aimed to estimate the prevalence of LTBI in patients with RA and AS. Methods: This is a cross-sectional study of consecutive patients with RA and AS who are treatment naïve with regards to immunosuppressants and biological drugs and if on steroids then less than or equalling dose of up to Deflazacort 12 mg. 178 eligible patients were tested for LTBI with QFT and TST. Results: The prevalence of LTBI observed was 60.1%. The prevalence of LTBI in patients with RA was 58.1% and that among patients with AS was 70%. Past exposure to TB and duration and the mean dose of steroids emerged as risk factors significantly associated with both the tests. Conclusion: The prevalence of LTBI in the study population with RA and AS was high (60.1%) compared to the community (40%), thus to achieve elimination and control the seedbed of tuberculosis strict screening should be implemented in this risk group, furthermore if planned for therapy with immunomodulators and biological.</p>	NAT	JUL TO DEC	Respiratory Medicine	<p><b>PMCID: PMC6891926</b> <b>Impact Factor: 0.58</b> <b>(RG-2018)</b> <b>H-Index: 18</b></p>
138.	<p>Dhoooria, S., Agarwal, R., Sehgal, I. S., Aggarwal, A. N., Goyal, R., Guleria, R., Singhal, P., Shah, S. P., Gupta, K. B., Koolwal, S., Akkaraju, J., Annapoorni, S., Bal, A., Bansal, A., Behera, D., Chhajed, P. N., Dhamija, A., Dhar, R., Garg, M., Gopal, B., Hibare, K. R., James, P., Jindal, A., Jindal, S. K., Khan, A., Kishore, N., Koul, P. A., Kumar, A., Kumar, R., Lall, A., Madan, K., Mandal, A., Mehta, R. M., Mohan, A., Nangia, V., Nath, A., Nayar, S., Patel, D., Pattabhiraman, V., Raghupati, N., Sarkar, P. K., Singh, V., Sivaramakrishnan, M., Srinivasan, A., Swarnakar, R., Talwar, D. and</p>	NAT	JAN TO JUN	Pulmonary Medicine	<p><b>PMCArticle</b> <b>Impact Factor: 0.58</b> <b>(RG-2018)</b> <b>H-Index: 18</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Thangakunam, B. Bronchoscopic lung cryobiopsy: An Indian association for bronchology position statement Lung India; 2019, 36 (1): 48-59</p> <p><b>Address:</b> Departments of Pulmonary Medicine, Postgraduate Institute of Medical Education and Research, Chandigarh, 160 012, India Department of Respiratory Medicine, Jaipur Golden Hospital, Rajiv Gandhi Cancer Institute, India Department of Pulmonary Medicine and Sleep Disorders, All India Institute of Medical Sciences, India Department of Respiratory Medicine, Bombay Hospital and Fortis Hiranandani Hospital, India Department of Respiratory Medicine, Nanavati Super Speciality Hospital, India Department of Respiratory Medicine, Postgraduate Institute of Medical Sciences, Rohtak, Haryana, India Department of Chest Diseases, SMS Medical College, India Department of Respiratory Medicine, Century Hospital, Hyderabad, Telangana, India Department of Respiratory Medicine, Royal Care Hospital, Coimbatore, India Departments of Histopathology, Postgraduate Institute of Medical Education and Research, Chandigarh, India Department of Respiratory Medicine, Indraprastha Apollo Hospital, India India and Lung Care and Sleep Centre, Institute of Pulmonology, Medical Research and Development, Mumbai, India Department of Respiratory Medicine, Sir Ganga Ram Hospital, India Department of Respiratory Medicine, Fortis Hospital Anandapur, Kolkata, West Bengal, India Departments of Radiodiagnosis and Imaging, Postgraduate Institute of Medical Education and Research, Chandigarh, India Department of Respiratory Medicine, Maharaja Agrasen Hospital, India Department of Respiratory Medicine, Narayana Health City, India Department of Pulmonary Medicine, <b>Christian Medical College, Vellore, India</b> Department of Respiratory Medicine, Jindal Chest Clinic, Chandigarh, India Department of Pulmonary Medicine, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Respiratory Medicine, Max Hospital, India                      Department of Internal and Pulmonary Medicine, Sher-I-Kashmir Institute of Medical Sciences, Srinagar, Jammu and Kashmir, India                      Department of Pulmonary Medicine, Vallabhbhai Patel Chest Institute, India                      Fortis Hospital, Mohali, Punjab, India                      Department of Respiratory Medicine, Apollo Hospital, Bengaluru, Karnataka, India                      Department of Respiratory Medicine, Fortis Hospital, India                      Department of Respiratory Medicine, BLK Super Speciality Hospital, New Delhi, India                      Department of Respiratory Medicine, City Clinic and Bhailal Amin General Hospital, Vadodara, Gujarat, India                      Department of Respiratory Medicine, Apollo Hospital, Chennai, Tamil Nadu, India                      Department of Medicine, Pulmonary, Critical Care and Sleep Medicine, Baylor College of Medicine, Houston, TX, United States                      Department of Respiratory Medicine, Asthma Bhawan, Jaipur, Rajasthan, India                      Department of Respiratory Medicine, Getwell Hospital and Research Institute, Nagpur, Maharashtra, India                      Metro Centre for Respiratory Diseases, Noida, Uttar Pradesh, India</p> <p>Background: Bronchoscopic lung cryobiopsy (BLC) is a novel technique for obtaining lung tissue for the diagnosis of diffuse parenchymal lung diseases. The procedure is performed using several different variations of technique, resulting in an inconsistent diagnostic yield and a variable risk of complications. There is an unmet need for standardization of the technical aspects of BLC. Methodology: This is a position statement framed by a group comprising experts from the fields of pulmonary medicine, thoracic surgery, pathology, and radiology under the aegis of the Indian Association for Bronchology. Sixteen questions on various technical aspects of BLC were framed. A literature search was conducted using PubMed and EMBASE databases. The expert group discussed the available evidence relevant to each question through e-mail and a face-to-face meeting, and arrived at a consensus. Results: The experts agreed that patients should be carefully selected for BLC after weighing the risks and benefits of the procedure. Where appropriate, consideration should be given to perform alternate procedures such as conventional transbronchial biopsy or subject the patient directly to a surgical lung biopsy. The procedure is best performed after placement of an artificial airway under</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	sedation/general anesthesia. Fluoroscopic guidance and occlusion balloon should be utilized for positioning the cryoprobe to reduce the risk of pneumothorax and bleeding, respectively. At least four tissue specimens (with at least two of adequate size, i.e., ≥5 mm) should be obtained during the procedure from different lobes or different segments of a lobe. The histopathological findings of BLC should be interpreted by an experienced pulmonary pathologist. The final diagnosis should be made after a multidisciplinary discussion. Finally, there is a need for structured training for performing BLC. Conclusion: This position statement is an attempt to provide practical recommendations for the performance of BLC in DPLDs. © 2019 Wolters Kluwer Medknow Publications. All rights reserved.				
139.	<p>Dhruva, A., Hamsavardhini, V. K., Kamatham, S., Kataria, A., Kumar, A., Shanthi, M. and Peedicayil, J.                      Avanafil Inhibits the Contractility of the Isolated Caprine Detrusor Muscle                      Int J Appl Basic Med Res; 2019, 9 (4): 231-235  <b>Address:</b> Department of Pharmacology and Clinical Pharmacology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Context: Avanafil is a smooth muscle relaxant that is clinically used to treat erectile dysfunction. It is an inhibitor of phosphodiesterase-5 (PDE5), the enzyme that catalyzes the metabolism of cyclic guanosine monophosphate (cGMP). The inhibitory effect of avanafil on isolated detrusor muscle contractility has not been studied. Aims: This study investigated the inhibitory effect of avanafil on isolated caprine (goat) detrusor muscle contractility and the possible mechanisms involved. Settings and Design: 80 mM potassium chloride (KCl)-induced contractility of the isolated goat detrusor was studied using a physiograph. Materials and Methods: Ten caprine detrusor strips were made to contract using 80 mM KCl before and after addition of three concentrations (10, 30, and 60 μM) of avanafil. Three reversal agents, ODQ, a guanylyl cyclase inhibitor; glibenclamide, an adenosine triphosphate (ATP)-sensitive potassium channel blocker; and iberiotoxin, a calcium-sensitive potassium (BKCa) channel blocker, were investigated for their ability to reverse the inhibitory effect of 30 μM avanafil on KCl-induced detrusor contractility. Statistical Analysis Used: The nonparametric statistical test, Kruskal-Wallis test, was used for the analysis of the data. Results: Avanafil caused a statistically significant inhibition of detrusor contractility at 30 and 60 μM concentrations. The inhibitory effect of 30 μM avanafil on detrusor contractility was significantly reversed by the addition of ODQ, glibenclamide, and iberiotoxin. Conclusions: Avanafil inhibits the contractility of the</p>	INT	JUL TO DEC	Pharmacology, Clinical Pharmacology	PMID: 31681549 <b>Impact Factor: NA</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: NA</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	isolated detrusor by inhibiting PDE5, leading to raised cellular levels of cGMP. The raised levels of cGMP could have inhibited detrusor contractility by activating cGMP-dependent protein kinase, by opening ATP-sensitive potassium channels, and by opening BKCa. Avanafil could be evaluated for treating clinical conditions requiring relaxation of the detrusor like overactive bladder.				
140.	<p>Dincy, P. C. V., Meera, T., Susanne, P. A. and Promila, R. M. Disseminated cutaneous chrysosporium infection Tropical Doctor; 2019, <b>Address:</b> Department of Dermatology, Venereology and Leprosy, <b>Christian Medical College, Vellore, India</b> Department of Pathology, <b>Christian Medical College, Vellore, India</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, India</b></p> <p>Cutaneous chrysosporium infection is extremely rare and underdiagnosed. We present an immunocompromised patient who presented with recurrent cutaneous abscesses. Histopathology of the abscess showed thick-walled conidia and septate fungal hyphae within the subcutis and fungal culture grew Chrysosporium species. © The Author(s) 2019.</p>	INT	JAN TO JUN	Dermatology, Venereology and Leprosy, Pathology, Clinical Microbiology	<b>PMID:31179890</b> <b>Impact Factor: 0.36</b> <b>(RG-2018)</b> <b>H-Index: 31</b>
141.	<p>Dsouza R(1), Roopavathana B(2), Chase S(1), Nayak S(1). Streptococcus constellatus: a rare causative agent of pyogenic liver abscess. BMJ Case Rep. 2019 Dec 18;12(12). pii: e229738. doi: 10.1136/bcr-2019-229738.</p> <p><b>Author information:</b> (1)Division of Surgery, Christian Medical College and Hospital Vellore, Tamil Nadu, India. (2)Division of Surgery, Christian Medical College and Hospital Vellore, Tamil Nadu, India <a href="mailto:beulahroopavathana@gmail.com">beulahroopavathana@gmail.com</a></p> <p>A 26-year-old man who was previously well presented to the emergency in septic shock. He had a preceding history of fever, right upper abdominal pain and jaundice. On examination, there was tenderness over the right hypochondrium and epigastrium, without features of generalised peritonitis. His blood tests were suggestive of sepsis with deranged liver function tests. CT scan of the abdomen showed multiples abscesses in various segments of the liver and a thrombus in the inferior venacava, without any other intraabdominal focus of infection. The abscess was aspirated under sonographic</p>	INT	JUL TO DEC	Surgery	<b>PMID: 31857289</b> <b>Impact Factor: 0.22</b> <b>(RG-2018)</b> <b>H-Index: 20</b>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	guidance, and the cultures grew Streptococcus constellatus species of S. milleri group (SMG). He received crystalline penicillin, based on culture sensitivity and underwent drainage of the abscess. There was a clinical improvement and he was subsequently discharged in a stable condition. On 3 months follow-up, there was a complete resolution of the liver abscess and normalisation of the liver function tests. © BMJ Publishing Group Limited 2019. No commercial re-use. See rights and permissions. Published by BMJ. Conflict of interest statement: Competing interests: None declared. DOI: 10.1136/bcr-2019-229738				
142.	Dsouza, R., Kota, A. A., Agarwal, S. and Issac, R. Cervical sympathetic schwannoma: a forgotten differential for Horner's syndrome ANZ J Surg; 2019, <b>Address:</b> Department of Vascular Surgery, <b>Christian Medical College and Hospital, Vellore, India.</b> Department of Pathology, <b>Christian Medical College and Hospital, Vellore, India.</b>	INT	JAN TO JUN	Vascular Surgery, Pathology	<b>PMID:31230401</b> <b>PMC</b>  <b>Impact Factor: 1.586</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 69</b>
143.	Ebenezer Suman Babu S(1), Mohamathu Rafic K(2), Timothy Peace BS(2), Jose Solomon Raj L(2), Paul Ravindran B(2).  Fricke xylenol glycine gel dosimeter for in vivo dosimetry at extended treatment distance.  Appl Radiat Isot. 2019 Mar;145:217-222. doi: 10.1016/j.apradiso.2018.09.028. Epub 2018 Sep 27.  <b>Author information:</b> (1)Department of Radiotherapy, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India. Electronic <b>Address:</b> emailstoebi@gmail.com. (2)Department of Radiotherapy, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India.  Fricke xylenol gelatin with glycine (FXGGly) as gel dosimeter was investigated for in vivo dosimetry at extended source-to-surface distance (eSSD) and validated with optically stimulated luminescence dosimeters (OSLD). FXGGly dosimeter was calibrated with a low dose rate of 10 cGy/min at eSSD and evaluated using anthropomorphic phantom simulating the actual treatment scenario. The FXGGly dosimeter was demonstrated as a suitable in vivo dosimeter for total body irradiation at eSSD with desirable dosimetric accuracy ( $\pm 2\%$ ) in comparison with OSLD or ionization chamber.	INT	JAN TO JUN	Radiotherapy	<b>PMID: 30798250</b> <b>WOS:000461407300035</b> <b>Impact</b> <b>Factor:1.123(BIOXBIO-2</b> <b>018)</b> <b>H-Index: 71</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Copyright © 2018 Elsevier Ltd. All rights reserved. DOI: 10.1016/j.apradiso.2018.09.028				
144.	<p>Ebenezer, E. D., Londhe, V., Rathore, S., Benjamin, S., Ross, B., Jeyaseelan, L. and Mathews, J. E.</p> <p>Peripartum interventions resulting in reduced perinatal mortality rates, and birth asphyxia rates, over 18 years in a tertiary centre in South India: a retrospective study</p> <p>BJOG; 2019, 126 Suppl 4 21-26</p> <p><b>Address:</b> Department of Obstetrics and Gynaecology, <b>Christian Medical College, Vellore</b>, Tamilnadu, India. Department of Neonatology, <b>Christian Medical College, Vellore</b>, Tamilnadu, India. Department of Biostatistics, <b>Christian Medical College, Vellore</b>, Tamilnadu, India.</p> <p>OBJECTIVE: To study the changes in the rates of perinatal mortality, birth asphyxia, and caesarean sections in relation to interventions implemented over the past 18 years, in a tertiary centre in South India. DESIGN: Retrospective study. SETTING: Labour and maternity unit of a tertiary centre in South India. POPULATION OR SAMPLE: Women who gave birth between 2000 and 2018. METHODS: Information from perinatal audits, chart reviews, and data retrieved from the electronic database were used. Interventions implemented during this time period were audits and training, obstetric re-organisation, and minor changes in staffing and infrastructure. MAIN OUTCOME MEASURES: Main outcome measures were perinatal mortality rate, birth asphyxia rate, and caesarean section rate. RESULTS: Perinatal mortality rate decreased from 44 per 1000 births in 2000 to 16.4 per 1000 births in 2018 (P &lt; 0.001). The rates of babies born with birth asphyxia requiring admission to the neonatal unit decreased from 24 per 1000 births in 2001 to 0.7 per 1000 births in 2018 (P &lt; 0.00001). The overall caesarean section rate was maintained close to 30%. CONCLUSION: In a large tertiary hospital in South India, with 14 000 deliveries per year, a policy of rigorous audits of stillbirths and birth asphyxia, electronic fetal monitoring, and the introduction of standardised criteria for trial of scar, reduced the perinatal mortality and the rate of babies born with birth asphyxia over the past 18 years, without an increase in the caesarean section rate. TWEETABLE ABSTRACT: Rigorous perinatal audits with training in fetal cardiotocography, decreased birth asphyxia, without a major increase in caesarean rates.</p>	INT	JUL TO DEC	Obstetrics and Gynaecology, Neonatology, Biostatistics	<p><b>PMID:</b> 31257695</p> <p><b>Impact Factor:</b> 5.193</p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 148</b></p>
145.	<p>Eidelberg, A., Kirubakaran, R., Nair, S. C., Eapen, C. E., Elias, E. and Goel, A.</p> <p>Systematic review: role of elevated plasma von-Willebrand factor as</p>	INT	JUL TO DEC	Hepatology, TMIH, Cochrane South Asia	<p><b>PMID:</b> 31498279</p> <p><b>PMC</b> 35241</p> <p><b>Impact Factor:</b> 2.198</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>predictor of mortality in patients with chronic liver disease                      Eur J Gastroenterol Hepatol; 2019, 31 (10): 1184-1191  <b>Address:</b> Weill Cornell Medical College, New York, USA.                      Cochrane South Asia, Prof BV Moses Centre for Research and Training in Evidence Informed Healthcare.                      Departments of Transfusion Medicine and Immunohematology.                      Department of Hepatology, <b>Christian Medical College, Vellore, India.</b>                      Department of Liver Unit, University Hospital Birmingham, Birmingham, UK.</p> <p>In this systematic review, we aimed to assess role of plasma von-Willebrand factor (vWF), an endothelial activation marker, as prognostic marker in patients with chronic liver disease [cirrhosis and acute-on-chronic liver failure (ACLF)]. We searched published databases using predefined keywords to identify all studies up to June 2018, in which plasma vWF (antigen or activity assay) was used as prognostic marker predicting mortality in patients with chronic liver disease. Relevant extracted data from selected studies were narratively summarized. The individual study's area under ROC curve for plasma vWF as a predictor of mortality was pooled and meta-analyzed. Six studies (cirrhosis: 5; ACLF: 1) with an aggregate data of 765 patients (cirrhosis: 715 patients; ACLF: 50 patients) were included. Baseline plasma vWF-antigen was an independent predictor of medium-term mortality in patients with cirrhosis (summary area under the curve: 0.74; 95% confidence interval: 0.70-0.79) with an optimal cutoff of 318% (216-390%; median, range) over a period of 25.6 months (23.6-33 months). Plasma vWF also predicted short-term (over 7 days) mortality in patients with ACLF. Plasma vWF levels correlated with Child's score, model for end-stage liver disease (MELD) score and hepatic venous pressure gradient and performed as well as MELD score in predicting mortality in patients with cirrhosis and ACLF. Baseline plasma vWF level predicts mortality over a medium term (1-3 years) in cirrhosis and over a short term (1 week) in ACLF patients. The marked elevation of baseline plasma vWF levels in ACLF patients was associated with drastic truncation of survival when compared with cirrhosis patients</p>				(BIOXBIO - 2018) H-Index: 95
146.	<p>Ella, R., Babji, S., Ciarlet, M., Blackwelder, W. C. and Vadrevu, K. M. A randomized, open-labelled, non-inferiority phase 4 clinical trial to evaluate the immunogenicity and safety of the live, attenuated, oral rotavirus vaccine, ROTAVAC(R) in comparison with a licensed rotavirus vaccine in healthy infants                      Vaccine; 2019, 37 (31): 4407-4413</p>	INT	JAN TO JUN	Gastrointestinal Sciences	<b>PMID:31178377</b> <b>Impact Factor: 3.285</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 164</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> Bharat Biotech International Limited, Genome Valley, Shameerpet, Hyderabad, India.            Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.            Independent Clinical Development Consultant, USA.            Bharat Biotech International Limited, Genome Valley, Shameerpet, Hyderabad, India. Electronic Address: kmohan@bharatbiotech.com.</p> <p><b>BACKGROUND:</b> ROTAVAC(R) (nHRV), derived naturally from the human 116E rotavirus (RV) neonatal strain, was licensed in India in 2015 based on promising results of a phase 3, safety and efficacy vaccine trial. As a pre-requisite for WHO prequalification, we compared the immunogenicity and safety of ROTAVAC(R) to those of a WHO-prequalified, Rotarix(R). <b>METHODS:</b> We conducted a multicentre, open-labeled, randomized phase 4 clinical trial where 464 infants, 6-8weeks of age were equally randomized to receive as licensed, the complete regimen of ROTAVAC(R) (3 doses; Group I) or Rotarix(R) (2 doses; Group II). Antibody responses (serum anti-RV Immunoglobulin A [IgA]) were measured by enzyme-linked immunosorbent assay (ELISA). The primary analysis was an assessment of non-inferiority of ROTAVAC(R) to Rotarix(R) for geometric mean concentration (GMC) for infants who received the complete regimen of either vaccine. <b>RESULTS:</b> The GMC for Group I was 20.4 (95%CI: 17.6, 23.6) and that for Group II was 24.8 (95%CI: 20.3, 30.3), the GMC ratio was 0.82 (95% CI: 0.64, 1.05), thus meeting the non-inferiority criterion. Site-wise analysis of GMC titres revealed that one site had a peculiar pre-vaccination titre affecting only ROTAVAC(R) post-vaccination GMCs. Seroconversion rates were 35.3% (95%CI: 29.0, 41.9) and 31.0% (95%CI: 25.1, 37.4) for Groups I and Group II, respectively. There was no substantive difference in safety profiles between both vaccines. <b>CONCLUSIONS:</b> The complete regimen of ROTAVAC(R) demonstrated immunological non-inferiority to the complete regimen of Rotarix(R) with a clinically acceptable safety profile. Because the demand for RV vaccines is increasing as more countries are expanding their immunization schedules, the lack of need of a buffering agent, low dose volume (0.5mL), non-interference with other concomitantly administered vaccines, and conformance with WHO-prequalification requirements provide ROTAVAC(R) the potential for widespread global usage. Post completion of this study, ROTAVAC(R) is now a WHO-prequalified vaccine. <b>CLINICAL TRIALS REGISTRATION:</b> (CTRI Number: CTRI/2015/12/006428).</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
147.	<p>Emmanuel A(1), Selvaraj D(1), Sen I(1), Agarwal S(1), Stephen E(1), Kota A(1), Nair SC(2), Antoniswamy B(3). D-dimer levels in patients with thromboangiitis obliterans. Natl Med J India. 2019 May-Jun;32(3):134-136. doi: 10.4103/0970-258X.278685.</p> <p>Author information: (1) Department of Vascular Surgery, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. (2) Department of Transfusion Medicine and Immunohaematology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. (3) Department of Biostatistics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</p> <p>Background: Thromboangiitis obliterans (TAO) or Buerger disease is a recurring progressive segmental vasculopathy that presents with inflammation and thrombosis of small and medium arteries and veins of the hands and feet. The exact cause remains unknown, with tobacco use (primarily smoking but also smokeless tobacco) being highly associated with the disease. The diagnosis is clinical and the lack of a diagnostic gold standard is a deterrent to diagnosing it in patients with atypical presentations. Obliterative endarteritis occurs perhaps due to a mixture of thrombosis and inflammation. The diagnostic sensitivity and specificity of D-dimer as a biomarker for thrombosis is well reported from its use in other areas such as deep vein thrombosis. Identification of a biomarker linked to the causation yields a diagnostic adjunct with a role in therapeutic decision-making, aiding diagnosis in atypical presentation, monitoring disease activity and gauging response to therapy. Methods: Between April 2014 and May 2015, we studied serum D-dimer (a marker of thrombosis) in 62 patients with TAO and compared this to 330 normal age- and sex-matched controls. We included all patients with peripheral arterial disease clinically diagnosed to have TAO according to the Shionoya criteria. There was no history of thrombosis or arterial disease in the control group. The control group was matched for baseline characteristics such as age and sex. All patients underwent a standard diagnostic protocol including blood tests (haemoglobin and creatinine), electrocardiogram, chest X-ray and ankle brachial pressure index. Blood was collected using an evacuated tube system into a citrate anticoagulant tube for testing D-dimer. Results: All the 62 patients diagnosed to have TAO were men with an average age of 40 years (range 18-65 years). They all had a history of tobacco use and did</p>	NAT	JUL TO DEC	Vascular Surgery, Transfusion Medicine and Immunohaematology, Biostatistics	<p><b>PMID: 32129304</b> <b>Impact Factor: 0.786</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 38</b></p>

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	not have other atherogenic risk factors (part of the diagnostic criteria). Medium-vessel involvement was present in 53 patients (85%) and the rest presented with additional involvement of the popliteal and femoral vessels. Upper limb involvement or superficial thrombophlebitis was present in 95% of patients. Laboratory and imaging studies were consistent with TAO. The groups were well matched for age (p = 0.3). The median and interquartile range for D-dimer values were 61 ng/ml and 41-88 ng/ml in controls (n = 330) and 247 ng/ml and 126478 ng/ml in patients (n = 62), respectively (p<0.001). Conclusions: D-dimer levels are considerably elevated in patients with TAO. This indicates an underlying thrombotic process and suggests its potential role as a diagnostic adjunct. It also leads us to hypothesize a potential therapeutic benefit of anticoagulants in this disease. DOI: 10.4103/0970-258X.278685 Conflict of interest statement: None				
148.	<p>Ete, G., Chaturvedi, G., Barreto, E. and Paul, M. K. Effectiveness of Parkland formula in the estimation of resuscitation fluid volume in adult thermal burns Chin J Traumatol; 2019, 22 (2): 113-116</p> <p><b>Address:</b> Department of Plastic &amp; Reconstructive Surgery, <b>Christian Medical College, Vellore</b>, Tamilnadu, India. Department of Plastic &amp; Reconstructive Surgery, <b>Christian Medical College, Vellore</b>, Tamilnadu, India. Electronic <b>Address:</b> kingsly@cmcvellore.ac.in.</p> <p>PURPOSE: Acute burn resuscitation in initial 24 h remains a challenge to plastic surgeons. Though various formulae for fluid infusion are available but consensus is still lacking, resulting in under resuscitation or over resuscitation. Parkland formula is widely used but recently its adequacy is questioned in studies. This study was conducted to see how closely the actual volume of fluid given in our center matches with that of calculated volume by Parkland formula. METHODS: All patients admitted with more than 20% flame burn injury and within 8 h of incident were included in this study. Crystalloid solution for infusion was calculated as per Parkland formula; however, it was titrated according to the urine output. Data on fluid infusion were collected from patient's inpatient records and analyzed. RESULTS: The study included a total of 90 patients, about 86.7% (n = 78) of the patients received fluid less than the calculated Parkland formula. Rate of fluid administered over 24 h in our study was 3.149 mL/kg/h. Mean hourly urine output was found to be 0.993 mL/kg/h. The mean difference between fluid administered and fluid</p>	INT	JAN TO JUN	Plastic & Reconstructive Surgery	<p><b>PMID:30962126</b> <b>PMC ID:6488519</b> <b>Impact Factor: 0.62 (RG-2018)</b> <b>H-Index: 23</b></p>

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	calculated by Parkland formula was 3431.825 mL which was significant (p < 0.001). CONCLUSION: The study showed a significant difference in the fluid infused based on urine output and the fluid calculated by Parkland formula. This probably is because fluid infused based on end point of resuscitation was more physiological than fluid calculated based on formulae.				
149.	Farquhar, Cynthia M., Bhattacharya, Siladitya, Repping, Sjoerd, Mastenbroek, Sebastiaan, Kamath, Mohan S., Marjoribanks, Jane and Boivin, Jacky Female subfertility Nature Reviews Disease Primers; 2019, 5 Subfertility is common and affects one in six couples, half of whom lack an explanation for their delay in conceiving. Developments in the diagnosis and treatment of subfertility over the past 50 years have been truly remarkable. Indeed, current generations of couples with subfertility are more fortunate than previous generations, as they have many more opportunities to become parents. The timely access to effective treatment for subfertility is important as many couples have a narrow window of opportunity before the age-related effects of subfertility limit the likelihood of success. Assisted reproduction can overcome the barriers to fertility caused by tubal disease and low sperm count, but little progress has been made in reducing the effect of increasing age on ovarian function. The next 5-10 years will likely see further increases in birth rates in women with subfertility, a greater awareness of lifestyle factors and a possible refinement of current assisted reproduction techniques and the development of new ones. Such progress will bring challenging questions regarding the potential benefits and harms of treatments involving germ cell manipulation, artificial gametes, genetic screening of embryos and gene editing of embryos. We hope to see a major increase in fertility awareness, access to safe and cost-effective fertility care in low-income countries and a reduction in the current disparity of access to fertility care.	INT	JUL TO DEC	Reproductive Medicine	<b>PMID:</b> WOS:000457016500001 <b>Impact Factor: 31.83 (Resurchify.com)</b> <b>H-Index: 48</b>
150.	Feigin, V. L., Nichols, E., Alam, T., Bannick, M. S., Beghi, E., Blake, N., Culpepper, W. J., Dorsey, E. R., Elbaz, A., Ellenbogen, R. G., Fisher, J. L., Fitzmaurice, C., Giussani, G., Glennie, L., James, S. L., Johnson, C. O., Kassebaum, N. J., Logroscino, G., Marin, B., Mountjoy-Venning, W. C., Nguyen, M., Ofori-Asenso, R., Patel, A. P., Piccininni, M., Roth, G. A., Steiner, T. J., Stovner, L. J., Szoeki, C. E. I., Theadom, A., Vollset, S. E., Wallin, M. T., Wright, C., Zunt, J. R., Abbasi, N., Abd-Allah, F., Abdelalim, A., Abdollahpour, I., Aboyans, V., Abraha, H. N., Acharya, D., Adamu, A. A., Adebayo, O. M., Adeoye, A. M., Adsuar, J. C., Afarideh, M., Agrawal, S., Ahmadi, A.,	INT	JUL TO DEC	Pulmonary Medicine, Neurological Science	<b>PMC Article 35516</b> <b>Impact Factor:28.755</b> <b>H-Index: 259</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Ahmed, M. B., Aichour, A. N., Aichour, I., Aichour, M. T. E., Akinyemi, R. O., Akseer, N., Al-Eyadhy, A., Al-Shahi Salman, R., Alahdab, F., Alene, K. A., Aljunid, S. M., Altirkawi, K., Alvis-Guzman, N., Anber, N. H., Antonio, C. A. T., Arabloo, J., Aremu, O., Ärnlov, J., Asayesh, H., Asghar, R. J., Atalay, H. T., Awasthi, A., Ayala Quintanilla, B. P., Ayuk, T. B., Badawi, A., Banach, M., Banoub, J. A. M., Barboza, M. A., Barker-Collo, S. L., Bärnighausen, T. W., Baune, B. T., Bedi, N., Behzadifar, M., Béjot, Y., Bekele, B. B., Belachew, A. B., Bennett, D. A., Bensenor, I. M., Berhane, A., Beuran, M., Bhattacharyya, K., Bhutta, Z. A., Biadgo, B., Bijani, A., Bililign, N., Bin Sayeed, M. S., Blazes, C. K., Brayne, C., Butt, Z. A., Campos-Nonato, I. R., Cantu-Brito, C., Car, M., Cárdenas, R., Carrero, J. J., Carvalho, F., Castañeda-Orjuela, C. A., Castro, F., Catalá-López, F., Cerin, E., Chaiah, Y., Chang, J. C., Chatziralli, I., Chiang, P. P. C., Christensen, H., Christopher, D. J., Cooper, C., Cortesi, P. A., Costa, V. M., Criqui, M. H., Crowe, C. S., Damasceno, A. A. M., Daryani, A., De La Cruz-Góngora, V., De La Hoz, F. P., De Leo, D., Degefa, M. G., Demoz, G. T., Deribe, K., Dharmaratne, S. D., Diaz, D., Dinberu, M. T., Djalalinia, S., Doku, D. T., Dubey, M., Dubljanin, E., Duken, E. E., Edvardsson, D., El-Khatib, Z., Endres, M., Endries, A. Y., Eskandarieh, S., Esteghamati, A., Esteghamati, S., Farhadi, F., Faro, A., Farzadfar, F., Farzaei, M. H., Fatima, B., Fereshtehnejad, S. M., Fernandes, E., Feyissa, G. T., Filip, I., Fischer, F., Fukumoto, T., Ganji, M., Gankpe, F. G., Garcia-Gordillo, M. A., Gebre, A. K., Gebremichael, T. G., Gelaw, B. K., Geleijnse, J. M., Geremew, D., Gezae, K. E., Ghasemi-Kasman, M., Gidey, M. Y., Gill, P. S., Gill, T. K., Gnedovskaya, E. V., Goulart, A. C., Grada, A., Grosso, G., Guo, Y., Gupta, R., Haagsma, J. A., Hagos, T. B., Haj-Mirzaian, A., Hamadeh, R. R., Hamidi, S., Hankey, G. J., Hao, Y., Haro, J. M., Hassankhani, H., Hassen, H. Y., Havmoeller, R., Hay, S. I., Hegazy, M. I., Heidari, B., Henok, A., Heydarpour, F., Hoang, C. L., Hole, M. K., Homaie Rad, E., Hosseini, S. M., Hu, G., Igumbor, E. U., Ilesanmi, O. S., Irvani, S. S. N., Islam, S. M. S., Jakovljevic, M., Javanbakht, M., Jha, R. P., Jobanputra, Y. B., Jonas, J. B., Józwiak, J. J., Jürisson, M., Kahsay, A., Kalani, R., Kalkonde, Y., Kamil, T. A., Kanchan, T., Karami, M., Karch, A., Karimi, N., Kasaeian, A., Kassa, T. D., Kassa, Z. Y., Kaul, A., Kefale, A. T., Keiyoro, P. N., Khader, Y. S., Khafaie, M. A., Khalil, I. A., Khan, E. A., Khang, Y. H., Khazaie, H., Kiadaliri, A. A., Kiirithio, D. N., Kim, A. S., Kim, D., Kim, Y. E., Kim, Y. J., Kisa, A., Kokubo, Y., Koyanagi, A., Krishnamurthi, R. V., Kuate Defo, B., Kucuk Bicer, B., Kumar, M., Lacey, B., Lafranconi, A., Lansingh, V. C., Latifi, A., Leshargie, C. T., Li, S., Liao, Y., Linn, S., Lo, W. D., Lopez, J. C. F., Lorkowski, S., Lotufo, P. A., Lucas, R. M., Lunevicius,</p>				



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>R., Mackay, M. T., Mahotra, N. B., Majdan, M., Majdzadeh, R., Majeed, A., Malekzadeh, R., Malta, D. C., Manafi, N., Mansournia, M. A., Mantovani, L. G., März, W., Mashamba-Thompson, T. P., Massenburg, B. B., Mate, K. K. V., Mcalinden, C., Mcgrath, J. J., Mehta, V., Meier, T., Meles, H. G., Melese, A., Memiah, P. T. N., Memish, Z. A., Mendoza, W., Mengistu, D. T., Mengistu, G., Meretoja, A., Meretoja, T. J., Mestrovic, T., Miazgowski, B., Miazgowski, T., Miller, T. R., Mini, G. K., Mirrakhimov, E. M., Moazen, B., Mohajer, B., Mohammad Gholi Mezerji, N., Mohammadi, M., Mohammadi-Khanaposhtani, M., Mohammadibakhsh, R., Mohammadnia-Afrouzi, M., Mohammed, S., Mohebi, F., Mokdad, A. H., Monasta, L., Mondello, S., Moodley, Y., Moosazadeh, M., Moradi, G., Moradi-Lakeh, M., Moradinazar, M., Moraga, P., Moreno Velásquez, I., Morrison, S. D., Mousavi, S. M., Muhammed, O. S., Muruet, W., Musa, K. I., Mustafa, G., Naderi, M., Nagel, G., Naheed, A., Naik, G., Najafi, F., Nangia, V., Negoï, I., Negoï, R. I., Newton, C. R. J., Ngunjiri, J. W., Nguyen, C. T., Nguyen, L. H., Ningrum, D. N. A., Nirayo, Y. L., Nixon, M. R., Norrving, B., Noubiap, J. J., Nourollahpour Shiadeh, M., Nyasulu, P. S., Ogbo, F. A., Oh, I. H., Olagunju, A. T., Olagunju, T. O., Olivares, P. R., Onwujekwe, O. E., Oren, E., Owolabi, M. O., A, M. P., Pakpour, A. H., Pan, W. H., Panda-Jonas, S., Pandian, J. D., Patel, S. K., Pereira, D. M., Petzold, M., Pillay, J. D., Piradov, M. A., Polanczyk, G. V., Polinder, S., Postma, M. J., Poulton, R., Poustchi, H., Prakash, S., Prakash, V., Qorbani, M., Radfar, A., Rafay, A., Rafiei, A., Rahim, F., Rahimi-Movaghar, V., Rahman, M., Rahman, M. H. U., Rahman, M. A., Rajati, F., Ram, U., Ranta, A., Rawaf, D. L., Rawaf, S., Reinig, N., Reis, C., Renzaho, A. M. N., Resnikoff, S., Rezaeian, S., Rezai, M. S., Rios González, C. M., Roberts, N. L. S., Roever, L., Ronfani, L., Roro, E. M., Roshandel, G., Rostami, A., Sabbagh, P., Sacco, R. L., Sachdev, P. S., Saddik, B., Safari, H., Safari-Faramani, R., Safi, S., Safiri, S., Sagar, R., Sahathevan, R., Sahebkar, A., Sahraian, M. A., Salamati, P., Salehi Zahabi, S., Salimi, Y., Samy, A. M., Sanabria, J., Santos, I. S., Santric Milicevic, M. M., Sarrafzadegan, N., Sartorius, B., Sarvi, S., Sathian, B., Satpathy, M., Sawant, A. R., Sawhney, M., Schneider, I. J. C., Schöttker, B., Schwebel, D. C., Seedat, S., Sepanlou, S. G., Shabaninejad, H., Shafieesabet, A., Shaikh, M. A., Shakir, R. A., Shams-Beyranvand, M., Shamsizadeh, M., Sharif, M., Sharif-Alhoseini, M., She, J., Sheikh, A., Sheth, K. N., Shigematsu, M., Shiri, R., Shirkoohi, R., Shiue, I., Siabani, S., Siddiqi, T. J., Sigfusdottir, I. D., Sigurvinsdottir, R., Silberberg, D. H., Silva, J. P., Silveira, D. G. A., Singh, J. A., Sinha, D. N., Skiadaresi, E., Smith, M., Sobaih, B. H., Sobhani, S., Soofi, M., Soyiri, I. N., Sposato, L. A.,</p>				

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	<p>Stein, D. J., Stein, M. B., Stokes, M. A., Sufiyan, M. B., Sykes, B. L., Sylaja, P., Tabarés-Seisdedos, R., Te Ao, B. J., Tehrani-Banihashemi, A., Temsah, M. H., Temsah, O., Thakur, J. S., Thrift, A. G., Topor-Madry, R., Tortajada-Girbés, M., Tovani-Palone, M. R., Tran, B. X., Tran, K. B., Truelsen, T. C., Tsadik, A. G., Tudor Car, L., Ukwaja, K. N., Ullah, I., Usman, M. S., Uthman, O. A., Valdez, P. R., Vasankari, T. J., Vasanthan, R., Veisani, Y., Venketasubramanian, N., Violante, F. S., Vlassov, V., Vosoughi, K., Vu, G. T., Vujcic, I. S., Wagnew, F. S., Waheed, Y., Wang, Y. P., Weiderpass, E., Weiss, J., Whiteford, H. A., Wijeratne, T., Winkler, A. S., Wiysonge, C. S., Wolfe, C. D. A., Xu, G., Yadollahpour, A., Yamada, T., Yano, Y., Yaseri, M., Yatsuya, H., Yimer, E. M., Yip, P., Yisma, E., Yonemoto, N., Yousefifard, M., Yu, C., Zaidi, Z., Zaman, S. B., Zamani, M., Zandian, H., Zare, Z., Zhang, Y., Zodpey, S., Naghavi, M., Murray, C. J. L., Vos, T. and Collaborators, G. B. D. Neurology</p> <p>Global, regional, and national burden of neurological disorders, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016</p> <p>The Lancet Neurology; 2019, 18 (5): 459-480</p> <p><b>Address:</b> National Institute for Stroke and Applied Neurosciences, Auckland University of Technology, Auckland, New Zealand  School of Public Health, Auckland University of Technology, Auckland, New Zealand  Institute for Health Metrics and Evaluation, University of Washington, Seattle, WA, United States  Department of Neurology, University of Washington, Seattle, WA, United States  Division of Cardiology, Department of Medicine, University of Washington, Seattle, WA, United States  Division of Hematology, University of Washington, Seattle, WA, United States  Department of Health Metrics Sciences, University of Washington, Seattle, WA, United States  Division of Plastic Surgery, University of Washington, Seattle, WA, United States  Department of Surgery, University of Washington, Seattle, WA, United States  University of Washington, Seattle, WA, United States  Department of Neuroscience, Mario Negri Institute for Pharmacological Research, Milan, Italy</p>				

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	<p>Research, Evidence and Policy Department, Meningitis Research Foundation, Bristol, United Kingdom</p> <p>Department of Veterans Affairs Multiple Sclerosis Center of Excellence, Baltimore, MD, United States</p> <p>Department of Neurology, School of Medicine, University of Maryland, Baltimore, MD, United States</p> <p>School of Medicine, University of Maryland, Baltimore, MD, United States</p> <p>University of Rochester, Rochester, NY, United States</p> <p>Centre for Research in Epidemiology and Population Health, National Institute of Health and Medical Research, Paris, France</p> <p>Department of Surgery, Seattle Children’s Hospital, Seattle, WA, United States</p> <p>Department of Anesthesiology &amp; Pain Medicine, Seattle Children’s Hospital, Seattle, WA, United States</p> <p>James Cancer Hospital, Ohio State University, Columbus, OH, United States</p> <p>Department of Pediatrics, Ohio State University, Columbus, OH, United States</p> <p>Department of Basic Medical Sciences, Neuroscience and Sense Organs, University of Bari Aldo Moro, Bari, Italy</p> <p>Unit of Neurodegenerative Diseases, Department of Clinical Research in Neurology, University of Bari Aldo Moro, Bari, Italy</p> <p>University of Bari Aldo Moro, Bari, Italy</p> <p>Department of Clinical Research in Neurology, Fondazione Cardinale Giovanni Panico Hospital, Tricase, Italy</p> <p>Institute of Neurological Epidemiology and Tropical Neurology, University of Limoges, Limoges, France</p> <p>Centre of Cardiovascular Research and Education in Therapeutics, Monash University, Melbourne, VIC, Australia</p> <p>School of Public Health and Preventive Medicine, Monash University, Melbourne, VIC, Australia</p> <p>Monash University, Melbourne, VIC, Australia</p> <p>Independent Consultant, Accra, Ghana</p> <p>Neurosurgery, University of Washington Medical Center, Seattle, WA, United States</p> <p>Department of Neuromedicine and Movement Science, Norwegian University of Science and Technology, Trondheim, Norway</p> <p>Division of Brain Sciences, Imperial College London, London, United Kingdom</p> <p>Department of Primary Care and Public Health, Imperial College London, London, United Kingdom</p> <p>WHO Collaborating Centre for Public Health Education and Training,</p>				

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	<p>Imperial College London, London, United Kingdom                      Neuro Centre, St. Olavs Hospital, Trondheim, Norway                      School of Health Sciences, University of Melbourne, Melbourne, VIC, Australia                      Department of Paediatrics, University of Melbourne, Melbourne, VIC, Australia                      Department of Medicine, University of Melbourne, Melbourne, VIC, Australia                      The Brain Institute, Australian Catholic University, Melbourne, VIC, Australia                      Mary MacKillop Institute for Health Research, Australian Catholic University, Melbourne, VIC, Australia                      Department of Neurology, George Washington University, Washington, DC, United States                      Non-communicable Diseases Research Center, Tehran University of Medical Sciences, Tehran, Iran                      Endocrinology and Metabolism Research Center, Tehran University of Medical Sciences, Tehran, Iran                      Multiple Sclerosis Research Center, Tehran University of Medical Sciences, Tehran, Iran                      Department of Pharmacology, Tehran University of Medical Sciences, Tehran, Iran                      Department of Epidemiology and Biostatistics, Tehran University of Medical Sciences, Tehran, Iran                      Hematologic Malignancies Research Center, Tehran University of Medical Sciences, Tehran, Iran                      Knowledge Utilization Research Center (KURC), Tehran University of Medical Sciences, Tehran, Iran                      Digestive Diseases Research Institute, Tehran University of Medical Sciences, Tehran, Iran                      Iran National Institute of Health Research, Tehran University of Medical Sciences, Tehran, Iran                      Department of Health Management and Economics, Tehran University of Medical Sciences, Tehran, Iran                      Sina Trauma and Surgery Research Center, Tehran University of Medical Sciences, Tehran, Iran                      Cancer Biology Research Center, Tehran University of Medical Sciences, Tehran, Iran                      Department of Anatomy, Tehran University of Medical Sciences, Tehran, Iran                      Hematology-Oncology and Stem Cell Transplantation Research Center, Tehran University of Medical Sciences, Tehran, Iran                      Community-Based Participatory-Research Center (CBPR), Tehran</p>				

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	<p>University of Medical Sciences, Tehran, Iran            Cancer Research Center, Tehran University of Medical Sciences, Tehran, Iran            Montreal Neuroimaging Center, McGill University, Montreal, QC, Canada            School of Physical and Occupational Therapy, McGill University, Montreal, QC, Canada            Department of Neurology, Cairo University, Cairo, Egypt            Department of Epidemiology, Arak University of Medical Sciences, Arak, Iran            Multiple Sclerosis Research Center, Tehran, Iran            Department of Cardiology, Dupuytren University Hospital, Limoges, France            Institute of Epidemiology, University of Limoges, Limoges, France            Clinical Pharmacy Unit, Mekelle University, Mekelle, Ethiopia            School of Public Health, Mekelle University, Mekelle, Ethiopia            School of Pharmacy, Mekelle University, Mekelle, Ethiopia            Department of Biostatistics, Mekelle University, Mekelle, Ethiopia            Anatomy Unit, Mekelle University, Mekelle, Ethiopia            Department of Nutrition and Dietetics, Mekelle University, Mekelle, Ethiopia            School of Medicine, Mekelle University, Mekelle, Ethiopia            Mekelle University, Mekelle, Ethiopia            Department of Preventive Medicine, Dongguk University, Gyeongju, South Korea            Department of Community Medicine, Kathmandu University, Devdaha, Nepal            Department of Global Health, Stellenbosch University, Cape Town, South Africa            Faculty of Medicine &amp; Health Sciences, Stellenbosch University, Cape Town, South Africa            Department of Psychiatry, Stellenbosch University, Cape Town, South Africa            Cochrane South Africa, South African Medical Research Council, Cape Town, South Africa            South African Medical Research Council, Cape Town, South Africa            Department of Medicine, University College Hospital, Ibadan, Ibadan, Nigeria            College of Medicine, University of Ibadan, Ibadan, Nigeria            Institute for Advanced Medical Research and Training, University of Ibadan, Ibadan, Nigeria            Community Cardiovascular Research Unit, Elyon Heart Rehabilitation Center, Ibadan, Nigeria</p>				

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	<p>Sport Science Department, University of Extremadura, Badajoz, Spain</p> <p>Indian Institute of Public Health, Gurugram, India</p> <p>Public Health Foundation of India, Gurugram, India</p> <p>Vital Strategies, Gurugram, India</p> <p>Department of Anesthesiology, Kermanshah University of Medical Sciences, Kermanshah, Iran</p> <p>Department of Traditional and Complementary Medicine, Kermanshah University of Medical Sciences, Kermanshah, Iran</p> <p>Faculty of Nutrition and Food Sciences, Kermanshah University of Medical Sciences, Kermanshah, Iran</p> <p>Department of Psychiatry, Kermanshah University of Medical Sciences, Kermanshah, Iran</p> <p>Research Center for Environmental Determinants of Health, Kermanshah University of Medical Sciences, Kermanshah, Iran</p> <p>Department of Operating Room, School of Paramedical, Kermanshah University of Medical Sciences, Kermanshah, Iran</p> <p>Department of Epidemiology &amp; Biostatistics, Kermanshah University of Medical Sciences, Kermanshah, Iran</p> <p>Department of Health Education &amp; Promotion, Kermanshah University of Medical Sciences, Kermanshah, Iran</p> <p>Faculty of Public Health, Kermanshah University of Medical Sciences, Kermanshah, Iran</p> <p>Radiology and Nuclear Medicine, Kermanshah University of Medical Sciences, Kermanshah, Iran</p> <p>Imam Ali Cardiovascular Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran</p> <p>Environmental Determinants of Health Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran</p> <p>Pharmaceutical Sciences Research Center, Kermanshah University of Medical Sciences, Kermanshah, Iran</p> <p>Kermanshah University of Medical Sciences, Kermanshah, Iran</p> <p>Department of Epidemiology, Jimma University, Jimma, Ethiopia</p> <p>Mycobacteriology Research Center, Jimma University, Jimma, Ethiopia</p> <p>Department of Health Education &amp; Behavioral Sciences, Jimma University, Jimma, Ethiopia</p> <p>University Ferhat Abbas of Setif, Algeria</p> <p>Higher National School of Veterinary Medicine, Algiers, Algeria</p> <p>The Hospital for Sick Children, University of Toronto, Toronto, ON, Canada</p> <p>Department of Nutritional Sciences, University of Toronto, Toronto, ON, Canada</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>The Centre for Global Child Health, Hospital for Sick Children, University of Toronto, Toronto, ON, Canada                      Pediatric Intensive Care Unit, King Saud University, Riyadh, Saudi Arabia                      Department of Pediatrics, King Saud University, Riyadh, Saudi Arabia                      King Saud University, Riyadh, Saudi Arabia                      Centre for Clinical Brain Sciences, University of Edinburgh, Edinburgh, United Kingdom                      Usher Institute of Population Health Sciences and Informatics, University of Edinburgh, Edinburgh, United Kingdom                      Evidence-Based Practice Center, Mayo Clinic Foundation for Medical Education and Research, Rochester, MN, United States                      Institute of Public Health, University of Gondar, Gondar, Ethiopia                      Department of Clinical Chemistry, University of Gondar, Gondar, Ethiopia                      Department of Medical Microbiology, University of Gondar, Gondar, Ethiopia                      Research School of Population Health, Australian National University, Canberra, ACT, Australia                      National Centre for Epidemiology and Population Health, Australian National University, Canberra, ACT, Australia                      Department of Health Policy and Management, Kuwait University, Safat, Kuwait                      International Centre for Casemix and Clinical Coding, National University of Malaysia, Bandar Tun Razak, Malaysia                      Research Group on Health Economics, University of Cartagena, Cartagena, Colombia                      Research Group in Hospital Management and Health Policies, University of the Coast, Barranquilla, Colombia                      Faculty of Medicine, Mansoura University, Mansoura, Egypt                      Mansoura University, Mansoura, Egypt                      Department of Health Policy and Administration, University of the Philippines Manila, Manila, Philippines                      Department of Epidemiology and Biostatistics, University of the Philippines Manila, Manila, Philippines                      Department of Applied Social Sciences, Hong Kong Polytechnic University, Hong Kong, China                      Health Management and Economics Research Center, Iran University of Medical Sciences, Tehran, Iran                      Preventive Medicine and Public Health Research Center, Iran University of Medical Sciences, Tehran, Iran                      Department of Health Policy, Iran University of Medical Sciences, Tehran, Iran</p>				

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	<p>Santa Fe de Bogotá, Bogotá, Colombia                      Department of Neurosciences, Costa Rican Department of Social Security, San Jose, Costa Rica                      School of Medicine, University of Costa Rica, San Pedro, Costa Rica                      School of Psychology, University of Auckland, Auckland, New Zealand                      School of Population Health, Faculty of Medical &amp; Health Science, University of Auckland, Auckland, New Zealand                      Molecular Medicine and Pathology, University of Auckland, Auckland, New Zealand                      Institute of Public Health, Heidelberg University Hospital, Heidelberg, Germany                      T.H. Chan School of Public Health, Harvard University, Boston, MA, United States                      Division of General Internal Medicine and Primary Care, Harvard University, Boston, MA, United States                      Melbourne Medical School, Melbourne, VIC, Australia                      Department of Community Medicine, Gandhi Medical College Bhopal, Bhopal, India                      Jazan University, Jazan, Saudi Arabia                      Social Determinants of Health Research Center, Lorestan University of Medical Sciences, Khorramabad, Iran                      Lorestan University of Medical Sciences, Khorramabad, Iran                      Department of Neurology, University Hospital of Dijon, Dijon, France                      Dijon Stroke Registry – UFR Sciences Santé, University of Burgundy, Dijon, France                      Public Health Department, Mizan-Tepi University, Teppi, Ethiopia                      Pharmacy Department, Mizan-Tepi University, Teppi, Ethiopia                      Mizan-Tepi University, Teppi, Ethiopia                      Nuffield Department of Population Health, University of Oxford, Oxford, United Kingdom                      Department of Psychiatry, University of Oxford, Oxford, United Kingdom                      Department of Internal Medicine, University of São Paulo, São Paulo, Brazil                      University Hospital, Internal Medicine Department, University of São Paulo, São Paulo, Brazil                      Department of Medicine, University of São Paulo, São Paulo, Brazil                      Department of Psychiatry, University of São Paulo, São Paulo, Brazil                      Department of Pathology and Legal Medicine, University of São Paulo, São Paulo, Brazil                      Center for Clinical and Epidemiological Research, University of São Paulo, São Paulo, Brazil</p>				

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	<p>School of Public Health, Addis Ababa University, Addis Ababa, Ethiopia</p> <p>Department of Pharmacology and Clinical Pharmacy, Addis Ababa University, Addis Ababa, Ethiopia</p> <p>Public Health, Addis Ababa University, Addis Ababa, Ethiopia</p> <p>School of Allied Health Sciences, Addis Ababa University, Addis Ababa, Ethiopia</p> <p>Addis Ababa University, Addis Ababa, Ethiopia</p> <p>Emergency Hospital of Bucharest, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania</p> <p>Anatomy and Embryology Department, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania</p> <p>Biostatistics and Bioinformatics, National Institute of Biomedical Genomics, Kalyani, India</p> <p>Center of Excellence in Women and Child Health, Aga Khan University, Karachi, Pakistan</p> <p>Human Development Programme, Aga Khan University, Karachi, Pakistan</p> <p>Social Determinants of Health Research Center, Babol University of Medical Sciences, Babol, Iran</p> <p>Health Research Institute, Babol University of Medical Sciences, Babol, Iran</p> <p>Department of Pharmacology, Babol University of Medical Sciences, Babol, Iran</p> <p>Department of Immunology, Babol University of Medical Sciences, Babol, Iran</p> <p>Infectious Diseases and Tropical Medicine Research Center, Babol University of Medical Sciences, Babol, Iran</p> <p>Student Research Committee, Babol University of Medical Sciences, Babol, Iran</p> <p>Woldia University, Woldia, Ethiopia</p> <p>Department of Clinical Pharmacy and Pharmacology, University of Dhaka, Ramna, Bangladesh</p> <p>Medical School, University of Michigan, Ann Arbor, MI, United States</p> <p>Department of Public Health and Primary Care, University of Cambridge, Cambridge, United Kingdom</p> <p>School of Population and Public Health, University of British Columbia, Vancouver, BC, Canada</p> <p>Al Shifa School of Public Health, Al Shifa Trust Eye Hospital, Rawalpindi, Pakistan</p> <p>Center for Evaluation and Surveys Research, National Institute of Public Health, Cuernavaca, Mexico</p> <p>National Institute of Public Health, Cuernavaca, Mexico</p>				

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	<p>Adelaide Medical School, University of Adelaide, Adelaide, SA, Australia</p> <p>University of Adelaide, Adelaide, SA, Australia</p> <p>Research Center of Neurology, Moscow, Russian Federation</p> <p>School of Medicine, Boston University, Boston, MA, United States</p> <p>Registro Tumori Integrato, Vittorio Emanuele University Hospital Polyclinic, Catania, Italy</p> <p>Commissioner of Public Health, West Virginia Bureau for Public Health, Charleston, WV, United States</p> <p>Department of Health Policy, Management &amp; Leadership, West Virginia University School of Public Health, Morgantown, WV, United States</p> <p>Academics and Research, Rajasthan University of Health Sciences, Jaipur, India</p> <p>Department of Preventive Cardiology, Eternal Heart Care Centre &amp; Research Institute, Jaipur, India</p> <p>Department of Public Health, Erasmus University Medical Center, Rotterdam, Netherlands</p> <p>Research Institute for Endocrine Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran</p> <p>Ophthalmic Epidemiology Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran</p> <p>Ophthalmic Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran</p> <p>Department of Radiology, Johns Hopkins University, Baltimore, MD, United States</p> <p>Department of Gastroenterology and Hepatology, Johns Hopkins University, Baltimore, MD, United States</p> <p>Department of Family and Community Medicine, Arabian Gulf University, Manama, Bahrain</p> <p>School of Health and Environmental Studies, Hamdan Bin Mohammed Smart University, Dubai, United Arab Emirates</p> <p>School of Medicine, University of Western Australia, Perth, WA, Australia</p> <p>Lions Eye Institute, University of Western Australia, Perth, WA, Australia</p> <p>Neurology Department, Sir Charles Gairdner Hospital, Perth, WA, Australia</p> <p>Sun Yat-sen Global Health Institute, Sun Yat-sen University, Guangzhou, China</p> <p>Department of Medical Statistics and Epidemiology, Sun Yat-sen University, Guangzhou, China</p> <p>Research and Development Unit, San Juan de Dios Sanitary Park,</p>				

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	<p>Germany                      Medical Clinic V, Heidelberg University, Mannheim, Germany                      Institute of Public Health, Heidelberg University, Mannheim, Germany                      Augenpraxis Jonas, Heidelberg University, Mannheim, Germany                      Beijing Institute of Ophthalmology, Beijing Tongren Hospital, Beijing, China                      Faculty of Medicine and Health Sciences, University of Opole, Opole, Poland                      Department of Family Medicine and Public Health, University of Opole, Opole, Poland                      Institute of Family Medicine and Public Health, University of Tartu, Tartu, Estonia                      Public Health, Society for Education, Action and Research in Community Health, India                      School of Public Health, Department of Health Informatics and Health Innovation, ACS Medical College and Hospital, Mekelle, Ethiopia                      ACS Medical College and Hospital, Mekelle, Ethiopia                      Department of Forensic Medicine and Toxicology, All India Institute of Medical Sciences, Jodhpur, India                      Department of Psychiatry, All India Institute of Medical Sciences, Jodhpur, India                      Department of Epidemiology, Hamadan University of Medical Sciences, Hamadan, Iran                      Biostatistics, Hamadan University of Medical Sciences, Hamadan, Iran                      Health, Hamadan University of Medical Sciences, Hamadan, Iran                      Chronic Diseases (Home Care) Research Center, Hamadan University of Medical Sciences, Hamadan, Iran                      Department for Epidemiology, Helmholtz Centre for Infection Research, Braunschweig, Germany                      School of Nursing and Midwifery, Hawassa University, Hawassa, Ethiopia                      School of Health Care Administration, Oklahoma State University, Tulsa, OK, United States                      Health Care Delivery Sciences, University of Tulsa, Tulsa, OK, United States                      ODeL Campus, University of Nairobi, Nairobi, Kenya                      Department of Psychiatry, University of Nairobi, Nairobi, Kenya                      Department of Public Health and Community Medicine, Jordan University of Science and Technology, Ramtha, Jordan                      Department of Public Health, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran</p>				



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	<p>Thalassemia and Hemoglobinopathy Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran                      Department of Neurosurgery, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran                      Medical Physics Department, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran                      Epidemiology and Biostatistics Department, Health Services Academy, Islamabad, Pakistan                      Institute of Health Policy and Management, Seoul National University, Seoul, South Korea                      Department of Health Policy and Management, Seoul National University, Seoul, South Korea                      Clinical Epidemiology Unit, Lund University, Lund, Sweden                      Department of Clinical Sciences, Lund University, Lund, Sweden                      Research Department, Kenya Revenue Authority, Nairobi, Kenya                      Research and Data Solutions, Synotech Consultant, Nairobi, Kenya                      Department of Neurology, University of California San Francisco, San Francisco, CA, United States                      Department of Health Sciences, Northeastern University, Boston, MA, United States                      Department of Preventive Medicine, Korea University, Seoul, South Korea                      School of Medicine, Xiamen University Malaysia, Sepang, Malaysia                      Department of Health Management and Health Economics, University of Oslo, Oslo, Norway                      Institute of Health and Society, University of Oslo, Oslo, Norway                      Department of Global Community Health and Behavioral Sciences, Tulane University, New Orleans, LA, United States                      Department of Preventive Cardiology, National Cerebral and Cardiovascular Center, Suita, Japan                      Department of Social and Preventive Medicine, University of Montreal, Montreal, QC, Canada                      Department of Demography, University of Montreal, Montreal, QC, Canada                      Department of Public Health, Yuksek Ihtisas University, Ankara, Turkey                      Department of Public Health, Hacettepe University, Ankara, Turkey                      Department of Psychology, University College London, London, United Kingdom                      NIHR Oxford Biomedical Research Centre, Oxford, United Kingdom                      Helpmesee, New York, NY, United States                      International Relations, Mexican Institute of Ophthalmology, Queretaro, Mexico</p>				

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	<p>Department of Internal Medicine, Sevenhills Hospital, Mumbai, India                      Institute for Agricultural and Nutritional Sciences, Martin Luther University Halle-Wittenberg, Halle, Germany                      Institute of Medical Epidemiology, Martin Luther University Halle-Wittenberg, Halle, Germany                      College of Health Sciences, Debre Tabor University, Debre Tabor, Ethiopia                      Department of Public Health, University of West Florida, Pensacola, FL, United States                      Research Department Prince Mohammed Bin Abdulaziz Hospital, Ministry of Health, Riyadh, Saudi Arabia                      Peru Country Office, United Nations Population Fund (UNFPA), Lima, Peru                      School of Pharmacy, Haramaya University, Harar, Ethiopia                      Department of Pharmacy, Wollo University, Dessie, Ethiopia                      Neurocenter, Helsinki University Hospital, Helsinki, Finland                      Breast Surgery Unit, Helsinki University Hospital, Helsinki, Finland                      University of Helsinki, Helsinki, Finland                      Clinical Microbiology and Parasitology Unit, Dr. Zora Profozic Polyclinic, Zagreb, Croatia                      University Centre Varazdin, University North, Varazdin, Croatia                      Department of Hypertension, Pomeranian Medical University, Szczecin, Poland                      Emergency Department, Pomeranian Medical University, Szczecin, Poland                      Pomeranian Medical University, Szczecin, Poland                      Pacific Institute for Research &amp; Evaluation, Calverton, MD, United States                      School of Public Health, Curtin University, Perth, WA, Australia                      Achutha Menon Centre for Health Science Studies, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, India                      Neurology Department, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, India                      Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, India                      Department of Public Health, Amrita Institute of Medical Sciences, Kochi, India                      Faculty of General Medicine, Kyrgyz State Medical Academy, Bishkek, Kyrgyzstan                      Department of Atherosclerosis and Coronary Heart Disease, National Center of Cardiology and Internal Disease, Bishkek, Kyrgyzstan                      Institute of Addiction Research (ISFF), Frankfurt University of</p>				

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	<p>Applied Sciences, Frankfurt, Germany  Hamedan University of Medical Sciences, Hamedan, Iran  Health Systems and Policy Research Unit, Ahmadu Bello University, Zaria, Nigeria  Department of Community Medicine, Ahmadu Bello University, Zaria, Nigeria  Clinical Epidemiology and Public Health Research Unit, Burlo Garofolo Institute for Maternal and Child Health, Trieste, Italy  Department of Biomedical and Dental Sciences and Morphofunctional Imaging, University of Messina, Messina, Italy  Department of Neurology, Oasi Research Institute, Troina, Italy  Department of Epidemiology and Biostatistics, Kurdistan University of Medical Sciences, Sanandaj, Iran  Social Determinants of Health Research Center, Kurdistan University of Medical Sciences, Sanandaj, Iran  Lancaster University, Lancaster, United Kingdom  School of Population Health and Environmental Sciences, King's College London, London, United Kingdom  School of Population Health &amp; Environmental Sciences, King's College London, London, United Kingdom  School of Medical Sciences, Science University of Malaysia, Kubang Kerian, Malaysia  Pediatrics Department, Nishtar Medical University, Multan, Pakistan  Pediatrics &amp; Pediatric Pulmonology, Institute of Mother &amp; Child Care, Multan, Pakistan  Institute of Epidemiology and Medical Biometry, Ulm University, Ulm, Germany  Initiative for Non Communicable Diseases, International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh  Maternal and Child Health Division, International Centre for Diarrhoeal Disease Research, Dhaka, Bangladesh  Department of Epidemiology, University of Alabama at Birmingham, Birmingham, AL, United States  Department of Psychology, University of Alabama at Birmingham, Birmingham, AL, United States  Department of Medicine, University of Alabama at Birmingham, Birmingham, AL, United States  University of Alabama at Birmingham, Birmingham, AL, United States  Suraj Eye Institute, Nagpur, India  Department of Cardiology, Cardio-Aid, Bucharest, Romania  Neurosciences, Kenya Medical Research Institute/Wellcome Trust Research Programme, Kilifi, Kenya</p>				

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	<p>Department of Biological Sciences, University of Embu, Embu, Kenya</p> <p>Institute for Global Health Innovations, Duy Tan University, Hanoi, Viet Nam</p> <p>Public Health Science Department, State University of Semarang, Kota Semarang, Indonesia</p> <p>Graduate Institute of Biomedical Informatics, Taipei Medical University, Taipei City, Taiwan</p> <p>Department of Medicine, University of Cape Town, Cape Town, South Africa</p> <p>Department of Psychiatry and Mental Health, University of Cape Town, Cape Town, South Africa</p> <p>Western Sydney University, Penrith, NSW, Australia</p> <p>Department of Preventive Medicine, Kyung Hee University, Dongdaemun-gu, South Korea</p> <p>Department of Psychiatry, University of Lagos, Lagos, Nigeria</p> <p>Department of Pathology and Molecular Medicine, McMaster University, Hamilton, ON, Canada</p> <p>Department of Pharmacology and Therapeutics, University of Nigeria Nsukka, Enugu, Nigeria</p> <p>Graduate School of Public Health, San Diego State University, San Diego, CA, United States</p> <p>Department of TB &amp; Respiratory Medicine, Jagadguru Sri Shivarathreeswara University, Mysore, India</p> <p>Department of Public Health, Qazvin University of Medical Sciences, Qazvin, Iran</p> <p>Institute of Biomedical Sciences, Academia Sinica, Taipei, Taiwan</p> <p>Research and Evaluation, Population Council, New Delhi, India</p> <p>Indian Institute of Health Management Research University, Jaipur, India</p> <p>Cartagena University, Cartagena, Colombia</p> <p>Institute of Medicine, University of Gothenburg, Gothenburg, Sweden</p> <p>School of Public Health, University of Witwatersrand, Johannesburg, South Africa</p> <p>Basic Medical Sciences Department, Durban University of Technology, Durban, South Africa</p> <p>Department of Economics and Business, University of Groningen, Groningen, Netherlands</p> <p>University Medical Center Groningen, University of Groningen, Groningen, Netherlands</p> <p>Department of Psychology, University of Otago, Dunedin, New Zealand</p> <p>Department of Medicine, University of Otago, Dunedin, New Zealand</p>				

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	<p>Department of Nephrology, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow, India</p> <p>Askok &amp; Rita Patel Institute of Physiotherapy, Charotar University of Science and Technology, Anand, India</p> <p>Non-communicable Diseases Research Center, Alborz University of Medical Sciences, Karaj, Iran</p> <p>Medichem, Barcelona, Spain</p> <p>Department of Epidemiology &amp; Biostatistics, Contech School of Public Health, Lahore, Pakistan</p> <p>Research and Evaluation Division, Brac University, Dhaka, Bangladesh</p> <p>Department of Public Health and Mortality Studies, International Institute for Population Sciences, Mumbai, India</p> <p>Department of Public Health &amp; Mortality Studies, International Institute for Population Sciences, Mumbai, India</p> <p>Department of Neurology, Capital &amp; Coast District Health Board, Wellington, New Zealand</p> <p>University College London Hospitals, London, United Kingdom</p> <p>Public Health England, London, United Kingdom</p> <p>Department of Preventive Medicine and Occupational Medicine, Loma Linda University Medical Center, Loma Linda, CA, United States</p> <p>School of Social Sciences and Psychology, Western Sydney University, Penrith, NSW, Australia</p> <p>Brien Holden Vision Institute, Sydney, NSW, Australia</p> <p>Organization for the Prevention of Blindness, Paris, France</p> <p>Research Directorate, Nihon Gakko University, Fernando De La Mora, Paraguay</p> <p>Department of Clinical Research, Federal University of Uberlândia, Uberlândia, Brazil</p> <p>Golestan Research Center of Gastroenterology and Hepatology, Golestan University of Medical Sciences, Gorgan, Iran</p> <p>School of Psychiatry, University of New South Wales, Kensington, NSW, Australia</p> <p>Neuropsychiatric Institute, Prince of Wales Hospital, Randwick, NSW, Australia</p> <p>Medical Department, University of Sharjah, Sharjah, United Arab Emirates</p> <p>Internal Medicine Services, Ballarat Health Service, Ballarat, VIC, Australia</p> <p>Neurogenic Inflammation Research Center, Mashhad University of Medical Sciences, Mashhad, Iran</p> <p>Biotechnology Research Center, Mashhad University of Medical Sciences, Mashhad, Iran</p>				

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	<p>School of Health and Policy Management, Faculty of Health, York University, Toronto, ON, Canada                      Research Deputy, Taleghani Hospital, Kermanshah, Iran                      Department of Entomology, Ain Shams University, Cairo, Egypt                      Department of Surgery, Marshall University, Huntington, WV, United States                      Department of Nutrition and Preventive Medicine, Case Western Reserve University, Cleveland, OH, United States                      Cardiovascular Research Institute, Isfahan University of Medical Sciences, Isfahan, Iran                      Surgery Department, Hamad Medical Corporation, Doha, Qatar                      Faculty of Health &amp; Social Sciences, Bournemouth University, Bournemouth, United Kingdom                      UGC Centre of Advanced Study in Psychology, Utkal University, Bhubaneswar, India                      Udyam-Global Association for Sustainable Development, Bhubaneswar, India                      Dr. D.Y. Patil Vidyapeeth, Pune, India                      Department of Public Health Sciences, University of North Carolina at Charlotte, Charlotte, NC, United States                      School of Health Sciences, Federal University of Santa Catarina, Ararangua, Brazil                      Division of Clinical Epidemiology and Aging Research, German Cancer Research Center, Heidelberg, Germany                      Langone Medical Center, New York University, New York, NY, United States                      Independent Consultant, Karachi, Pakistan                      School of Medicine, Dezful University of Medical Sciences, Dezful, Iran                      Department of Laboratory Sciences, Islamic Azad University, Sari, Iran                      Department of Basic Sciences, Islamic Azad University, Sari, Iran                      Department of Pulmonary Medicine, Fudan University, Shanghai, China                      Department of Neurology, Yale University, New Haven, CT, United States                      National Institute of Infectious Diseases, Tokyo, Japan                      Finnish Institute of Occupational Health, Helsinki, Finland                      School of Health, University of Technology Sydney, Sydney, NSW, Australia                      Department of Internal Medicine, Dow University of Health Sciences, Karachi, Pakistan                      Department of Psychology, Reykjavik University, Reykjavik, Iceland</p>				

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	<p>Department of Health and Behavior Studies, Columbia University, New York, NY, United States</p> <p>Department of Neurology, University of Pennsylvania, Philadelphia, PA, United States</p> <p>Population Studies Center, University of Pennsylvania, Philadelphia, PA, United States</p> <p>Brasília University, Brasília, Brazil</p> <p>Department of the Health Industrial Complex and Innovation in Health, Federal Ministry of Health, Brasília, Brazil</p> <p>Department of Epidemiology, School of Preventive Oncology, Patna, India</p> <p>Department of Epidemiology, Healis Sekhsaria Institute for Public Health, Mumbai, India</p> <p>Pediatric Department, King Khalid University Hospital, Riyadh, Saudi Arabia</p> <p>Hull York Medical School, University of Hull, Hull City, United Kingdom</p> <p>Clinical Neurological Sciences, The University of Western Ontario, London, ON, Canada</p> <p>Department of Criminology, Law and Society, University of California Irvine, Irvine, CA, United States</p> <p>Department of Medicine, University of Valencia, Valencia, Spain</p> <p>Department of Pediatrics, Obstetrics and Gynecology, University of Valencia, Valencia, Spain</p> <p>Carlos III Health Institute, Biomedical Research Networking Center for Mental Health Network (CIBERSAM), Madrid, Spain</p> <p>School of Public Health, Post Graduate Institute of Medical Education and Research, Chandigarh, India</p> <p>Institute of Public Health, Jagiellonian University Medical College, Krakow, Poland</p> <p>Agency for Health Technology Assessment and Tariff System, Warszawa, Poland</p> <p>Pediatric Department, University Hospital Doctor Peset, Valencia, Spain</p> <p>Department of Health Economics, Hanoi Medical University, Hanoi, Viet Nam</p> <p>Clinical Hematology and Toxicology, Military Medical University, Hanoi, Viet Nam</p> <p>Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore</p> <p>Department of Internal Medicine, Federal Teaching Hospital, Abakaliki, Nigeria</p> <p>Gomal Center of Biochemistry and Biotechnology, Gomal University,</p>				



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	<p>Dera Ismail Khan, Pakistan                      TB Culture Laboratory, Mufti Mehmood Memorial Teaching Hospital, Dera Ismail Khan, Pakistan                      Argentine Society of Medicine, Ciudad De Buenos Aires, Argentina                      Velez Sarsfield Hospital, Buenos Aires, Argentina                      UKK Institute, Tampere, Finland                      Department of Neurophysiotherapy, The Oxford College of Physiotherapy, Bangalore, India                      Psychosocial Injuries Research Center, Ilam University of Medical Sciences, Ilam, Iran                      Raffles Neuroscience Centre, Raffles Hospital, Singapore, Singapore                      Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Singapore                      Department of Medical and Surgical Sciences, University of Bologna, Bologna, Italy                      Occupational Health Unit, Sant'orsola Malpighi Hospital, Bologna, Italy                      Department of Health Care Administration and Economy, National Research University Higher School of Economics, Moscow, Russian Federation                      Foundation University Medical College, Foundation University, Rawalpindi, Pakistan                      Department of Research, Cancer Registry of Norway, Oslo, Norway                      Department of Neurology, Technical University of Munich, Munich, Germany                      Cochrane South Africa, Medical Research Council South Africa, Cape Town, South Africa                      Biomedical Research Council, Guy's and St. Thomas' NHS Foundation Trust, London, United Kingdom                      School of Medicine, Nanjing University, Nanjing, China                      Department of Diabetes and Metabolic Diseases, University of Tokyo, Tokyo, Japan                      Department of Preventive Medicine, Northwestern University, Chicago, IL, United States                      Department of Public Health, Fujita Health University, Toyoake, Japan                      Department of Public Health and Health Systems, Nagoya University, Nagoya, Japan                      Department of Psychopharmacology, National Center of Neurology and Psychiatry, Tokyo, Japan                      Global Health Institute, Wuhan University, Wuhan, China                      Department of Preventive Medicine, Wuhan University, Wuhan, China</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Department of Epidemiology and Biostatistics, Wuhan University, Wuhan, China Department of Epidemiology, University Hospital of Setif, Setif, Algeria Social Determinants of Health Research Center, Ardebil University of Medical Science, Ardabil, Iran				
151.	Fletcher, G. J., Eapen, C. E. and Abraham, P. Hepatitis B genotyping: The utility for the clinicians Indian J Gastroenterol; 2019, <b>Address:</b> Department of Virology, <b>Christian Medical College, Vellore</b> , 632 004, India. Department of Hepatology, <b>Christian Medical College, Vellore</b> , 632 004, India. eapen@cmcvellore.ac.in.	NAT	JUL TO DEC	Virology, Hepatology	<b>PMID:</b> 31617082 <b>PMC</b> 35242 <b>Impact Factor: 0.74 (RG- 2018)</b> <b>H-Index: 37</b>
152.	Francis, M. R., Nuorti, J. P., Kompithra, R. Z., Larson, H., Balraj, V., Kang, G. and Mohan, V. R. Vaccination coverage and factors associated with routine childhood vaccination uptake in rural Vellore, southern India, 2017 Vaccine; 2019, 37 (23): 3078-3087 Address: Health Sciences Unit, Faculty of Social Sciences, Tampere University, Finland Infectious Diseases and Vaccines, Department of Health Protection, National Institute for Health and Welfare, Helsinki, Finland Well Baby Immunization Clinic, Department of Pediatrics Unit – I, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India Department of Infectious Disease Epidemiology, London School of Hygiene and Tropical Medicine, London, United Kingdom Society for Applied Studies, Vellore, Tamil Nadu, India Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India Department of Community Health, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India	INT	JUL TO DEC	Pediatrics Unit I, Gastrointestinal Sciences, Community Health	<b>PMID: 31040085</b> <b>PMC Article 35493</b> <b>Impact Factor: 3.285 (BIOXBIO-2018)</b> <b>H-Index: 164</b>
153.	Franklyn, K., Sahajanandan, R. and Priyadarshini, K. Comparative study of the effects of intravenous palonosetron vs. ondansetron and dexamethasone for prevention of postoperative nausea and vomiting after laparoscopic cholecystectomy: a prospective randomised control study Anaesthesia; 2019, 74 61-61	INT	JUL TO DEC	Anesthesia	<b>PMID:</b> WOS:000455042900102 <b>Impact Factor: 5.879 (BIOXBIO - 2018)</b> <b>H-Index: 106</b>
154.	Furia, F. F., Shoo, J., Ruggajo, P. J., Kilonzo, K., Basu, G., Yeates, K., Varughese, S., Svarstad, E. and Kisanga, O. Developing nephrology services in low income countries: a case of Tanzania BMC Nephrol; 2019, 20 (1): 378	INT	JUL TO DEC	Nephrology	<b>PMID:</b> 31623570 <b>Impact Factor: 2.088 (BIOXBIO - 2018)</b> <b>H-Index: 43</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> School of Medicine, Muhimbili University of Health Sciences (MUHAS), P. O. Box 65001, Dar es Salaam, Tanzania. fredrick.francis78@gmail.com.                      Renal Unit, Muhimbili National Hospital (MNH), Dar es Salaam, Tanzania. fredrick.francis78@gmail.com.                      School of Medicine, Muhimbili University of Health Sciences (MUHAS), P. O. Box 65001, Dar es Salaam, Tanzania.                      Renal Unit, Muhimbili National Hospital (MNH), Dar es Salaam, Tanzania.                      Department of Internal Medicine, Kilimanjaro Christian Medical Centre (KCMC), Moshi, Tanzania.                      Department of Renal Medicine, The Alfred Hospital, Melbourne, Australia.                      Previously Department of Nephrology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Department of Medicine, Division of Nephrology, Queen's University, Kingston, Ontario, Canada.                      Department of Nephrology, <b>Christian Medical College-Vellore, Vellore</b>, Tamil Nadu, India.                      Department of Medicine, Haukeland University Hospital and Department of Clinical Medicine, University of Bergen, Bergen, Norway.</p> <p>BACKGROUND: The burden of kidney diseases is reported to be higher in lower- and middle-income countries as compared to developed countries, and countries in sub-Saharan Africa are reported to be most affected. Health systems in most sub-Saharan African countries have limited capacity in the form of trained and skilled health care providers, diagnostic support, equipment and policies to provide nephrology services. Several initiatives have been implemented to support establishment of these services. METHODS: This is a situation analysis to examine the nephrology services in Tanzania. It was conducted by interviewing key personnel in institutions providing nephrology services aiming at describing available services and international collaborators supporting nephrology services. RESULTS: Tanzania is a low-income country in Sub-Saharan Africa with a population of more than 55 million that has seen remarkable improvement in the provision of nephrology services and these include increase in the number of nephrologists to 14 in 2018 from one in 2006, increase in number of dialysis units from one unit (0.03 unit per million) before 2007 to 28 units (0.5 units per million) in 2018 and improved diagnostic services with introduction of nephropathology services. Government of Tanzania has been providing kidney transplantation services by funding</p>				

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	referral of donor and recipients abroad and has now introduced local transplantation services in two hospitals. There have been strong international collaborators who have supported nephrology services and establishment of nephrology training in Tanzania. CONCLUSION: Tanzania has seen remarkable achievement in provision of nephrology services and provides an interesting model to be used in supporting nephrology services in low income countries.				
155.	<p>Ganapati, A., Arunachal, G., Arya, S., Shanmugasundaram, D., Jeyaseelan, L., Kumar, S., Danda, S. and Danda, D.</p> <p>Study of familial aggregation of autoimmune rheumatic diseases in Asian Indian patients with systemic lupus erythematosus  Rheumatology International; 2019, 39 (12): 2053-2060</p> <p><b>Address:</b> Department of Clinical Immunology and Rheumatology, <b>Christian Medical College Hospital, Vellore, India.</b>  Department of Medical Genetics, <b>Christian Medical College Hospital, Vellore, India.</b>  Department of Biostatistics, <b>Christian Medical College Hospital, Vellore, India.</b>  Department of Child Health II, <b>Christian Medical College Hospital, Vellore, India.</b>  Department of Clinical Immunology and Rheumatology, <b>Christian Medical College Hospital, Vellore, India.</b>  <a href="mailto:debashisdandacmc@hotmail.com">debashisdandacmc@hotmail.com</a>.</p> <p>Systemic lupus erythematosus (SLE) and other autoimmune rheumatic diseases (AIRD) tend to co-aggregate in families, making positive familial history a risk factor. We aimed to estimate familial aggregation of AIRD in SLE patients and to compare between ones having a positive and negative family history of autoimmunity in our cohort. We included families of 157 consecutive SLE patients in a hospital-based, cross-sectional design for a three-generation pedigree study. Clinical and laboratory parameters of these patients were recorded. AIRD was seen in families of 39 SLE patients amounting to a familial prevalence of 24.8% [95% confidence interval (CI) 18.1, 31.6] with a relative risk (lambda) of 4.3 for first-degree relatives (FDRs) and 1.1 for second-degree relatives (SDRs). SLE was the commonest AIRD seen in families of 19 patients with a familial prevalence of 12.1% (95% CI 7.0, 17.2) and lambda of 78.2 for FDRs and 18.1 for SDRs. AIRD as a whole and SLE alone were seen more commonly with parental consanguinity (<math>p &lt; 0.05</math>). Familial aggregation in SLE patients also showed a relatively higher percentage of affected males and lesser presentation with constitutional features (<math>p &lt; 0.05</math>) than sporadic SLE patients. Rheumatoid arthritis (RA) was the second most common AIRD seen</p>	INT	JUL TO DEC	Clinical Immunology and Rheumatology, Medical Genetics, Biostatistics, Child Health II.	<b>PMID:</b> 31263994 <b>Impact Factor:</b> 2.200 <b>(BIOXBIO - 2018)</b> <b>H-Index: 66</b>

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	in 16/39 (41%) families with a RR of 3.1 in FDRs of SLE patients. In conclusion, Asian Indian SLE patients seem to have a high familial aggregation of AIRD, which is more pronounced in the background of parental consanguinity. SLE is the commonest AIRD seen amongst FDRs and SDRs of SLE patients, followed by RA, with FDRs being at highest risk.				
<b>156.</b>	<p>Ganapati, A., Goel, R., Kabeerdoss, J., Gowri, M., Mathew, J. and Danda, D.</p> <p>Study of clinical utility of antibodies to phosphatidylserine/prothrombin complex in Asian-Indian patients with suspected APS</p> <p>Clin Rheumatol; 2019, 38 (2): 545-553</p> <p><b>Address:</b> Department of Clinical Immunology and Rheumatology, Christian Medical College , Vellore, India. Department of Biostatistics, Christian Medical College , Vellore, India. Department of Clinical Immunology and Rheumatology, Christian Medical College , Vellore, India. debashisdandacmc@hotmail.com.</p> <p>Antiphospholipid syndrome (APS) is the most common acquired pro-thrombotic disorder, also associated with obstetric complications. Phosphatidylserine/Prothrombin complex antibody (aPSPT) though associated with various APS manifestations, is not included in the revised Sapporo Criteria. To study the prevalence of aPSPT in Asian-Indian patients with suspected APS and compare its performance with the criteria anti-phospholipid antibodies (APLs). Electronic charts of 372 individuals whose sera was tested for aPSPT in suspected APS between June 2014 and May 2016 were retrieved and analyzed. aPSPT was assayed by ELISA. aPSPT tested individuals were categorized into cases-seropositive and seronegative APS (SNAPS) and controls. aPSPT was positive in 24/58 (41.3%) cases and 17/314 (5.4%) controls (p &lt; 0.001). aPSPT positivity was seen in 44.5%, 38.7%, and 58.4% in primary, secondary and SNAPS patients respectively. aPSPT had the best performance among all APLs, in obstetric APS with 31% sensitivity, 97.7% specificity, and an odds ratio of 18.8. It showed 41.4% sensitivity, 94.6% specificity for the classification/diagnosis of primary APS and 38.7% sensitivity, 91.5% specificity for secondary APS. Addition of aPSPT to current APS criteria to SNAPS patients led to reclassification of additional 12.1% patients as APS overall and 42.8% in obstetric APS category. In Asian-Indian patients with suspected APS, aPSPT outperformed all classical APLs in diagnosis/classification of obstetric APS and both isotypes of beta 2-glycoprotein-I antibodies in diagnosis/classification of APS. aPSPT could reclassify additional 12.1</p>	<b>INT</b>	<b>JUL TO DEC</b>	Clinical Immunology and Rheumatology, Biostatistics.	<p><b>PMID:</b> 30255283</p> <p><b>Impact Factor:</b> 2.293</p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 74</b></p>

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	and 42.8% patients as APS overall and obstetric APS respectively, over and above the cases satisfying revised Sapporo criteria.				
157.	Ganapati, Arvind, Goel, Ruchika and Danda, Debashish Two Cases of lupus anti-coagulant hypo-prothrombinemia syndrome Lupus; 2019, 28 45-45	INT	JUL TO DEC	Clinical Immunology and Rheumatology	<b>PMID:</b> WOS:000486295800096 <b>Impact Factor:</b> 2.924 <b>(BIOXBIO - 2018)</b> <b>H-Index: 94</b>
158.	Ganapati, Arvind, Kabeerdoss, Jayakanthan, Nair, Aswin, Mathew, Ashish, Goel, Ruchika, Kumar, Satish, Mathew, John and Danda, Debashish Clinical utility of Antibodies to C1q sub-component as a biomarker of Anti-phospholipid syndrome Lupus; 2019, 28 26-26	INT	JUL TO DEC	Clinical Immunology and Rheumatology	<b>PMID:</b> WOS:000486295800052 <b>Impact Factor:</b> 2.924 <b>(BIOXBIO - 2018)</b> <b>H-Index: 94</b>
159.	Gandhi, Prashanth B., David, Deepu, Jaleel, Rajeeb, Kurien, Reuben Thomas, Chowdhury, Sudipta Dhar, Joseph, A. J., Simon, Ebby George and Dutta, Amit Kumar Etiological and Clinical Spectrum of Gastroparesis Retrospective Analysis from a Tertiary Care Center Journal of Gastroenterology and Hepatology; 2019, 34 203-203	INT	JUL TO DEC	Gastroenterology	<b>PMID:</b> WOS:000495492601061 <b>Impact Factor:</b> 3.632 <b>(BIOXBIO - 2018)</b> <b>H-Index: 117</b>
160.	Garima Upreti, Regi Thomas ABS-082: Sinonasal Mesenchymal Malignancies: A Retrospective Analysis Journal of Head & Neck Physicians and Surgeons; 2019, 7(3):S47 Department of ENT, <b>CMC, Vellore</b> , Tamil Nadu, India. E-mail: <a href="mailto:grmppt@gmail.com">grmppt@gmail.com</a> Background: Sarcomas of head and neck region account for less than 10% of soft tissue sarcomas, and comprise less than 1% of head and neck malignancies. Involvement of the sinonasal tract is even more uncommon. We hereby present our series of managing this relatively uncommon group of malignancy. Methods: Retrospective review of patient charts presenting with sinonasal malignancies to our unit was done. Cases with histopathology suggestive of mesenchymal malignancy were included in the study. Data was analyzed for demographics, site of involvement, stage of disease, histopathology, treatment modality, complications and outcome. Results: Seven cases, meeting the inclusion criteria, were included in the study. 6 were female and 1 was male. The median age of presentation was 24 years, ranging from 5 to 63 years. Most common presentation was nasal obstruction followed by epistaxis and ophthalmic symptoms. Histopathological subtypes included 2 cases of embryonal rhabdomyosarcoma, 1 chondrosarcoma, 1 adult fibrosarcoma, 1 synovial sarcoma, 1 pleomorphic sarcoma and 1 malignant spindle cell tumor. Multimodality management was employed including	NAT	JUL TO DEC	Head and Neck Surgery	<b>Impact Factor: 0.472</b> <b>H-Index: NA</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	surgical resection, radiotherapy and chemotherapy, tailored to each case. Mean time of follow up was 48 months. Patient outcomes varied with histopathology and extent of tumor. Conclusion: Sinonasal region being a relatively uncommon site of involvement in mesenchymal malignancies, requires a high index of suspicion for diagnosis, especially with the various histopathological subtypes described. Immunohistochemistry aids in diagnosis. Outcomes are related to histopathological subtype, grade and extent of malignancy. Advanced stage of presentation calls for multidisciplinary management and close follow up.				
161.	<p>George AS(1), Abraham AP(1), Nair S(1), Joseph M(1). The Prevalence of Physiological Anisocoria and its Clinical Significance - A Neurosurgical Perspective. Neurol India. 2019 Nov-Dec;67(6):1500-1503. doi: 10.4103/0028-3886.273623.</p> <p><b>Author information:</b> (1)Department of Neurological Sciences, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Aim: We aimed to estimate the prevalence of physiological anisocoria and also evaluate the accuracy of clinical assessment of anisocoria employed in routine bedside examination. Materials and Methods: A total of 708 voluntary subjects between the ages of 20-69 years who had no history of ophthalmologic or neurological disease other than refractive error were included in the study. In a closed room with uniform ambient lighting, the subjects' pupils were examined clinically and the presence or absence of anisocoria was recorded. This was followed by photography of the subjects' pupils using a digital camera secured on a tripod at a fixed distance from the subject's face. A difference in pupillary size of 0.4 mm or more was considered anisocoria. Results: Of the 708 subjects, 361 (51%) were males. The average pupillary diameter of the subjects was 4.99 mm. Ninety-seven (13.7%) had measured anisocoria on photography. Ninety-seven subjects (13.7%) also had anisocoria on clinical examination, however, only 45 of them had measured anisocoria. The clinical measurement of anisocoria, therefore, showed a specificity of 0.91 and a sensitivity of 0.46. With a prevalence of anisocoria of 13.7%, the positive predictive value was 0.46, and the negative predictive value was 0.91. Conclusions: The prevalence of physiological anisocoria was 13.7%, which is less than what has previously been reported. The sensitivity of clinical examination in detecting early anisocoria is poor. Patients at risk of developing uncal</p>	NAT	JUL TO DEC	Neurological Sciences	<p><b>PMID: 31857545</b> <b>Impact Factor: 0.45</b> <b>(RG-2018)</b> <b>H-Index: 43</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	herniation may, therefore, benefit from routine bedside pupillary assessment with a portable device such as a pupillometer. DOI: 10.4103/0028-3886.273623 Conflict of interest statement: None				
162.	George, A., George, R., Varghese, S. S. and Telugu, R. B. Squamous Cell Carcinoma and Lymph Node Metastasis with Hypertrophic Lichen Planus in a 12 Year Old Boy Indian Dermatol Online J; 2019, 10 (6): 695-697 <b>Address:</b> Department of Dermatology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Radiotherapy, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of General Pathology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Hypertrophic lichen planus (HLP) is a chronic variant of lichen planus with an estimated risk of 0.4% developing squamous cell carcinoma (SCC) in later years. We report the case of a 12-year- old boy with history of hypertrophic lichen planus since 4 years of age, with malignant transformation into squamous cell carcinoma along with lymph node metastasis.	NAT	JUL TO DEC	Dermatology, Radiotherapy	<b>PMID:31807451</b> <b>PMC ID:6859748</b> <b>35245</b> <b>Impact Factor:NA</b> <b>H-Index: NA</b>
163.	George, B. and Pulimood, A. Concerns with regard to an article Indian J Med Ethics; 2019, - (-): 1  <b>Address:</b> <b>Christian Medical College, Vellore, 632 002 Tamil Nadu INDIA.</b> <b>Christian Medical College, Vellore, 632 002, Tamil Nadu, INDIA.</b>  We have read with interest and concern the article titled "Consultations on human infection studies in India: Do people's voices really count" by Sandhya Srinivasan and Veena Johari. The article expresses the opinions of 2 persons who have not visited CMC, nor have spoken to anyone concerned, to ascertain the authenticity of the information published or with regard to the purported research in CMC.	NAT	JAN TO JUN	Hematology, General Pathology, Medical Ethics	<b>PMID:31213420</b> <b>Impact Factor: 0.17</b> <b>(RG-2018)</b> <b>H-Index: 14</b>
164.	George, Dona, Simha, Arathi Roddam, Braganza, Andrew David, Abraham, Lekha Mary and Shivanna, Yeshvanth Kumar Gubbi Changes in Central Corneal Thickness with Varying Post-prandial Blood Sugar Levels in Type 2 Diabetics Journal of Clinical & Diagnostic Research; 2019, 13 (3): 1-4 (NC01 - NC04)  <b>Author Affiliations:</b>	NAT	JUL TO DEC	Ophthalmology, Family Medicine	<b>PMID:135386168</b> <b>PMC Article</b> <b>Impact Factor: 0.41</b> <b>(RG - 2018)</b> <b>H-Index: 28</b>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>1.Consultant Ophthalmologist, Department of Ophthalmology, St. Gregorios Medical Mission Hospital, Parumala, Kerala, India                  2.Associate Professor, Department of Ophthalmology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India                  3.Professor, Department of Ophthalmology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India                  4.Assistant Professor, Department of Family Medicine, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India</p> <p>Introduction: Central Corneal Thickness (CCT) affects measurement of Intraocular Pressure (IOP) using Goldmann Applanation Tonometry (GAT). Variation in CCT with blood sugar levels in diabetics could affect IOP measurement and subsequent glaucoma management. CCT has been described to vary with glycaemic levels in diabetics but variation in CCT in the same individuals with variation in the blood sugar levels has not been adequately described. Aim: To study for changes in CCT in patients with Type 2 Diabetes Mellitus (Ty2DM) during hyperglycaemic blood sugar levels in comparison to euglycaemic blood sugar levels and to look for co-relation if any between changes in blood sugar levels and CCT. Materials and Methods: This was a non-interventional crosssectional observational study. Ty2DM patients with Post-Prandial Blood Sugar (PPBS) =200 mg/dL underwent CCT measurements using optical biometry. CCT was re-measured a month later when they returned for repeat PPBS estimations. Those patients achieving PPBS values &lt;200 mg/dL and a minimum drop of 50 mg/dL were included for analysis. CCT at each visit was measured within 30 minutes of blood sugar measurement. Paired t-test was used to compare mean changes in CCT and PPBS levels. Pearson correlation coefficient was used to assess the relationship between CCT and PPBS levels. Results: The mean CCT of 89 Ty2DM patients with PPBS =200 mg/dL was 501.38±25.28 µm. When the PPBS reduced to &lt;200 mg/dL, the CCT was 502.20±25.05 µm. The difference was not statistically significant (p=0.167). There was no correlation between change in blood sugar levels and CCT (Pearson's r=0.148). Conclusion: The present study demonstrated no significant change in CCT with varying blood sugar levels in Ty2DM patients. Therefore, in routine clinical practice, the correction for GAT IOP based on a single CCT measurement on one occasion, does not have to be revised depending on glycaemic control in Type 2 diabetics.</p>				
165.	George, J. T., Janeela, A. M., Sigamani, E. and Mathuram, A. J. A fatal case of levamisole induced bone marrow failure BMJ Case Reports Sep 2019, 12 (9) e231167;	INT	JUL TO DEC	General Medicine, Pathology	PMID: 31570359 Impact Factor: 0.22 (RG-2018)

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>DOI: 10.1136/bcr-2019-231167</p> <p><b>Address:</b> Department of General Medicine, <b>Christian Medical College and Hospital Vellore</b>, Vellore, India. Department of Pathology, <b>Christian Medical College and Hospital Vellore</b>, Vellore, India.</p> <p>A 20-year-old college student presented with high grade, intermittent fever for 10 days associated with blood stained loose stools after taking tablet levamisole for 17 days for vitiligo vulgaris. He was febrile, had a toxic appearance and appeared pale. Investigations showed neutropaenia with thrombocytopaenia. Blood cultures were sterile and stool cultures did not grow any enteric pathogens. His bone marrow examination was suggestive of an aplastic anaemia. He was administered empirical antibiotics, granulocyte colony stimulating factor and platelet transfusions. However, his fever and blood stained stools persisted. A repeat bone marrow examination after 2 weeks still revealed a hypoplastic marrow. Hence, a diagnosis of a levamisole induced bone marrow failure was made. While being worked up for an allogeneic stem cell transplantation, he developed neutropaenic enterocolitis and refractory septic shock with carbapenem resistant Klebsiella pneumoniae and succumbed to his illness.</p>				<b>H-Index: 20</b>
166.	<p>George, J. T., Sadiq, M., Sigamani, E. and Mathuram, A. J. Visceral leishmaniasis with haemophagocytic lymphohistiocytosis BMJ Case Rep; 2019, 12 (2):</p> <p><b>Address:</b> Department of General Medicine, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India. Department of Pathology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>A 27-year-old man presented with high-grade intermittent fever for 4 months, generalised fatigue for 2 months, intermittent gum bleeds for 1 month and loss of weight of 15 kg. He appeared cachectic with generalised wasting, had pallor and features of reticuloendothelial system proliferation. His liver span was 17 cm. He had massive splenomegaly. His cardiovascular, respiratory and neurological examination were normal. He was diagnosed to have visceral leishmaniasis (VL) based on bone marrow (BM) examination that showed Leishmania donovani (LD) bodies and was treated with liposomal amphotericin (LA). During the course of therapy, he developed bleeding from various mucosal and venepuncture sites. His further evaluation, which included a repeat BM aspirate, showed haemophagocytes. Final diagnosis made was VL with secondary</p>	INT	JAN TO JUN	General Medicine, Pathology	<p><b>PMID:30765439</b> <b>PMC</b> <b>Impact Factor: 0.22</b> <b>(RG-2018)</b> <b>H-Index: 20</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	haemophagocytic lymphohistiocytosis. He was continued on LA with intravenous hydrocortisone. He developed refractory distributive shock with multiorgan dysfunction and succumbed to his illness.				
167.	<p>George, J., Chandy, V. J., Premnath, J., Hariharan, T. D., Oommen, A. T., Balaji, V. and Poonnoose, P. M.</p> <p>Microbiological profile of septic arthritis in adults: Lessons learnt and treatment strategies                      Indian J Med Microbiol; 2019, 37 (1): 29-33</p> <p><b>Address:</b> Department of Orthopaedics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Objective: The aim of this study is to characterise the clinical and microbiological profile of adult patients treated at our orthopaedic unit with septic arthritis between 2006 and 2017. Materials and Methods: A total of 70 patients who were admitted with a diagnosis of septic arthritis between 2006 and 2017 were included in the study. The patients' clinical and epidemiological characteristics were surveyed; microbiological profile and the complications relating to the patients' treatment were identified. Results: Septic arthritis was more common among males (83%). About 75% of the patients presented with a history of fever. The knee was the most commonly affected joint (71%), followed by the hip. While C-reactive protein was found to be consistently &gt;75, total blood white blood cell (WBC) counts were found not to be reflective of the presence of infection with a mean WBC count of only 13,561/cu.mm, and Gram stain examination had a poor sensitivity of 47%. Among the co-morbidities, the most prevalent association was with diabetes mellitus. The infectious agent most frequently isolated was Staphylococcus aureus(42.85%). The antibiotic sensitivity pattern has evolved since the early years, with resistant strains becoming increasingly prevalent. Unusually, high incidence of streptococci was noted (30%), contrary to the published literature. One-third of the patients had multi-resistant organisms. Septic arthritis left 70% of the patients with a significant residual disability at 6 months follow-up and had 4.25% mortality. Conclusion: Changing sensitivity patterns of microbes in septic arthritis point to a need for reconsidering empirical antibiotic therapy. Joint damage following infection can lead to significant disability.</p>	NAT	JUL TO DEC	Orthopaedics, Microbiology  Clinical	<p><b>PMID:</b> 31424007  <b>Impact Factor:</b> 0.950  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 41</b></p>
168.	George, K., Cherian, K. E., Kapoor, N., Jebasingh, F., Dasgupta, R. and Paul, T. V.	NAT	JUL TO DEC	Endocrinology	<p><b>PMID:</b> 31681700  <b>Impact Factor:</b> 0.21</p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>An unusual cause of foot ulcer in a patient with diabetes mellitus                      J Family Med Prim Care; 2019, 8 (9): 3068-3070  <b>Address:</b> Department of Endocrinology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>A diabetic foot ulcer is the leading cause of nontraumatic amputation worldwide. The most important predisposing factor for diabetic foot ulcer is peripheral neuropathy. Rat bites are an uncommon but important cause of ulcer in patients with diabetes, especially in lower socioeconomic strata. A 56-year-old male from southern India, a known patient with type 2 diabetes for the past 15 years with severe peripheral neuropathy, presented to our center with multiple bite marks on bilateral feet and destroyed nails. He was initially managed with local measures and injection tetanus toxoid; however, he rapidly worsened over the next 5 days to develop bilateral cellulitis of the feet and right great toe osteomyelitis. His biochemistry showed uncontrolled diabetes (HbA1c: 9.9) and radiology confirmed right great toe osteomyelitis. He underwent transmetatarsal amputation of the right first toe along with intravenous antibiotics followed by oral antibiotics (amoxicillin with clavulanic acid) for a total duration of 6 weeks and optimization of glycemic control. He improved completely over the next 1 month. Rat bites are a rare but readily preventable cause of foot ulcer in diabetic patients. Primary care and family physician play a vital role in educating patients about preventive aspects such as avoidance of using vegetable oil as a moisturizer that may attract rodents and insects.</p>				<b>(BIOXBIO - 2018)</b> <b>H-Index: NA</b>
<b>169.</b>	<p>George, L., Mahabal, G., Mohanan, E., Peter, D., Pulimood, S., Lakshmi, K., Mathews, V. and George, B.                      Plasma Elafin as a biomarker for Skin Graft Versus Host Disease                      Journal of Investigative Dermatology; 2019, 139 (9): S241-S241</p>	<b>INT</b>	<b>JUL TO DEC</b>	Dermatology	<b>PMID:</b> WOS:000485661500158 <b>Impact Factor: 6.290</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 181</b>
<b>170.</b>	<p>George, Miriam T., Schloegel, Jesse L., Ntumngia, Francis B., Barnes, Samantha J., King, Christopher L., Casey, Joanne L., Foley, Michael and Adams, John H.                      Identification of an Immunogenic Broadly Inhibitory Surface Epitope of the Plasmodium vivax Duffy Binding Protein Ligand Domain mSphere; 2019, 4 (3): The Plasmodium vivax Duffy binding protein</p> <p><b>Addresses:</b>                      [ 1 ] Univ S Florida, Dept Global Hlth, Ctr Global Hlth &amp; Infect Dis Res, Tampa, FL 33620 USA                      [ 2 ] Case Western Reserve Univ, Ctr Global Hlth &amp; Dis, Cleveland, OH 44106 USA                      [ 3 ] La Trobe Univ, Dept Biochem, Melbourne, Vic, Australia</p>	<b>INT</b>	<b>JUL TO DEC</b>	Wellcome Trust Research Lab	<b>PMID:</b> WOS:000475754600014 <b>Impact Factor: NA</b> <b>H-Index: 19</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>[ 4 ] <b>Chistian Med Coll, Wellcome Trust Res Lab, Vellore</b>, Tamil Nadu, India</p> <p>[ 5 ] Nepean Hosp, Kingswood, NSW, Australia Email Addresses: <a href="mailto:jadams3@health.usf.edu">jadams3@health.usf.edu</a></p> <p>region II (DBPII) is a vital ligand for the parasite's invasion of reticulocytes, thereby making this molecule an attractive vaccine candidate against vivax malaria. However, strain-specific immunity due to DBPII allelic variation in Bc epitopes may complicate vaccine efficacy, suggesting that an effective DBPII vaccine needs to target conserved epitopes that are potential targets of strain-transcending neutralizing immunity. The minimal epitopes reactive with functionally inhibitory anti-DBPII monoclonal antibody (MAb) 3C9 and noninhibitory anti-DBPII MAb 3D10 were mapped using phage display expression libraries, since previous attempts to deduce the 3C9 epitope by cocrystallographic methods failed. Inhibitory MAb 3C9 binds to a conserved conformation-dependent epitope in subdomain 3, while noninhibitory MAb 3D10 binds to a linear epitope in subdomain 1 of DBPII, consistent with previous studies. Immunogenicity studies using synthetic linear peptides of the minimal epitopes determined that the 3C9 epitope, but not the 3D10 epitope, could induce functionally inhibitory anti-DBPII antibodies. Therefore, the highly conserved binding-inhibitory 3C9 epitope offers the potential as a component in a broadly inhibitory, strain-transcending DBP subunit vaccine. <b>IMPORTANCE</b> Vivax malaria is the second leading cause of malaria worldwide and the major cause of non-African malaria. Unfortunately, efforts to develop antimalarial vaccines specifically targeting Plasmodium vivax have been largely neglected, and few candidates have progressed into clinical trials. The Duffy binding protein is considered a leading blood-stage vaccine candidate because this ligand's recognition of the Duffy blood group reticulocyte surface receptor is considered essential for infection. This study identifies a new target epitope on the ligand's surface that may serve as the target of vaccine-induced binding-inhibitory antibody (BIAb). Understanding the potential targets of vaccine protection will be important for development of an effective vaccine.</p>				
<b>171.</b>	<p>George, R. M., Thotampuri, S. P., Kandasamy, R., Murali, S., Rekha, R. and Mani, T.</p> <p>LOW-DOSE DAILY ORAL METRONIDAZOLE IS ASSOCIATED WITH A REDUCTION IN MALIGNANT FISTULAE IN LOCALLY RECURRENT CERVICAL CANCER: RESULTS FROM A TEN-YEAR HISTORIC COHORT</p> <p>International Journal of Gynecological Cancer; 2019, 29 A78-A78</p>	<b>INT</b>	<b>JUL TO DEC</b>	Palliative Care	<p><b>PMID:</b> WOS:000491998200175 <b>Impact Factor:</b> 1.746 <b>(BIOXBIO - 2018)</b> <b>H-Index: 79</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
172.	<p>George, R., Prasoon, T. S., Kandasamy, R., Mani, T., Murali, S., Rekha, R. and Muliylil, J.                      Regular Low-Dose Oral Metronidazole Is Associated With Fewer Vesicovaginal and Rectovaginal Fistulae in Recurrent Cervical Cancer: Results From a 10-Year Retrospective Cohort                      J Glob Oncol; 2019, 5 1-10  <b>Address: Christian Medical College, Vellore, India.</b>                      PURPOSE: Anaerobic necrosis in cervical cancer can lead to malodor, fistulae, and treatment abandonment. In this retrospective cohort study, we examined the association between maintenance metronidazole and the incidence of malignant fistulae in recurrent cervical cancer. METHODS: We screened all cervical cancer records registered between 2007 and 2016 in the local palliative care database at <b>Christian Medical College, Vellore, India</b>. There were 208 eligible patients with post-treatment residual/recurrent pelvic disease. Among them, 76 had received oral maintenance metronidazole 200 mg once per day for 2 to 86 weeks (interquartile range, 4-16 weeks). RESULTS: Seventy-two patients developed at least one fistula. Forty-nine had vesicovaginal fistulae, 10 had rectovaginal fistulae, and 13 developed both types of fistulae. Patients on maintenance metronidazole had fewer fistulae (22.4% v 41.7%; P = .005), a longer median fistula-free survival (42.9 months v 14.1 months; P &lt; .001), and a postrecurrence survival of 11.5 months versus 8.7 months (P = .112). We performed Cox multivariable proportional hazards regression analysis on the data from the subset of 146 patients observed until death. Bladder/rectal infiltration had a higher risk of fistula (HR, 5.24; P = .011), whereas distant metastases (HR, 2.46; P = .012) and Eastern Cooperative Oncology Group performance status greater than 1 (HR, 1.64; P = .008) were associated with a higher risk of death. Maintenance metronidazole was associated with a lower risk of fistula (hazard ratio [HR], 0.33; 95% CI, 0.16 to 0.67; P = .002) and a lower risk of death (HR, 0.56; 95% CI, 0.39 to 0.81; P = .002). CONCLUSION: Our data indicate that there is a significant inverse association between oral maintenance metronidazole and malignant fistulae in locally recurrent cervical cancer. The impact of this simple intervention on pelvic symptoms, fistulae, and survival should be evaluated in prospective studies.</p>	INT	JUL TO DEC	Community Medicine, Palliative Care, Obstetrics and Gynaecology	<p><b>PMID:</b> 31479340  <b>Impact Factor:</b> NA  <b>H-Index:</b> 4</p>
173.	<p>George, Smitha and Mathew, Jacob                      Midazolam is effective in controlling intracranial pressure in severe traumatic brain injury                      CHRISMED Journal of Health and Research; 2019, 6 (4): 242-247</p>	NAT	JUL TO DEC	Anesthesia	

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address for correspondence:</b> Dr. Smitha Elizabeth George, Department of Anaesthesia, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India. E-mail: smitha.lizgeorge@gmail. Com</p> <p>1.Department of Anaesthesia, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India 2.Department of Neurosurgery, Aster Medcity, Kochi, Kerala, India</p>				
174.	<p>George, T., Moorthy, R. K. and Rajshekhar, V. Long tunnel external ventricular drain: an adjunct in the management of patients with infection associated hydrocephalus Br J Neurosurg; 2019, 1-5 <b>Address:</b> Department of Neurological Sciences, Christian Medical College , Vellore , India. Objective: To evaluate the safety and efficacy of long tunnelled external ventricular drains (LTEVD) as a temporizing measure in patients with ventriculitis/meningitis requiring cerebrospinal fluid (CSF) diversion in whom immediate shunt surgery is not feasible. Methods: A retrospective review of the records of 15 patients with ventriculitis/meningitis, in whom an LTEVD was inserted, was performed to evaluate its safety, new onset CSF infection and need for permanent CSF diversion. Results: 15 patients with ventriculitis/meningitis had 16 LTEVDs placed between May 2006 and December 2016. There were 10 males and 5 females, their mean age being 16.5 years (range, 8 months-50 years). The mean duration of CSF drainage was 15.6 days (range, 4 to 44 days). Of the 16 LTEVDs that were inserted, two (13.3% - one CSF infection and one wound infection) developed new infection after 44 and 17 days of continuous CSF drainage respectively. The LTEVDs were removed and permanent CSF diversion procedures were performed in 10 patients during the same admission and in one patient later. At a mean follow up of 11.6 months (range 2-40 months), 8 of the 11 patients who underwent a permanent CSF diversion procedure had no clinical features of meningitis/ventriculitis. Conclusion: LTEVDs are an effective method of temporary CSF diversion in patients requiring the same for more than 5 days. These drains have a low infection rate when placed up to four weeks making them a safe and efficacious adjunct in management of ventriculitis/meningitis associated hydrocephalus.</p>	INT	JUL TO DEC	Neurological Sciences	<p><b>PMID:</b> 31549855 <b>Impact Factor:</b> 1.481 <b>(BIOXBIO - 2018)</b> <b>H-Index:</b> 59</p>
175.	<p>Ghosh, G. C. and Alex, A. G. A Silent Large Left Ventricular Apical Pseudoaneurysm Presenting as Congestive Heart Failure</p>	INT	JAN TO JUN	Cardiology	<p><b>PMID:</b>31057711 <b>PMC ID:</b>6487299 <b>Impact Factor:</b> 0.25</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Heart Views; 2018, 19 (4): 156-157  <b>Address:</b> Department of Cardiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>				<b>(RG-2018)</b> <b>H-Index: NA</b>
176.	Ghosh, Gopal Chandra, Aparna, S. and George, Oomen K. Fourteen-year-old boy with decreased appetite and pedal swelling Heart; 2019, 105 (5): 405-+ <b>Address:</b> Department of Cardiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Radiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> CLINICAL INTRODUCTION: A 14-year-old boy presented with history of decreased appetite and bilateral swelling of feet for 6 months. He did not give any associated history of orthopnoea or paroxysmal nocturnal dyspnoea. He was born by a normal delivery after a non-consanguineous marriage. He had an unremarkable birth and childhood health history. There was no family history of significant cardiovascular illness or sudden death. Clinical examination showed an average built boy with elevated jugular venous pressure with prominent v wave and bilateral pitting pedal oedema. Cardiovascular examination showed normal first (S1) and second (S2) heart sounds and a short early systolic murmur over tricuspid region. Other systems examination was remarkable for soft tender hepatomegaly. ECG showed sinus rhythm with tall, peaked p waves. Chest X-ray revealed enlargement along the right cardiac border. Transthoracic echocardiographic images are shown in figure 1A (apical four-chamber view) and figure 1B (tricuspid inflow Doppler). There was no colour Doppler evidence of interatrial shunt. heartjnl;105/5/405/F1F1F1Figure 1(A) Transthoracic echocardiographic apical four-chamber view. (B) Tricuspid inflow continuous wave Doppler image. QUESTION: What is the most likely diagnosis of his condition? Endomyocardial fibrosis (EMF) Ebstein's anomaly Arrhythmogenic right ventricular dysplasia (ARVD) Idiopathic dilatation of right atrium Restrictive cardiomyopathy.	INT	JUL TO DEC	Cardiology, Radiology	<b>PMID: 30242138</b> <b>Impact Factor: 5.420</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 165</b>
177.	Gieles NC(1), Mutsaerts EAML(1), Kwatra G(2), Bont L(3), Cutland CL(4), Jones S(4), Moultrie A(4), Madhi SA(4), Nunes MC(5). Rubella seroprevalence in pregnant women living with and without HIV in Soweto, South Africa. Int J Infect Dis. 2019 Dec 19;91:255-260. doi: 10.1016/j.ijid.2019.12.018. [Epub ahead of print]  <b>Author information:</b>	INT	JUL TO DEC	Clinical Microbiology	<b>PMID: 31863878</b> <b>Impact Factor: 0.81</b> <b>(RG-2018)</b> <b>H-Index: 73</b>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>(1)Medical Research Council: Respiratory and Meningeal Pathogens Research Unit, School of Pathology, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; Department of Science and Technology/National Research Foundation: Vaccine Preventable Diseases Unit, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; Julius Global Health, Julius Centre for Health Sciences and Primary Care, University Medical Centre Utrecht, Utrecht University, Utrecht, Netherlands.</p> <p>(2)Medical Research Council: Respiratory and Meningeal Pathogens Research Unit, School of Pathology, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; Department of Science and Technology/National Research Foundation: Vaccine Preventable Diseases Unit, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; Department of Clinical Microbiology, <b>Christian Medical College, Vellore, India.</b></p> <p>(3)Division of Infectious Diseases, Department of Paediatrics, University Medical Centre Utrecht, Utrecht, Netherlands.</p> <p>(4)Medical Research Council: Respiratory and Meningeal Pathogens Research Unit, School of Pathology, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; Department of Science and Technology/National Research Foundation: Vaccine Preventable Diseases Unit, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa.</p> <p>(5)Medical Research Council: Respiratory and Meningeal Pathogens Research Unit, School of Pathology, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; Department of Science and Technology/National Research Foundation: Vaccine Preventable Diseases Unit, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa. Electronic <b>Address:</b> <a href="mailto:nunesm@rmpru.co.za">nunesm@rmpru.co.za</a></p> <p>OBJECTIVES: Rubella infection during pregnancy may cause foetal death or congenital rubella syndrome. In South Africa, the national public immunization programme does not include rubella vaccination. The aim of this study was to evaluate rubella sero-epidemiology in pregnant South African women living with and without HIV. METHODS: Serum samples obtained from women living with HIV (n=552) and without HIV (n=552) were tested for rubella immunoglobulin G antibodies using an ELISA. The proportions of women with seronegative titres (&lt;8IU/ml) and seropositive titres</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	(≥11IU/ml), and geometric mean titres (GMT) were compared by age group and HIV status. RESULTS: The overall proportion of rubella seropositivity was 97.8%. The proportion of seropositive women increased with age group (18-25 years: 97.0%; 26-32 years: 97.7%; 33-40 years: 99.3%; p=0.047 after adjusting for HIV status). Similar proportions of women living with and without HIV were seropositive. CONCLUSIONS: Rubella immunity was high among South African pregnant women living with and without HIV in the absence of rubella vaccination in the public immunization programme. However, a lower percentage of younger women had seropositive titres, indicating the need for routine rubella vaccination after an increase in vaccine coverage rates. Copyright © 2019 The Authors. Published by Elsevier Ltd.. All rights reserved. DOI: 10.1016/j.ijid.2019.12.018				
178.	<p>Gieles, N. C., Mutsaerts, Eaml, Kwatra, G., Bont, L., Cutland, C. L., Jones, S., Moultrie, A., Madhi, S. A. and Nunes, M. C.</p> <p>Measles seroprevalence in pregnant women in Soweto, South Africa: a nested cohort study</p> <p>Clin Microbiol Infect; 2019, <b>Address:</b> Medical Research Council: Respiratory and Meningeal Pathogens Research Unit, School of Pathology, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; Department of Science and Technology/National Research Foundation: Vaccine Preventable Diseases Unit, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; Julius Global Health, Julius Center for Health Sciences and Primary Care, University Medical Center Utrecht, Utrecht University, Utrecht, Netherlands.</p> <p>Medical Research Council: Respiratory and Meningeal Pathogens Research Unit, School of Pathology, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; Department of Science and Technology/National Research Foundation: Vaccine Preventable Diseases Unit, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; Department of Clinical Microbiology, <b>Christian Medical College, Vellore, India.</b></p> <p>Division of Infectious Diseases, Department of Pediatrics, University Medical Centre Utrecht, Utrecht, Netherlands.</p> <p>Medical Research Council: Respiratory and Meningeal Pathogens Research Unit, School of Pathology, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; Department of Science and Technology/National Research Foundation: Vaccine Preventable Diseases Unit, Faculty of Health</p>	INT	JUL TO DEC	Clinical Microbiology	<p>PMID: 31730905</p> <p>Impact Factor: 6.425</p> <p>(BIOXBIO - 2018)</p> <p>H-Index: 131</p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Sciences, University of the Witwatersrand, Johannesburg, South Africa.</p> <p>Medical Research Council: Respiratory and Meningeal Pathogens Research Unit, School of Pathology, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa; Department of Science and Technology/National Research Foundation: Vaccine Preventable Diseases Unit, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa. Electronic <b>Address:</b> nunesm@rmpru.co.za.</p> <p><b>OBJECTIVES:</b> Measles infection causes particularly severe disease in young children, who prior to vaccination, are dependent on maternal antibodies for protection against infection. Measles vaccination was introduced into the South African public immunization program in 1983 and became widely available in 1992. The aim of this study was to determine measles-specific immunoglobulin G (IgG) levels in pregnant women living with and without HIV born before and after measles vaccine introduction in South Africa. <b>METHODS:</b> Measles IgG antibody level from blood obtained at the time of delivery was compared between women who were born before 1983 (n=349) and since 1992 (n=349). Serum samples were tested for measles IgG antibody using an enzyme-linked immunosorbent assay. Geometric mean titres (GMTs) and the proportion with seronegative (&lt;200 mIU/mL) or seropositive titres (&gt;=275 mIU/mL) were compared. <b>RESULTS:</b> Women born since 1992 had lower GMTs (379.7 mIU/mL [95%CI: 352.7-448.6]) and fewer were seropositive (55.9%, 195/349) compared to women born before 1983 (905.8 mIU/mL [95%CI: 784.7-1045.5]; 76.8%, 268/349), p-values for both comparisons &lt;0.001. <b>CONCLUSIONS:</b> We found an association between measles vaccine implementation into the public immunization program in South Africa and peri-partum maternal measles immunity, where women born before vaccine introduction had higher measles IgG antibody titres and were more likely to be seropositive. These findings suggest a need to reconsider the infant measles immunization schedule in settings where women have derived immunity mainly from measles vaccine rather than wild-type virus exposure.</p>				
<b>179.</b>	<p>Global Burden of Disease Cancer Collaboration, Fitzmaurice C, Abate D, Abbasi N, Abastabar H, Abd-Allah F, Abdel-Rahman O, Abdelalim A, Abdoli A, Abdollahpour I, Abdulle ASM, Abebe ND, Abraha HN, Abu-Raddad LJ, Abualhasan A, Adedeji IA, Advani SM, Afarideh M, Afshari M, Aghaali M, Agius D, Agrawal S, Ahmadi A, Ahmadian E, Ahmadpour E, Ahmed MB, Akbari ME, Akinyemiju T, Al-Aly Z, AlAbdulKader AM, Alahdab F, Alam T, Alamene GM,</p>	<b>INT</b>	<b>JUL TO DEC</b>	Community Health, Pulmonary Medicine	<p><b>PMID: 31560378</b>  <b>PMCID: PMC6777271</b>  <b>Impact Factor: 22.416</b>                      (Journal Website)  <b>H-Index: 61</b>                      22.416</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Alemnew BTT, Alene KA, Alinia C, Alipour V, Aljunid SM, Bakeshei FA, Almadi MAH, Almasi-Hashiani A, Alsharif U, Alsowaidi S, Alvis-Guzman N, Amini E, Amini S, Amoako YA, Anbari Z, Anber NH, Andrei CL, Anjomshoa M, Ansari F, Ansariadi A, Appiah SCY, Arab-Zozani M, Arabloo J, Arefi Z, Aremu O, Aleri HA, Artaman A, Asayesh H, Asfaw ET, Ashagre AF, Assadi R, Ataeinia B, Atalay HT, Ataro Z, Atique S, Ausloos M, Avila-Burgos L, Avokpaho EFGA, Awasthi A, Awoke N, Ayala Quintanilla BP, Ayanore MA, Ayele HT, Babae E, Bacha U, Badawi A, Bagherzadeh M, Bagli E, Balakrishnan S, Balouchi A, Bärnighausen TW, Battista RJ, Behzadifar M, Behzadifar M, Bekele BB, Belay YB, Belayneh YM, Berfield KKS, Berhane A, Bernabe E, Beuran M, Bhakta N, Bhattacharyya K, Biadgo B, Bijani A, Bin Sayeed MS, Birungi C, Bisignano C, Bitew H, Bjørge T, Bleyer A, Bogale KA, Bojia HA, Borzi AM, Bosetti C, Bou-Orm IR, Brenner H, Brewer JD, Briko AN, Briko NI, Bustamante-Teixeira MT, Butt ZA, Carreras G, Carrero JJ, Carvalho F, Castro C, Castro F, Catalá-López F, Cerin E, Chaiah Y, Chanie WF, Chattu VK, Chaturvedi P, Chauhan NS, Chehrazi M, Chiang PP, Chichiabellu TY, Chido-Amajuoyi OG, Chimed-Ochir O, Choi JJ, Christopher DJ, Chu DT, Constantin MM, Costa VM, Crocetti E, Crowe CS, Curado MP, Dahlawi SMA, Damiani G, Darwish AH, Daryani A, das Neves J, Demeke FM, Demis AB, Demissie BW, Demoz GT, Denova-Gutiérrez E, Derakhshani A, Deribe KS, Desai R, Desalegn BB, Desta M, Dey S, Dharmaratne SD, Dhimal M, Diaz D, Dinberu MTT, Djalalinia S, Doku DT, Drake TM, Dubey M, Dubljanin E, Duken EE, Ebrahimi H, Effiong A, Eftekhari A, El Sayed I, Zaki MES, El-Jaafary SI, El-Khatib Z, Elemineh DA, Elkout H, Ellenbogen RG, Elsharkawy A, Emamian MH, Endalew DA, Endries AY, Eshrati B, Fadhil I, Fallah V, Faramarzi M, Farhangi MA, Farioli A, Farzadfar F, Fentahun N, Fernandes E, Feyissa GT, Filip I, Fischer F, Fisher JL, Force LM, Foroutan M, Freitas M, Fukumoto T, Futran ND, Gallus S, Gankpe FG, Gayesa RT, Gebrehiwot TT, Gebremeskel GG, Gedefaw GA, Gelaw BK, Geta B, Getachew S, Gezae KE, Ghafourifard M, Ghajar A, Ghashghaee A, Gholamian A, Gill PS, Ginindza TTG, Girmay A, Gizaw M, Gomez RS, Gopalani SV, Gorini G, Goulart BNG, Grada A, Ribeiro Guerra M, Guimaraes ALS, Gupta PC, Gupta R, Hadkhale K, Haj-Mirzaian A, Haj-Mirzaian A, Hamadeh RR, Hamidi S, Hanfore LK, Haro JM, Hasankhani M, Hasanzadeh A, Hassen HY, Hay RJ, Hay SI, Henok A, Henry NJ, Herteliu C, Hidru HD, Hoang CL, Hole MK, Hoogar P, Horita N, Hosgood HD, Hosseini M, Hosseinzadeh M, Hostiuc M, Hostiuc S, Househ M, Hussien MM, Ileanu B, Ilic MD, Innos K, Irvani SSN, Iseh KR, Islam SMS, Islami F, Jafari Balalami N, Jafarinia M, Jahangiry L, Jahani MA, Jahanmehr N, Jakovljevic M,</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	James SL, Javanbakht M, Jayaraman S, Jee SH, Jenabi E, Jha RP, Jonas JB, Jonnagaddala J, Joo T, Jungari SB, Jürisson M, Kabir A, Kamangar F, Karch A, Karimi N, Karimian A, Kasaeian A, Kasahun GG, Kassa B, Kassa TD, Kassaw MW, Kaul A, Keiyoro PN, Kelbore AG, Kerbo AA, Khader YS, Khalilarjmandi M, Khan EA, Khan G, Khang YH, Khatab K, Khater A, Khayamzadeh M, Khazaee-Pool M, Khazaei S, Khoja AT, Khosravi MH, Khubchandani J, Kianipour N, Kim D, Kim YJ, Kisa A, Kisa S, Kissimova-Skarbek K, Komaki H, Koyanagi A, Krohn KJ, Bicer BK, Kugbey N, Kumar V, Kuupiel D, La Vecchia C, Lad DP, Lake EA, Lakew AM, Lal DK, Lami FH, Lan Q, Lasrado S, Lauriola P, Lazarus JV, Leigh J, Leshargie CT, Liao Y, Limenih MA, Listl S, Lopez AD, Lopukhov PD, Lunevicius R, Madadin M, Magdeldin S, El Razek HMA, Majeed A, Maleki A, Malekzadeh R, Manafi A, Manafi N, Manamo WA, Mansourian M, Mansournia MA, Mantovani LG, Maroufizadeh S, Martini SMS, Mashamba-Thompson TP, Massenburg BB, Maswabi MT, Mathur MR, McAlinden C, McKee M, Meheretu HAA, Mehrotra R, Mehta V, Meier T, Melaku YA, Meles GG, Meles HG, Melese A, Melku M, Memiah PTN, Mendoza W, Menezes RG, Merat S, Meretoja TJ, Mestrovic T, Miazgowski B, Miazgowski T, Mihretie KMM, Miller TR, Mills EJ, Mir SM, Mirzaei H, Mirzaei HR, Mishra R, Moazen B, Mohammad DK, Mohammad KA, Mohammad Y, Darwesh AM, Mohammadbeigi A, Mohammadi H, Mohammadi M, Mohammadian M, Mohammadian-Hafshejani A, Mohammadoo-Khorasani M, Mohammadpourhodki R, Mohammed AS, Mohammed JA, Mohammed S, Mohebi F, Mokdad AH, Monasta L, Moodley Y, Moosazadeh M, Moossavi M, Moradi G, Moradi-Joo M, Moradi-Lakeh M, Moradpour F, Morawska L, Morgado-da-Costa J, Morisaki N, Morrison SD, Mosapour A, Mousavi SM, Mucche AA, Muhammed OSS, Musa J, Nabhan AR, Naderi M, Nagarajan AJ, Nagel G, Nahvijou A, Naik G, Najafi F, Naldi L, Nam HS, Nasiri N, Nazari J, Negoj I, Neupane S, Newcomb PA, Nggada HA, Ngunjiri JW, Nguyen CT, Nikniaz L, Ningrum DNA, Nirayo YL, Nixon MR, Nnaji CA, Nojomi M, Nosratnejad S, Shiadeh MN, Obsa MS, Ofori-Asenso R, Ogbo FA, Oh IH, Olagunju AT, Olagunju TO, Oluwasanu MM, Omonisi AE, Onwujekwe OE, Oommen AM, Oren E, Ortega-Altamirano DDV, Ota E, Otstavnov SS, Owolabi MO, P A M, Padubidri JR, Pakhale S, Pakpour AH, Pana A, Park EK, Parsian H, Pashaei T, Patel S, Patil ST, Pennini A, Pereira DM, Piccinelli C, Pillay JD, Pirestani M, Pishgar F, Postma MJ, Pourjafar H, Pourmalek F, Pourshams A, Prakash S, Prasad N, Qorbani M, Rabiee M, Rabiee N, Radfar A, Rafiei A, Rahim F, Rahimi M, Rahman MA, Rajati F, Rana SM, Raoofi S, Rath GK, Rawaf DL, Rawaf S, Reiner RC, Renzaho AMN, Rezaei N, Rezapour A, Ribeiro AI, Ribeiro D, Ronfani L, Roro EM, Roshandel G, Rostami A,				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Saad RS, Sabbagh P, Sabour S, Saddik B, Safiri S, Sahebkar A, Salahshoor MR, Salehi F, Salem H, Salem MR, Salimzadeh H, Salomon JA, Samy AM, Sanabria J, Santric Milicevic MM, Sartorius B, Sarveazad A, Sathian B, Satpathy M, Savic M, Sawhney M, Sayyah M, Schneider IJC, Schöttker B, Sekerija M, Sepanlou SG, Sepehrimanesh M, Seyedmousavi S, Shaahmadi F, Shabaninejad H, Shahbaz M, Shaikh MA, Shamshirian A, Shamsizadeh M, Sharafi H, Sharafi Z, Sharif M, Sharifi A, Sharifi H, Sharma R, Sheikh A, Shirkoohi R, Shukla SR, Si S, Siabani S, Silva DAS, Silveira DGA, Singh A, Singh JA, Sisay S, Sitas F, Sobngwi E, Soofi M, Soriano JB, Stathopoulou V, Sufiyan MB, Tabarés-Seisdedos R, Tabuchi T, Takahashi K, Tamtaji OR, Tarawneh MR, Tassew SG, Taymoori P, Tehrani-Banihashemi A, Temsah MH, Temsah O, Tesfay BE, Tesfay FH, Teshale MY, Tessema GA, Thapa S, Tlaye KG, Topor-Madry R, Tovani-Palone MR, Traini E, Tran BX, Tran KB, Tsadik AG, Ullah I, Uthman OA, Vacante M, Vaezi M, Varona Pérez P, Veisani Y, Vidale S, Violante FS, Vlassov V, Vollset SE, Vos T, Vosoughi K, Vu GT, Vujcic IS, Wabinga H, Wachamo TM, Wagnew FS, Waheed Y, Weldegebreal F, Weldesamuel GT, Wijeratne T, Wondafrash DZ, Wonde TE, Wondmieneh AB, Workie HM, Yadav R, Yadegar A, Yadollahpour A, Yaseri M, Yazdi-Feyzabadi V, Yeshaneh A, Yimam MA, Yimer EM, Yisma E, Yonemoto N, Younis MZ, Yousefi B, Yousefifard M, Yu C, Zabeh E, Zadnik V, Moghadam TZ, Zaidi Z, Zamani M, Zandian H, Zangeneh A, Zaki L, Zendejdel K, Zenebe ZM, Zewale TA, Ziapour A, Zodpey S, Murray CJL.</p> <p>Global, Regional, and National Cancer Incidence, Mortality, Years of Life Lost, Years Lived With Disability, and Disability-Adjusted Life-Years for 29 Cancer Groups, 1990 to 2017: A Systematic Analysis for the Global Burden of Disease Study.</p> <p>JAMA Oncol. 2019 Sep 27. doi: 10.1001/jamaoncol.2019.2996. [Epub ahead of print]</p> <p>Importance: Cancer and other noncommunicable diseases (NCDs) are now widely recognized as a threat to global development. The latest United Nations high-level meeting on NCDs reaffirmed this observation and also highlighted the slow progress in meeting the 2011 Political Declaration on the Prevention and Control of Noncommunicable Diseases and the third Sustainable Development Goal. Lack of situational analyses, priority setting, and budgeting have been identified as major obstacles in achieving these goals. All</p>				

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	<p>of these have in common that they require information on the local cancer epidemiology. The Global Burden of Disease (GBD) study is uniquely poised to provide these crucial data. Objective: To describe cancer burden for 29 cancer groups in 195 countries from 1990 through 2017 to provide data needed for cancer control planning. Evidence Review: We used the GBD study estimation methods to describe cancer incidence, mortality, years lived with disability, years of life lost, and disability-adjusted life-years (DALYs). Results are presented at the national level as well as by Socio-demographic Index (SDI), a composite indicator of income, educational attainment, and total fertility rate. We also analyzed the influence of the epidemiological vs the demographic transition on cancer incidence. Findings: In 2017, there were 24.5 million incident cancer cases worldwide (16.8 million without nonmelanoma skin cancer [NMSC]) and 9.6 million cancer deaths. The majority of cancer DALYs came from years of life lost (97%), and only 3% came from years lived with disability. The odds of developing cancer were the lowest in the low SDI quintile (1 in 7) and the highest in the high SDI quintile (1 in 2) for both sexes. In 2017, the most common incident cancers in men were NMSC (4.3 million incident cases); tracheal, bronchus, and lung (TBL) cancer (1.5 million incident cases); and prostate cancer (1.3 million incident cases). The most common causes of cancer deaths and DALYs for men were TBL cancer (1.3 million deaths and 28.4 million DALYs), liver cancer (572 000 deaths and 15.2 million DALYs), and stomach cancer (542 000 deaths and 12.2 million DALYs). For women in 2017, the most common incident cancers were NMSC (3.3 million incident cases), breast cancer (1.9 million incident cases), and colorectal cancer (819 000 incident cases). The leading causes of cancer deaths and DALYs for women were breast cancer (601 000 deaths and 17.4 million DALYs), TBL cancer (596 000 deaths and 12.6 million DALYs), and colorectal cancer (414 000 deaths and 8.3 million DALYs). Conclusions and Relevance: The national epidemiological profiles of cancer burden in the GBD study show large heterogeneities, which are a reflection of different exposures to risk factors, economic settings, lifestyles, and access to care and screening. The GBD study can be used by policy makers and other stakeholders to develop and improve national and local cancer control in order to achieve the global targets and improve equity in cancer care. DOI: 10.1001/jamaoncol.2019.2996</p>				
<b>180.</b>	Goel, A., Ramakrishna, B., Job, V., Zachariah, U. and Eapen, C. E. Vitamin B12 Deficiency in Patients With Unexplained Portal	<b>INT</b>	<b>JAN TO JUN</b>	Hepatology, Pathology, Clinical Biochemistry	<b>PMID:30742603</b> <b>WOS:000459203600019</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Hypertension Indicates Absence of Severe Liver Fibrosis J Clin Gastroenterol; 2019, 53 (3): e126-e127</p> <p><b>Address:</b> Departments of Hepatology. Pathology. Clinical Biochemistry, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p>				<p><b>Impact Factor: 2.724 (BIOXBIO-2018)</b> <b>H-Index: 102</b></p>
181.	<p>Goel, A., Ramakrishna, B., Zachariah, U., Sajith, K. G., Burad, D. K., Kodiatte, T. A., Keshava, S. N., Balasubramanian, K. A., Elias, E. and Eapen, C. E. What makes non-cirrhotic portal hypertension a common disease in India? Analysis for environmental factors Indian J Med Res; 2019, 149 (4): 468-478</p> <p><b>Address:</b> Department of Hepatology, Division of GI Sciences, <b>Christian Medical College, Vellore, India.</b> Department of Pathology, Division of GI Sciences, <b>Christian Medical College, Vellore, India.</b> Department of Radio-diagnosis, Division of GI Sciences, <b>Christian Medical College, Vellore, India.</b> Department of Wellcome Research Laboratory, Division of GI Sciences, <b>Christian Medical College, Vellore, India.</b> Department of Hepatology, Division of GI Sciences, <b>Christian Medical College, Vellore, India</b>; Liver Unit, University Hospitals, Birmingham, UK.</p> <p>In India, an unexplained enteropathy is present in a majority of non-cirrhotic intrahepatic portal hypertension (NCIPH) patients. Small intestinal bacterial contamination and tropical enteropathy could trigger inflammatory stimuli and activate the endothelium in the portal venous system. Groundwater contaminated with arsenic is an environmental factor of epidemic proportions in large areas of India which has similar consequences. Von Willebrand factor (a sticky protein) expressed by activated endothelium may promote formation of platelet microthrombi and occlusion of intrahepatic portal vein branches leading to NCIPH. Environmental factors linked to suboptimal hygiene and sanitation, which enter through the gastrointestinal (GI) tract, predispose to platelet plugging onto activated endothelium in portal microcirculation. Thus, NCIPH, an example of poverty linked thrombophilia, is a disease mainly affecting the lower socio-economic strata of Indian population. Public health measures to improve sanitation, provide clean drinking water and eliminate arsenic contamination of drinking water are urgently needed. Till such time as these environmental factors are addressed, NCIPH is likely to remain 'an Indian disease'.</p>	NAT	JUL TO DEC	Hepatology, Pathology, Radio-diagnosis, Wellcome Research Laboratory.	<p><b>PMID: 31411170</b> <b>PMCID: PMC6676844</b> <b>Impact Factor: 1.508 (BIOXBIO-2018)</b> <b>H-Index: 75</b></p>



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<b>DOI: 10.4103/ijmr.IJMR_1405_17</b>				
<b>182.</b>	<p>Goel, R., Gribbons, K. B., Carette, S., Cuthbertson, D., Hoffman, G. S., Joseph, G., Khalidi, N. A., Koenig, C. L., Kumar, S., Langford, C., Maksimowicz-Mckinnon, K., Mclear, C. A., Monach, P. A., Moreland, L. W., Nair, A., Pagnoux, C., Quinn, K. A., Ravindran, R., Seo, P., Sreih, A. G., Warrington, K. J., Ytterberg, S. R., Merkel, P. A., Danda, D. and Grayson, P. C.</p> <p>Derivation of an angiographically based classification system in Takayasu's arteritis: an observational study from India and North America</p> <p>Rheumatology (Oxford); 2019, <b>Address:</b> Department of Clinical Immunology and Rheumatology, <b>Christian Medical College, Vellore, India.</b></p> <p>Systemic Autoimmunity Branch, NIAMS, National Institutes of Health, Bethesda, MD, USA.</p> <p>Division of Rheumatology, Mount Sinai Hospital, University of Toronto, Toronto, ON, Canada.</p> <p>Department of Biostatistics, University of South Florida, Tampa, FL.</p> <p>Department of Rheumatic and Immunologic Diseases, Cleveland Clinic Foundation, Cleveland, OH, USA.</p> <p>Department of Cardiology, <b>Christian Medical College, Vellore, India.</b></p> <p>Division of Rheumatology, McMaster University, Hamilton, ON, Canada.</p> <p>Division of Rheumatology, University of Utah, Salt Lake City, UT.</p> <p>Division of Rheumatology, Henry Ford Health System, Detroit, MI.</p> <p>Division of Rheumatology, Department of Biostatistics, Epidemiology, and Informatics, University of Pennsylvania, Philadelphia, PA.</p> <p>Division of Rheumatology, VA Boston Healthcare System, Boston, MA.</p> <p>Division of Rheumatology, University of Pittsburgh, Pittsburgh, PA.</p> <p>Division of Rheumatology, Georgetown University, Washington DC, USA.</p> <p>Division of Rheumatology, Hiranandani Hospitals, Mumbai, India.</p> <p>Division of Rheumatology, Johns Hopkins University, Baltimore, MD.</p> <p>Division of Rheumatology, Mayo Clinic, Rochester, MN, USA.</p> <p>OBJECTIVES: To develop and replicate, using data-driven methods, a novel classification system in Takayasu's arteritis based on distribution of arterial lesions. METHODS: Patients were included from four international cohorts at major academic centres: India (Christian Medical College Vellore); North America (National Institutes of Health, Vasculitis Clinical Research Consortium and</p>	<b>int</b>	<b>JUL TO DEC</b>	Clinical Immunology and Rheumatology, Cardiology	<p><b>PMID:</b> 31580452</p> <p><b>Impact Factor:</b> 5.149</p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 156</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Cleveland Clinic Foundation). All patients underwent whole-body angiography of the aorta and branch vessels, with categorization of arterial damage (stenosis, occlusion or aneurysm) in 13 territories. K-means cluster analysis was performed to identify subgroups of patients based on pattern of angiographic involvement. Cluster groups were identified in the Indian cohort and independently replicated in the North American cohorts. RESULTS: A total of 806 patients with Takayasu's arteritis from India (n = 581) and North America (n = 225) were included. Three distinct clusters defined by arterial damage were identified in the Indian cohort and replicated in each of the North American cohorts. Patients in cluster one had significantly more disease in the abdominal aorta, renal and mesenteric arteries (P &lt; 0.01). Patients in cluster two had significantly more bilateral disease in the carotid and subclavian arteries (P &lt; 0.01). Compared with clusters one and two, patients in cluster three had asymmetric disease with fewer involved territories (P &lt; 0.01). Demographics, clinical symptoms and clinical outcomes differed by cluster. CONCLUSION: This large study in Takayasu's arteritis identified and replicated three novel subsets of patients based on patterns of arterial damage. Angiographic-based disease classification requires validation by demonstrating potential aetiological or prognostic implications.</p>				
183.	<p>Goel, R., Sathish Kumar, T. and Danda, D.            Childhood-Onset Takayasu Arteritis (c-TA): Current and Future Drug Therapy            Paediatr Drugs; 2019, 21 (2): 81-93</p> <p><b>Address:</b> Department of Clinical Immunology and Rheumatology, <b>Christian Medical College, Vellore, India.</b>            Department of Child Health, <b>Christian Medical College, Vellore, India.</b>            Department of Clinical Immunology and Rheumatology, <b>Christian Medical College, Vellore, India.</b>            debashisdandacmc@hotmail.com.</p> <p>Childhood-onset Takayasu arteritis (c-TA) is the third most common systemic vasculitic disorder in children. Vascular stenosis is the main complication, and aneurysms are reported in 19-65% of cases, often in combination with stenotic lesions. Management of patients with c-TA is largely based on studies involving predominantly patients with adult-onset TA (a-TA). More widely used criteria for patients with c-TA have been devised by the joint European League Against Rheumatism, Pediatric Rheumatology International Trials</p>	INT	JAN TO JUN	Clinical Immunology and Rheumatology, Child Health, Clinical Immunology and Rheumatology	<p><b>PMID:31087279</b>  <b>PMC</b>  <b>Impact Factor: 1.45</b>  <b>(RG-2018)</b>  <b>H-Index: 55</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Organization, and Pediatric Rheumatology European Society. Of the available imaging modalities, those that do not use radiation (color Doppler ultrasound and magnetic resonance angiogram) are preferred over (18)F-labeled fluoro-2-deoxyglucose ((18)F-FDG) positron-emission tomography, computed tomography (CT), and CT angiogram in children. Remission rates have been reported to be lower in c-TA than in a-TA, and published mortality rates in c-TA range from 16 to 40%, which is much higher than reported in patients with a-TA. The usual drug therapy options include steroids plus steroid-sparing second-line immunosuppressants, such as mycophenolate, azathioprine, methotrexate, cyclophosphamide, and cyclosporine, along with antiplatelet agents. Interleukin-6 inhibitors such as tocilizumab, as well as the tumor necrosis factor inhibitors, are other aggressive therapeutic options. As yet, no randomized controlled trials have been conducted in c-TA.				
184.	Goel, Ruchika, Anantharaman, Devasena, Ragupathy, Rekha, Prabhu, Priya, Kabeerdoss, Jayakanthan, Jeyaseelan, Lakshmanan, Pillai, Radhakrishnan and Danda, Debashish SERUM BIOMARKER PROFILE OF INDIAN PATIENTS WITH TAKAYASU'S ARTERITIS: RELATION WITH EARLY AND LATE ANGIOGRAPHIC PROGRESSION Rheumatology; 2019, 58 5-5	INT	JUL TO DEC	Clinical Immunology and Rheumatology, Biostatistics	<b>PMID:</b> WOS:000478085100012 <b>Impact Factor:</b> 5.149 <b>(BIOXBIO - 2018)</b> <b>H-Index: 156</b>
185.	Gohil, A. J., Gupta, A. K., Jesudason, M. R. and Nayak, S. Graciloplasty for Anal Incontinence-Is Electrical Stimulation Necessary? Ann Plast Surg; 2019, 82 (6): 671-678  <b>Address:</b> From the Department of Plastic & Reconstructive Surgery, and. Department of General Surgery, <b>Christian Medical College, Vellore</b> , Tamilnadu, India.  INTRODUCTION: Anal incontinence brings lot of social embarrassment, mental distress, dignity loss, anxiety, low confidence, and eventually a low self-esteem with a restricted social life to the affected person. Surgical repair is the mainstay of treatment for anal incontinence. However, some patients need additional procedures such as gluteoplasty, graciloplasty (adynamic and dynamic), artificial bowel sphincter, and sacral nerve stimulation, which help to reinforce or augment the anal sphincter. METHODS: A retrospective analysis of 17 patients who underwent adynamic graciloplasty for reconstruction of anal sphincter from January 2008 to December 2017 was done. Demographic profile,	INT	JAN TO JUN	Plastic & Reconstructive Surgery, General Surgery	<b>PMID:30633015</b> <b>PMC</b>  <b>Impact Factor: 1.536</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 83</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	fecal incontinence scores (Wexner score and KAMM score), and anal manometric findings were recorded pregraciloplasty and postgraciloplasty. RESULTS: Of the total 17 patients, 9 were males and 8 were females. Satisfactory continence was achieved in 13 patients out of 17 (76.47%). Continence was defined as satisfactory for patients having a postoperative Wexner score of 2 or less and KAMM score of 4 or less. It was considered to be poor if the Wexner score was greater than 6 and KAMM score was greater than 8 in the follow-up period or if the stoma was not reversed. CONCLUSIONS: Unstimulated or adynamic graciloplasty is a relatively safe procedure, has a short learning curve, is affordable, and avoids the additional implant-related complications. We feel that the unstimulated graciloplasty still has a significant role in the management of anal incontinence.				
186.	<p>Gorey, A., Jacob, P. M., Abraham, D. T., John, R., Manipadam, M. T., Ansari, M. S., Chen, G. C. K. and Vasudevan, S. Differentiation of malignant from benign thyroid nodules using photoacoustic spectral response: A preclinical study Biomedical Physics and Engineering Express; 2019, 5 (3): 035017. doi:10.1088/2057-1976/ab101c</p> <p><b>Address:</b> Discipline of Electrical Engineering, Indian Institute of Technology Indore, Simrol, (M.P.), 453552, India Departments of Endocrine Surgery, Radio Diagnosis and General Pathology, <b>Christian Medical College, Vellore</b>, India LPSD, Raja Ramanna Centre for Advanced Technology, Indore, India BC Photonics Technological Co., Richmond, Canada Centre for Biosciences and Biomedical Engineering, Indian Institute of Technology Indore, Simrol, (M.P.), 453552, India</p> <p>Thyroid nodule (TN), a discrete palpable swelling of the thyroid gland, is prevalent among 8% of the adult population. The important concern with these nodules is the differentiation between benign and malignant ones. Since conventional diagnostic techniques (e.g., ultrasound) are not accurate in diagnosis, clinical surgeons adopt to excision biopsy, a golden standard, which requires surgery and removal of the gland. We propose to apply Photoacoustic Spectral Response (PASR), a non-invasive and elasticity based diagnostic technique, onto TN for malignancy diagnosis. In this study, time domain photoacoustic signals were acquired through custom built experimental setup inside the surgical theatre and spectral information were obtained through signal processing. PA spectra</p>	INT	JUL TO DEC	Endocrine Surgery, Radio Diagnosis and General Pathology,	<b>Impact Factor: 1.10 (Resurchify.com)</b> <b>H-Index: 7</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	could distinguish Follicular Variant of Papillary Thyroid Carcinoma (a thyroid cancer) from the other tissues with a high accuracy which an important challenge in conventional diagnostic techniques. Further, other tissue variants were also successfully differentiated through signal decomposition in a quantitative manner. © 2019 IOP Publishing Ltd.				
187.	<p>Gouw, S. C., Timmer, M. A., Srivastava, A., De Kleijn, P., Hilliard, P., Peters, M., Blanchette, V. and Fischer, K.</p> <p>Measurement of joint health in persons with haemophilia: A systematic review of the measurement properties of haemophilia-specific instruments</p> <p>Haemophilia; 2019, 25 (1): e1-e10</p> <p><b>Address:</b> Department of Pediatric Hematology, Academic Medical Center, Amsterdam, The Netherlands.                      Department of Clinical Epidemiology, Leiden University Medical Center, Amsterdam, The Netherlands.                      Van Creveldkliniek, Department of Hematology, University Medical Center, Utrecht, The Netherlands.                      Department of Hematology, <b>Christian Medical College, Vellore, India.</b>                      Department of Rehabilitation, Physical Therapy Science and Sport, Brain Center Rudolf Magnus, University Medical Center Utrecht, Utrecht, the Netherlands.                      Department of Rehabilitation, Hospital for Sick Children, Toronto, Ontario, Canada.                      Department of Paediatrics, Division of Hematology/Oncology, Hospital for Sick Children, University of Toronto, Toronto, Ontario, Canada.</p> <p>INTRODUCTION: Accurate assessment of joint health in persons with haemophilia is crucial. Several haemophilia-specific measurement tools are available, but an overview of the measurement properties is lacking. AIM: To provide an overview of the measurement properties of haemophilia-specific measurement tools to assess clinical joint health. METHODS: MEDLINE and EMBASE were searched for reports on reliability, validity or responsiveness of the World Federation of Haemophilia Orthopedic Joint Score (WFH), Colorado Physical Examination Score (CPE), joint examination score by Petrini (PJS) and Hemophilia Joint Health Score (HJHS). Methodological quality of the studies was assessed using an adapted COSMIN checklist. RESULTS: The search yielded 2905 unique hits, and 98 papers were included. The methodological quality of the included studies was limited. The HJHS was studied most extensively, which yielded</p>	INT	JUL TO DEC	Hematology	<p><b>PMID:</b> 30427100</p> <p><b>Impact Factor:</b> 3.590</p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 84</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	limited evidence for good internal consistency and structural validity, moderate evidence for hypothesis testing in adults and conflicting evidence for hypothesis testing in children. Reliability, measurement error and responsiveness were rated unknown due to low COSMIN scores. For the CPE and PJS, we found limited to moderate evidence for good responsiveness and conflicting evidence for hypothesis testing. CONCLUSION: Only patchy evidence is available on the quality of measurement properties of all haemophilia-specific joint health scores. Although significant gaps in the evidence for all instruments remain, measurement properties of the HJHS were most extensively studied and show no drawbacks for use in clinical practice. This review forms the basis for further research aimed at the assessment of measurement properties of measurement tools to assess joint health.				
188.	<p>Grace, A. G., Mittal, A., Jain, S., Tripathy, J. P., Satyanarayana, S., Tharyan, P. and Kirubakaran, R.</p> <p>Shortened treatment regimens versus the standard regimen for drug-sensitive pulmonary tuberculosis</p> <p>Cochrane Database of Systematic Reviews; 2019, 2019 (12): Address: Sree Balaji Medical College &amp; Hospital, Department of Community Medicine, Works road, Chrompet, Chennai, 600044, India</p> <p>All India Institute of Medical Sciences, Department of Internal Medicine, New Delhi, India</p> <p>Postgraduate Institute of Medical Education and Research (PGIMER), Clinical Immunology and Rheumatology Unit, Department of Internal Medicine, Chandigarh, 160012, India</p> <p>International Union Against Tuberculosis and Lung Disease (The Union), South-East Asia Regional Office, Centre for Operational Research, New Delhi, India</p> <p>International Union Against Tuberculosis and Lung Disease (The Union), South-East Asia Regional Office, New Delhi, India</p> <p>Christian Medical College, Clinical Epidemiology Unit, Prof. BV Moses Centre for Evidence-Informed Healthcare and Health Policy, Carman Block II Floor, CMC Campus, Bagayam, Vellore, Tamil Nadu 632002, India</p> <p>Christian Medical College, Cochrane South Asia, Prof. BV Moses Centre for Evidence-Informed Healthcare and Health Policy, Carman Block II Floor, CMC Campus, Bagayam, Vellore, 632002, India</p> <p>Background: Tuberculosis causes more deaths than any other infectious disease worldwide, with pulmonary tuberculosis being the most common form. Standard first-line treatment for drug-sensitive pulmonary tuberculosis for six months comprises isoniazid,</p>	INT	JUL TO DEC	Clinical Epidemiology Unit, Cochrane South Asia	<p><b>PMID: 31828771</b></p> <p><b>PMCID: PMC6953336</b></p> <p><b>PMC Review 22371</b></p> <p><b>Impact Factor: 6.754</b></p> <p><b>(BIOXBIO-2018)</b></p> <p><b>H-Index: 244</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>rifampicin, pyrazinamide, and ethambutol (HRZE) for two months, followed by HRE (in areas of high TB drug resistance) or HR, given over a four-month continuation phase. Many people do not complete this full course. Shortened treatment regimens that are equally effective and safe could improve treatment success. Objectives: To evaluate the efficacy and safety of shortened treatment regimens versus the standard six-month treatment regimen for individuals with drug-sensitive pulmonary tuberculosis. Search methods: We searched the following databases up to 10 July 2019: the Cochrane Infectious Diseases Group Specialized Register; the Central Register of Controlled Trials (CENTRAL), in the Cochrane Library; MEDLINE (PubMed); Embase; the Latin American Caribbean Health Sciences Literature (LILACS); Science Citation Index-Expanded; Indian Medlars Center; and the South Asian Database of Controlled Clinical Trials. We also searched the World Health Organization (WHO) International Clinical Trials Registry Platform, ClinicalTrials.gov, the Clinical Trials Unit of the International Union Against Tuberculosis and Lung Disease, the UK Medical Research Council Clinical Trials Unit, and the Clinical Trials Registry India for ongoing trials. We checked the reference lists of identified articles to find additional relevant studies. Selection criteria: We searched for randomized controlled trials (RCTs) or quasi-RCTs that compared shorter-duration regimens (less than six months) versus the standard six-month regimen for people of all ages, irrespective of HIV status, who were newly diagnosed with pulmonary tuberculosis by positive sputum culture or GeneXpert, and with presumed or proven drug-sensitive tuberculosis. The primary outcome of interest was relapse within two years of completion of anti-tuberculosis treatment (ATT). Data collection and analysis: Two review authors independently selected trials, extracted data, and assessed risk of bias for the included trials. For dichotomous outcomes, we used risk ratios (RRs) with 95% confidence intervals (CIs). When appropriate, we pooled data from the included trials in meta-analyses. We assessed the certainty of evidence using the GRADE approach. Main results: We included five randomized trials that compared fluoroquinolone-containing four-month ATT regimens versus standard six-month ATT regimens and recruited 5825 adults with newly diagnosed drug-sensitive pulmonary tuberculosis from 14 countries with high tuberculosis transmission in Asia, Africa, and Latin America. Three were multi-country trials that included a total of 572 HIV-positive people. These trials excluded children, pregnant or lactating women, people with serious comorbid conditions, and those with diabetes mellitus. Four trials had multiple treatment arms.</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Moxifloxacin replaced ethambutol in standard four-month, daily or thrice-weekly ATT regimens in two trials; moxifloxacin replaced isoniazid in four-month ATT regimens in two trials, was given daily in one trial, and was given with rifapentine instead of rifampicin daily for two months and twice weekly for two months in one trial. Moxifloxacin was added to standard ATT drugs for three to four months in one ongoing trial that reported interim results. Gatifloxacin replaced ethambutol in standard ATT regimens given daily or thrice weekly for four months in two trials. Follow-up ranged from 12 months to 24 months after treatment completion for the majority of participants. Moxifloxacin-containing four-month ATT regimens. Moxifloxacin-containing four-month ATT regimens that replaced ethambutol or isoniazid probably increased the proportions who experienced relapse after successful treatment compared to standard ATT regimens (RR 3.56, 95% CI 2.37 to 5.37; 2265 participants, 3 trials; moderate-certainty evidence). For death from any cause, there was probably little or no difference between the two regimens (2760 participants, 3 trials; moderate-certainty evidence). Treatment failure was rare, and there was probably little or no difference in proportions with treatment failure between ATT regimens (2282 participants, 3 trials; moderate-certainty evidence). None of the participants given moxifloxacin-containing regimens developed resistance to rifampicin, and these regimens may not increase the risk of acquired resistance (2282 participants, 3 trials; low-certainty evidence). Severe adverse events were probably little or no different with moxifloxacin-containing four-month regimens that replaced ethambutol or isoniazid, and with three- to four-month regimens that augmented standard ATT with moxifloxacin, when compared to standard six-month ATT regimens (3548 participants, 4 trials; moderate-certainty evidence). Gatifloxacin-containing four-month ATT regimens. Gatifloxacin-containing four-month ATT regimens that replaced ethambutol probably increased relapse compared to standard six-month ATT regimens in adults with drug-sensitive pulmonary tuberculosis (RR 2.11, 95% CI 1.56 to 2.84; 1633 participants, 2 trials; moderate-certainty evidence). The four-month regimen probably made little or no difference in death compared to the six-month regimen (1886 participants, 2 trials; moderate-certainty evidence). Treatment failure was uncommon and was probably little or no different between the four-month and six-month regimens (1657 participants, 2 trials; moderate-certainty evidence). Acquired resistance to isoniazid or rifampicin was not detected in those given the gatifloxacin-containing shortened ATT regimen, but we are uncertain whether acquired drug resistance is</p>				



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>any different in the four- and six-month regimens (429 participants, 1 trial; very low-certainty evidence). Serious adverse events were probably no different with either regimen (1993 participants, 2 trials; moderate-certainty evidence). Authors' conclusions: Evidence to date does not support the use of shortened ATT regimens in adults with newly diagnosed drug-sensitive pulmonary tuberculosis. Four-month ATT regimens that replace ethambutol with moxifloxacin or gatifloxacin, or isoniazid with moxifloxacin, increase relapse substantially compared to standard six-month ATT regimens, although treatment success and serious adverse events are little or no different. The results of six large ongoing trials will help inform decisions on whether shortened ATT regimens can replace standard six-month ATT regimens. 9 December 2019. Up to date. All studies incorporated from most recent search. All eligible published studies found in the last search (10 Jul, 2019) were included. Copyright © 2019 The Authors. Cochrane Database of Systematic Reviews published by John Wiley &amp; Sons, Ltd. on behalf of The Cochrane Collaboration. DOI: 10.1002/14651858.CD012918.pub2 Free PMC Article Share on FacebookShare on TwitterShare on Google+</p>				
189.	<p>Gribbons, Katherine, Goel, Ruchika, Cuthbertson, David, Carette, Simon, Hoffman, Gary S., Joseph, George, Khalidi, Nader A., Koenig, Curry L., Langford, Carol, Maksimowicz-Mckinnon, Kathleen, Mclear, Carol A., Monach, Paul A., Moreland, Larry W., Nair, Aswin, Pagnoux, Christian, Ravindran, Raheesh, Seo, Philip, Sreih, Antoine G., Warrington, Kenneth J., Ytterberg, Steven R., Merkel, Peter A., Danda, Debashish and Grayson, Peter C. Discovery and Validation of A Novel Angiographic Classification Scheme in Takayasu's Arteritis Rheumatology; 2019, 58</p>	INT	JUL TO DEC	Clinical Immunology and Rheumatology	<p><b>PMID:</b> WOS:000478085100084 <b>Impact Factor: 5.149</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 156</b></p>
190.	<p>Gunasekaran, K., Amladi, A., Mathew, S. K., Miraclin, T. A. and Iyyadurai, R. A case of septicaemic melioidosis: Utility of therapeutic drug monitoring and high-dose meropenem in successful management Indian J Med Microbiol; 2018, 36 (4): 597-599</p> <p><b>Address:</b> Department of General Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Clinical Pharmacology, <b>Christian Medical College,</b></p>	NAT	JAN TO JUN	General Medicine, Clinical Microbiology, Clinical Pharmacology	<p><b>PMID:30880715</b> <b>PMC</b> <b>Impact Factor: 1.157</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 41</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Vellore, Tamil Nadu, India.</b></p> <p>Melioidosis is an emerging infectious disease of major public health importance. We describe a patient who presented with septicaemic melioidosis with multi-organ dysfunction. He had only marginal response on standard doses of meropenem. Therapeutic drug monitoring (TDM) revealed suboptimal concentration of meropenem following which drug dose was increased, with which he showed rapid clinical improvement and microbiological clearance. Melioidosis presents with multisystem involvement with disseminated abscess, standard dosing of meropenem may not be sufficient in achieving therapeutic levels and TDM with increased dosing in these critically ill patients will improve outcome.</p>				
191.	<p>Gunasekaran, K., Das, S. and Iyyadurai, R. Clinical Profile and Outcomes of Inpatients with Influenza from A Tertiary Care Center in South India Transactions of the Royal Society of Tropical Medicine and Hygiene; 2019, 113 S223-S224</p>	INT	JUL TO DEC	Medicine, Infectious Diseases	<p><b>PMID:</b> WOS:000493064400554 <b>Impact Factor: 2.307</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 97</b></p>
192.	<p>Gunasekaran, K., Mathew, D. E., Sudarsan, T. I. and Iyyadurai, R. Fatal colchicine intoxication by ingestion of Gloriosa superba tubers BMJ Case Rep; 2019, 12 (5): <b>Address: General Medicine, Christian Medical College, Vellore, India.</b> Division of Critical Care, <b>Christian Medical College, Vellore, India.</b></p> <p>Gloriosa superba is an ornamental herb, widely found in the tropics especially in the southern parts of India and Sri Lanka. All parts of the plants are toxic, especially the tuberous rhizomes in view of their high content of colchicines and its derivatives. We report a case of fatal ingestion of the tubers of G. superba, with an intention of deliberate self harm, leading to systemic coagulopathy and progressive multiple organ dysfunctions. The patient was managed with intralipid rescue therapy, plasmapheresis, haemodialysis and intensive care. The ease of availability makes plant poisons, a common method of deliberate self-harm in South India. This report reiterates the need for clinician's awareness of common toxidromes associated with plant poisons.</p>	INT	JUL TO DEC	General Medicine, Critical Care	<p><b>PMID:31101749</b> <b>Impact Factor: 0.22</b> <b>(RG-2018)</b> <b>H-Index: 20</b></p>
193.	<p>Gupta P(1), Cherian KE(1), Kapoor N(1), Fouzia NA(2), Paul TV(1). Imatinib-induced Gynecomastia. Indian J Endocrinol Metab. 2019 Nov-Dec; 23(6):648.</p> <p><b>Author information:</b></p>	NAT	Jul To Dec	Endocrinology	<p><b>PMID: 32042704</b> <b>PMCID: PMC6987781</b> <b>Impact Factor: 1.70</b> <b>(resurchiefy.com)</b> <b>H-Index: 19</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>(1) Department of Endocrinology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>(2) Department of Hematology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>DOI: 10.4103/ijem.IJEM_566_19</p> <p>Conflict of interest statement: There are no conflicts of interest.</p>				
194.	<p>Gupta, M.</p> <p>WITHDRAWN: Metastatic Leydig Cell Tumor: A Clinico-pathological Review of Five Cases</p> <p>J Pathol Transl Med; 2019, <b>Address:</b> Department of General Pathology, <b>Christian Medical College, Vellore, India.</b></p> <p>Ahead of Print article withdrawn by the author and internal inquiry committee of <b>Christian Medical College, Vellore</b>, Tamilnadu, India. The Editors were informed that an internal inquiry committee was constituted to look into an allegation of scientific fraud with regard to this article, and it is the recommendation of the committee that this article should be withdrawn.</p>	INT	JUL TO DEC	General Pathology	<p><b>PMID:</b> 31307153</p> <p><b>Impact Factor:</b> NA</p> <p><b>H-Index:</b> 20</p>
195.	<p>Gupta, Piyush, Goel, Ashish, Zachariah, Uday and Eapen, Chundamanil</p> <p>Serum ceruloplasmin activity assay is superior to nephelometric assay in clinical settings of false positive serum ceruloplasmin (hypoproteinemic states)</p> <p>Journal of Gastroenterology and Hepatology; 2019, 34 263-263</p>	INT	JUL TO DEC	Gastroenterology, Hepatology	<p><b>PMID:</b></p> <p>WOS:000495492601180</p> <p><b>Impact Factor:</b> 3.632</p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index:</b> 117</p>
196.	<p>Gupta, R. D., Haobam, S. S., Krishna, A., Ramchandran, R., Satyaraddi, A., Shetty, S., Asha, H. S., Paul, T. V. and Thomas, N.</p> <p>Clinico-radiological characteristics and not laboratory markers are useful in diagnosing diabetic myonecrosis in Asian Indian patients with type 2 diabetes mellitus: A 10-year experience from South India</p> <p>J Family Med Prim Care; 2018, 7 (6): 1243-1247</p> <p><b>Address:</b> Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>Department of Radiology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>Introduction: Diabetic myonecrosis or muscle infarction is an unusual complication of Type 2 Diabetes, usually associated with longstanding disease. It commonly presents as an acute non-traumatic palpable swelling of the affected muscle with predilection for the quadriceps and thigh muscles, often accompanied by retinopathy and nephropathy. Methodology: A retrospective review of the medical records of patients admitted with</p>	NAT	JAN TO JUN	Endocrinology, Diabetes and Metabolism, Radiology	<p><b>PMID:30613504</b></p> <p><b>PMC ID:6293897</b></p> <p><b>Impact Factor:</b> 0.21</p> <p><b>(RG-2018)</b></p> <p><b>H-Index:</b> NA</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>diabetic myonecrosis under the Department of Endocrinology, <b>Christian Medical College</b> Vellore over a period of ten years(2006-2015) was done. Data pertaining to clinical, biochemical and radiological characteristics were obtained and treatment modalities and outcomes were recorded. Results and Analysis: A total of n = 4 patients with diabetic myonecrosis and completed clinical data were included in the study. In our present series, the mean age at presentation was 45.5 years (+/-7.3 years), the mean duration of the diabetes was 9.0 years (+/-2.5 years)with an equal distribution of male and female subjects. The mean HbA1c (9.5 +/- 0.6%) was suggestive of poor glycemic control at presentation with all (100%) the patients in our series having concomitant one or more microvascular complications. While laboratory parameters of elevated CPK or LDH were mostly normal, the findings of T1 hyperintense and T2 hypointense heterogenous lower limb lesions were present in all the subjects (n = 4). Conservative management with bed rest, analgesics and good glycemic control were effective in good clinical improvement over a period of 1-2 months. Conclusions: Our series of diabetic myonecrosis in Indian patients with Type 2 diabetes mellitus, elucidates the varied clinical presentations, with MRI findings rather than laboratory markers being the mainstay of diagnosis.</p>				
197.	<p>Gupta, S. and Gupta, N. Short-term pregnancy outcomes in patients chikungunya infection: An observational study J Family Med Prim Care. 2019 Mar;8(3):985-987.  doi: 10.4103/jfmpc.jfmpc_274_18.</p> <p><b>Address:</b> Department of OBG and GYNE, Maternity and Gyne Hospital, RK Puram, Delhi, India. Post Doctoral Fellow, Clinical Immunology and Rheumatology, <b>CMC, Vellore, Tamil Nadu, India.</b> Senior Research Fellow Rheumatology, AIIMS, India. Currently Working, Consultant Rheumatology, Max Hospital, Shalimar Bagh, Delhi, India.</p> <p>Background: Maternal to fetal transmission of chikungunya infection is reported in various studies. However, there is no study from India that looked at the pregnancy outcomes in patients infected with chikungunya. Thus, we planned an observational study that looked at the short-term outcomes of chikungunya infection on pregnancy</p>	NAT	JAN TO JUN	Clinical Immunology and Rheumatology,	<p><b>PMID:31041238</b> <b>PMC ID:6482732</b></p> <p><b>Impact Factor: 0.21</b> <b>(RG-2018)</b> <b>H-Index: NA</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>outcomes. Materials and Methods: It was an observational study conducted at a private clinic in New Delhi from August 2016 to October 2016. We recruited 150 consecutive pregnant females from the outpatient that were suspected chikungunya infection and subsequently tested positive for the same. Those patients who fulfill the inclusion and exclusion criteria would be followed till 10 days including the time till fever subsided. Pregnancy outcomes would be noted in these subjects based on history, examination, and investigations. Results: Out of 150 patients, 141 (94%) recovered completely within 10 days of onset of symptoms. Only nine patients had persistent arthralgias. In our study, mean age (years) +/- std was 24.52 +/- 3.765, mean period of gestation (months) +/- std was 25.62 +/- 13.475, and mean period of gestation at delivery (months) +/- std was 36.36 +/- 3.225. Most of our patients, 75 (50%) were in 2(nd) trimester, 24 (16%) were in first trimester, and 51 (34%) in third trimester. Pregnancy complications were seen in 30 (20%) patients. Preterm delivery (&lt;36 weeks) were seen in 11 (7.33%), premature rupture of membranes were seen in 5 (3.33%), decreased fetal movements in 4 (2.67%), intrauterine deaths in 4 (2.67%), oligohydromnios in 3 (2%), and preterm labor pains 3 (2%). There were six patients who underwent delivery at term. In our study cohort, 30 (20%) developed adverse pregnancy outcomes which were maximum during third trimester -24/30 (80%). Conclusion: Chikungunya infection in pregnancy is associated with increased pregnancy morbidity and fetal mortality.</p>				
198.	<p>Gutta, S., Das, S., Kodiatte, T. A. and Vimala, L. R. Organising pneumonia in Rhupus syndrome BMJ Case Reports Dec 2019, 12 (12) e232326 DOI: 10.1136/bcr-2019-232326 <b>Address:</b> Department of General Medicine Unit-5, <b>Christian Medical College, Vellore, Tamil Nadu, India</b> smiteshg@gmail.com. Department of General Medicine Unit-5, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of General Pathology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Radiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Interstitial lung disease (ILD) is seen in 17% of patients with Rhupus syndrome. Organising pneumonia (OP), a subtype of connective tissue disease-associated ILD, is rare but associated with good outcomes. Here, we present a patient with Rhupus who developed OP.</p>	INT	JUL TO DEC	Medicine Unit 5, General Pathology and Radiology	<p><b>PMID:31862815</b> <b>PMC 35251</b> <b>Impact Factor: 0.22</b> <b>(RG-2018)</b> <b>H-Index: 20</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
199.	<p>Gutta, S., Prasad, J. D., Gunasekaran, K. and Iyadurai, R. Hepatotoxicity and neurotoxicity of Fipronil poisoning in human: A case report J Family Med Prim Care; 2019, 8 (10): 3437-3439 <b>Address:</b> Department of General Medicine 5, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Fipronil is an N-phenylprazole insecticide which is commonly used pesticide in south India. In animals it has been described to cause toxic manifestations mainly in the Gastro-intestinal (GI) and Central nervous system (CNS) and less commonly in kidney and liver. The available medical literature about toxic effects of Fipronil consumption in humans has been very little and mostly limited to acute GI and neurological manifestation mostly lasting for less than three days. We report the case of a 32-year-old gentleman who had consumed Fipronil (5%) in an attempt of deliberate self-harm. The patient had neurotoxicity features in the form of seizures and decreased sensorium requiring intensive medical care with mechanical ventilation and also had hepatotoxicity. Both hepatotoxicity and neurotoxicity lasted for nearly three weeks. The patient improved with supportive therapy and gradually overcame both the toxicities.</p>	NAT	JUL TO DEC	General Medicine	<p><b>PMID:</b> 31742187 <b>Impact Factor: 0.21 (BIOXBIO - 2018)</b> <b>H-Index: NA</b></p>
200.	<p>Guttikonda, A., Shajan, A. M., Hephzibah, A., Jones, A. S., Susanna, J., Neethu, S., Poornima, S., Jala, S. M., Arputharaj, D., John, D., Natta, N., Fernandes, D., Jeyapaul, S., Jamkhandi, D., Prashanth, H. R. and Oommen, A. M. Perceived Stigma Regarding Mental Illnesses among Rural Adults in Vellore, Tamil Nadu, South India Indian J Psychol Med; 2019, 41 (2): 173-177</p> <p><b>Address:</b> MBBS Students, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Community Health Department, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Background: Stigma is an important factor that determines whether individuals seek treatment for mental illnesses. Studies assessing public perceptions regarding mental illnesses are scarce in India. This study documents the stigma perceived by a rural population toward patients with mental illness and their families. Materials and Methods: A cross-sectional pilot study was done in five villages, selected by simple random sampling, from a rural block in Vellore, Tamil Nadu. Households in each village were selected by systematic</p>	NAT	JAN TO JUN	Community Health Department	<p><b>PMID:30983667</b> <b>PMC ID:6436406</b> <b>Impact Factor: 0.64 (RG-2018)</b> <b>H-Index: 17</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	random sampling. From the selected households, 150 subjects aged 18-65 years, without known mental disorders, were chosen by convenience sampling, based on availability. Stigma was assessed using the Devaluation of Consumers Scale (DCS) and Devaluation of Consumer's Families Scale (DCFS). Results: The proportion with high perceptions of stigma associated with mentally ill persons was 63.8%, among the 150 interviewed rural respondents (women: 112, median age: 37 years). The proportion which perceived that there was public stigma toward families of those with mental illnesses was 43.4%. Older respondents (>37 years) had higher perceptions of stigma (odds ratio: 2.07; 95% confidence interval: 1.02-4.20) than others. Conclusion: The high perception of stigma associated with persons who are mentally ill as well as their families needs to be kept in mind while planning interventions to decrease the treatment gap for psychiatric morbidity, especially in rural areas.				
<b>201.</b>	Haagsma, J. A., James, S. L., Castle, C. D., Dingels, Z. V., Fox, J. T., Hamilton, E. B., Liu, Z., Lucchesi, L. R., Roberts, N. L. S., Sylte, D. O., Adebayo, O. M., Ahmadi, A., Ahmed, M. B., Aichour, M. T. E., Alahdab, F., Alghnam, S. A., Aljunid, S. M., Al-Raddadi, R. M., Alsharif, U., Altirkawi, K., Anjomshoa, M., Antonio, C. A. T., Appiah, S. C. Y., Aremu, O., Arora, A., Asayesh, H., Assadi, R., Awasthi, A., Ayala Quintanilla, B. P., Balalla, S., Banstola, A., Barker-Collo, S. L., Bärnighausen, T. W., Bazargan-Hejazi, S., Bedi, N., Behzadifar, M., Benjet, C., Bennett, D. A., Bensenor, I. M., Bhaumik, S., Bhutta, Z. A., Bijani, A., Borges, G., Borschmann, R., Bose, D., Boufous, S., Brazinova, A., Campuzano Rincon, J. C., Cárdenas, R., Carrero, J. J., Carvalho, F., Castañeda-Orjuela, C. A., Catalá-López, F., Choi, J. Y. J., Christopher, D. J., Crowe, C. S., Dalal, K., Daryani, A., Davitoui, D. V., Degenhardt, L., De Leo, D., De Neve, J. W., Deribe, K., Dessie, G. A., Deveber, G. A., Dharmaratne, S. D., Doan, L. P., Dolan, K. A., Driscoll, T. R., Dubey, M., El-Khatib, Z., Ellingsen, C. L., El Sayed Zaki, M., Endries, A. Y., Eskandarieh, S., Faro, A., Fereshtehnejad, S. M., Fernandes, E., Filip, I., Fischer, F., Franklin, R. C., Fukumoto, T., Gezae, K. E., Gill, T. K., Goulart, A. C., Grada, A., Guo, Y., Gupta, R., Haghparast Bidgoli, H., Haj-Mirzaian, A., Hamadeh, R. R., Hamidi, S., Haro, J. M., Hassankhani, H., Hassen, H. Y., Havmoeller, R., Hendrie, D., Henok, A., Híjar, M., Hole, M. K., Homaie Rad, E., Hossain, N., Hostiuc, S., Hu, G., Igumbor, E. U., Ilesanmi, O. S., Irvani, S. S. N., Islam, S. M. S., Ivers, R. Q., Jacobsen, K. H., Jahanmehr, N., Jakovljevic, M., Jayatilleke, A. U., Jha, R. P., Jonas, J. B., Jorjoran Shustari, Z., Jozwiak, J. J., Jürisson, M., Kabir, A., Kalani, R., Kasaeian, A., Kelbore, A. G., Kengne, A. P., Khader, Y. S., Khafaie, M. A., Khalid, N., Khan, E. A., Khoja, A. T., Kiadaliri, A. A.,	<b>INT</b>	<b>JUL TO DEC</b>	Pulmonary Medicine	<b>PMID: 31915273</b> <b>Impact Factor: 2.987</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 72</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Kim, Y. E., Kim, D., Kisa, A., Koyanagi, A., Kuate Defo, B., Kucuk Bicer, B., Kumar, M., Laloo, R., Lam, H., Lami, F. H., Lansingh, V. C., Leasher, J. L., Li, S., Linn, S., Lunevicius, R., Machado, F. R., Magdy Abd El Razek, H., Magdy Abd El Razek, M., Mahotra, N. B., Majdan, M., Majeed, A., Malekzadeh, R., Malik, M. A., Malta, D. C., Manda, A. L., Mansournia, M. A., Massenburg, B. B., Maulik, P. K., Meheretu, H. A. A., Mehndiratta, M. M., Melese, A., Mendoza, W., Mengesha, M. M., Meretoja, T. J., Meretoja, A., Mestrovic, T., Miazgowski, T., Miller, T. R., Mini, G. K., Mirrakhimov, E. M., Moazen, B., Mohammad Gholi Mezerji, N., Mohammadibakhsh, R., Mohammed, S., Molokhia, M., Monasta, L., Mondello, S., Montero-Zamora, P. A., Moodley, Y., Moosazadeh, M., Moradi, G., Moradi-Lakeh, M., Morawska, L., Velásquez, I. M., Morrison, S. D., Moschos, M. M., Mousavi, S. M., Murthy, S., Musa, K. I., Naik, G., Najafi, F., Nangia, V., Nascimento, B. R., Ndwandwe, D. E., Negoj, I., Nguyen, T. H., Nguyen, S. H., Nguyen, L. H., Nguyen, H. L. T., Ningrum, D. N. A., Nirayo, Y. L., Ofori-Asenso, R., Ogbo, F. A., Oh, I. H., Oladimeji, O., Olagunju, A. T., Olagunju, T. O., Olivares, P. R., Orpana, H. M., Otsavnov, S. S., Mahesh, P. A., Pakhale, S., Park, E. K., Patton, G. C., Pesudovs, K., Phillips, M. R., Polinder, S., Prakash, S., Radfar, A., Rafay, A., Rafiei, A., Rahimi, S., Rahimi-Movaghar, V., Rahman, M. A., Rai, R. K., Ramezanzadeh, K., Rawaf, S., Rawaf, D. L., Renzaho, A. M. N., Resnikoff, S., Rezaeian, S., Roeber, L., Ronfani, L., Roshandel, G., Sabde, Y. D., Saddik, B., Salamati, P., Salimi, Y., Salz, I., Samy, A. M., Sanabria, J., Sanchez Riera, L., Santric Milicevic, M. M., Satpathy, M., Sawhney, M., Sawyer, S. M., Saxena, S., Saylan, M., Schneider, I. J. C., Schwebel, D. C., Seedat, S., Sepanlou, S. G., Shaikh, M. A., Shams-Beyranvand, M., Shamsizadeh, M., Sharif-Alhoseini, M., Sheikh, A., Shen, J., Shigematsu, M., Shiri, R., Shiue, I., Silva, J. P., Singh, J. A., Sinha, D. N., Soares Filho, A. M., Soriano, J. B., Soshnikov, S., Soyiri, I. N., Starodubov, V. I., Stein, D. J., Stokes, M. A., Sufiyan, M. B., Sunshine, J. E., Sykes, B. L., Tabarés-Seisdedos, R., Tabb, K. M., Tehrani-Banihashemi, A., Tessema, G. A., Thakur, J. S., Tran, K. B., Tran, B. X., Tudor Car, L., Uthman, O. A., Uzochukwu, B. S. C., Valdez, P. R., Varavikova, E., Vasconcelos, A. M. N., Venketasubramanian, N., Violante, F. S., Vlassov, V., Waheed, Y., Wang, Y. P., Wijeratne, T., Winkler, A. S., Yadav, P., Yano, Y., Yenesew, M. A., Yip, P., Yisma, E., Yonemoto, N., Younis, M. Z., Yu, C., Zafar, S., Zaidi, Z., Zaman, S. B., Zamani, M., Zhao, Y., Zodpey, S., Hay, S. I., Lopez, A. D., Mokdad, A. H. and Vos, T.</p> <p>Burden of injury along the development spectrum: Associations</p>				



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>between the Socio-demographic Index and disability-adjusted life year estimates from the Global Burden of Disease Study 2017</p> <p>Injury Prevention; 2019,                      Address: Department of Public Health, Erasmus University Medical Center, Rotterdam, Netherlands                      Institute for Health Metrics and Evaluation, University of Washington, Seattle, WA 98121, United States                      Department of Medicine,, University College Hospital Ibadan, Ibadan, Nigeria                      Department of Anesthesiology, Kermanshah University of Medical Sciences, Kermanshah, Iran                      Department of Epidemiology, Jimma University, Jimma, Ethiopia                      Higher National School of Veterinary Medicine, Algiers, Algeria                      Evidence Based Practice Center, Mayo Clinic Foundation for Medical Education and Research, Rochester, MN, United States                      Department of Population Health Research, King Abdullah International Medical Research Center, Riyadh, Saudi Arabia                      Department of Health Policy and Management, Kuwait University, Safat, Kuwait                      International Centre for Casemix and Clinical Coding, National University of Malaysia, Bandar Tun Razak, Malaysia                      Department of Family and Community Medicine, King Abdulaziz University, Jeddah, Saudi Arabia                      Department of Oral and Maxillofacial Surgery, University Hospital Knappschaftskrankenhaus Bochum, Bochum, Germany                      King Saud University, Riyadh, Saudi Arabia                      Social Determinants of Health Research Center, Rafsanjan University of Medical Sciences, Rafsanjan, Iran                      Department of Health Policy and Administration, University of the Philippines Manila, Manila, Philippines                      Department of Applied Social Sciences, Hong Kong Polytechnic University, Hong Kong, Hong Kong                      Department of Sociology and Social Work, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana                      Center for International Health, Ludwig Maximilians University, Munich, Germany                      School of Health Sciences, Birmingham City University, Birmingham, United Kingdom                      School of Science and Health, Western Sydney University, Sydney, NSW, Australia                      Oral Health Services, Sydney Local Health District, Sydney, NSW, Australia</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Qom University of Medical Sciences, Qom, Iran                      Education Development Center, Mashhad University of Medical Sciences, Mashhad, Iran                      Indian Institute of Public Health, Gandhinagar, India                      Judith Lumley Centre, La Trobe University, Melbourne, VIC, Australia                      General Office for Research and Technological Transfer, Peruvian National Institute of Health, Lima, Peru                      School of Public Health, Auckland University of Technology, Auckland, New Zealand                      Department of Research, Public Health Perspective Nepal, Pokhara-Lekhnath Metropolitan, Nepal                      School of Psychology, University of Auckland, Auckland, New Zealand                      Heidelberg Institute of Global Health (HIGH), Heidelberg University, Heidelberg, Germany                      T.H. Chan School of Public Health, Harvard University, Boston, MA, United States                      Department of Psychiatry, Charles R. Drew University of Medicine and Science, Los Angeles, CA, United States                      Department of Psychiatry and Biobehavioral Sciences, David Geffen School of Medicine, University of California Los Angeles, Los Angeles, CA, United States                      Department of Community Medicine, Gandhi Medical College Bhopal, Bhopal, India                      Social Determinants of Health Research Center, Lorestan University of Medical Sciences, Khorramabad, Iran                      Department of Epidemiology and Biostatistics, Lorestan University of Medical Sciences, Khorramabad, Iran                      Department of Epidemiology and Psychosocial Research, Ramón de la Fuente Muñiz National Institute of Psychiatry, Mexico City, Mexico                      Nuffield Department of Population Health, University of Oxford, Oxford, United Kingdom                      Department of Internal Medicine, University of Sao Paulo, Sao Paulo, Brazil                      George Institute for Global Health, New Delhi, India                      Centre for Global Child Health, Hospital for Sick Children, Toronto, ON, Canada                      Centre of Excellence in Women and Child Health, Aga Khan University, Karachi, Pakistan                      Social Determinants of Health Research Center, Babol University of Medical Sciences, Babol, Iran                      Centre for Adolescent Health, Murdoch Childrens Research Institute, Melbourne, VIC, Australia</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>School of Population and Global Health, University of Melbourne, Melbourne, VIC, Australia</p> <p>Transport and Digital Development, World Bank, Washington, DC, United States</p> <p>Transport and Road Safety (TARS) Research Department, University of New South Wales, Sydney, NSW, Australia</p> <p>Institute of Epidemiology, Comenius University, Bratislava, Slovakia</p> <p>National Institute of Public Health, Cuernavaca, Mexico</p> <p>School of Medicine, University of the Valley of Cuernavaca, Cuernavaca, Mexico</p> <p>Department of Population and Health, Metropolitan Autonomous University, Mexico City, Mexico</p> <p>Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, Sweden</p> <p>UCIBIO, University of Porto, Porto, Portugal</p> <p>Colombian National Health Observatory, National Institute of Health, Bogota, Colombia</p> <p>Epidemiology and Public Health Evaluation Group, National University of Colombia, Bogota, Colombia</p> <p>National School of Public Health, Carlos III Health Institute, Madrid, Spain</p> <p>Clinical Epidemiology Program, Ottawa Hospital Research Institute, Ottawa, ON, Canada</p> <p>Department of Biochemistry and Biomedical Science, Seoul National University Hospital, Seoul, South Korea</p> <p>Department of Pulmonary Medicine, Christian Medical College and Hospital (CMC), Vellore, India</p> <p>Division of Plastic Surgery, University of Washington, Seattle, WA, United States</p> <p>Institute of Public Health Kalyani, Kalyani, India</p> <p>School of Health Science, Orebro University, Orebro, Sweden</p> <p>Toxoplasmosis Research Center, Mazandaran University of Medical Sciences, Sari, Iran</p> <p>Department of General Surgery, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania</p> <p>Department of Surgery, Clinical Emergency Hospital Sf. Pantelimon, Bucharest, Romania</p> <p>National Drug and Alcohol Research Centre, University of New South Wales, Sydney, NSW, Australia</p> <p>Australian Institute for Suicide Research and Prevention, Griffith University, Mount Gravatt, QLD, Australia</p> <p>Department of Global Health and Infection, Brighton and Sussex Medical School, Brighton, United Kingdom</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>School of Public Health, Addis Ababa University, Addis Ababa, Ethiopia</p> <p>Department of Nursing, Debre Markos University, Debre Markos, Ethiopia</p> <p>Centre for Global Child Health, Hospital for Sick Children, University of Toronto, Toronto, ON, Canada</p> <p>Department of Community Medicine, University of Peradeniya, Peradeniya, Sri Lanka</p> <p>Center of Excellence in Health Service Management, Nguyen Tat Thanh University, Ho Chi Minh, Viet Nam</p> <p>University of New South Wales, Sydney, NSW, Australia</p> <p>Sydney School of Public Health, University of Sydney, Sydney, NSW, Australia</p> <p>United Nations World Food Programme, New Delhi, India</p> <p>Department of Public Health Sciences, Karolinska Institutet, Stockholm, Sweden</p> <p>World Health Programme, Université du Québec en Abitibi-Témiscamingue, Rouyn-Noranda, QC, Canada</p> <p>Department of Pathology, Stavanger University Hospital, Stavanger, Norway</p> <p>Department of Clinical Pathology, Mansoura University, Mansoura, Egypt</p> <p>Public Health Department, Saint Paul's Hospital Millennium Medical College, Addis Ababa, Ethiopia</p> <p>Multiple Sclerosis Research Center, Tehran University of Medical Sciences, Tehran, Iran</p> <p>Department of Psychology, Federal University of Sergipe, Sao Cristovao, Brazil</p> <p>Department of Neurobiology, Care Sciences and Society, Karolinska Institutet, Stockholm, Sweden</p> <p>Division of Neurology, University of Ottawa, Ottawa, ON, Canada</p> <p>REQUIMTE, LAQV, University of Porto, Porto, Portugal</p> <p>Psychiatry Department, Kaiser Permanente, Fontana, CA, United States</p> <p>School of Health Sciences, A.T. Still University, Mesa, AZ, United States</p> <p>Department of Population Medicine and Health Services Research, Bielefeld University, Bielefeld, Germany</p> <p>College of Public Health, Medical and Veterinary Science, James Cook University, Douglas, QLD, Australia</p> <p>Gene Expression and Regulation Program, Wistar Institute, Philadelphia, PA, United States</p> <p>Department of Dermatology, Kobe University, Kobe, Japan</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Biostatistics, Mekelle University, Mekelle, Ethiopia</p> <p>Adelaide Medical School, University of Adelaide, Adelaide, SA, Australia</p> <p>Center for Clinical and Epidemiological Research, University of São Paulo, Sao Paulo, Brazil</p> <p>Internal Medicine Department, University Hospital, University of São Paulo, Sao Paulo, Brazil</p> <p>School of Medicine, Boston University, Boston, MA, United States</p> <p>School of Public Health and Preventive Medicine, Monash University, Melbourne, VIC, Australia</p> <p>Department of Epidemiology and Biostatistics, Zhengzhou University, Zhengzhou, China</p> <p>March of Dimes, Arlington, VA, United States</p> <p>School of Public Health, West Virginia University, Morgantown, WV, United States</p> <p>Institute for Global Health, University College London, London, United Kingdom</p> <p>Department of Pharmacology, Tehran University of Medical Sciences, Tehran, Iran</p> <p>Obesity Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran</p> <p>Department of Radiology, Johns Hopkins University, Baltimore, MD, United States</p> <p>Department of Family and Community Medicine, Arabian Gulf University, Manama, Bahrain</p> <p>School of Health and Environmental Studies, Hamdan Bin Mohammed Smart University, Dubai, United Arab Emirates</p> <p>Biomedical Research Networking Center for Mental Health Network (CiberSAM), Madrid, Spain</p> <p>Research and Development Unit, San Juan de Dios Sanitary Park, Sant Boi de Llobregat, Spain</p> <p>School of Nursing and Midwifery, Tabriz University of Medical Sciences, Tabriz, Iran</p> <p>Independent Consultant, Tabriz, Iran</p> <p>Department of Public Health, Mizan-Tepi University, Teppi, Ethiopia</p> <p>Unit of Epidemiology and Social Medicine, University Hospital Antwerp, Wilrijk, Belgium</p> <p>Clinical Sciences, Karolinska University Hospital, Stockholm, Sweden</p> <p>School of Public Health, Curtin University, Perth, WA, Australia</p> <p>Research Coordination, AC Environments Foundation, Cuernavaca, Mexico</p> <p>CISS, National Institute of Public Health, Cuernavaca, Mexico</p> <p>Department of Pediatrics, Dell Medical School, University of Texas</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Austin, Austin, TX, United States                      Guilan Road Trauma Research Center, Guilan University of Medical Sciences, Rasht, Iran                      Social Determinants of Health Research Center, Guilan University of Medical Sciences, Rasht, Iran                      Department of Pharmacology and Therapeutics, Dhaka Medical College, Dhaka University, Dhaka, Bangladesh                      Department of Pharmacology, Bangladesh Industrial Gases Limited, Tangail, Bangladesh                      Faculty of Dentistry, Department of Legal Medicine and Bioethics, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania                      Clinical Legal Medicine Department, National Institute of Legal Medicine Mina Minovici, Bucharest, Romania                      Department of Epidemiology and Health Statistics, Central South University, Changsha, China                      School of Public Health, University of the Western Cape, Bellville, Cape Town, South Africa                      Department of Public Health, Walter Sisulu University, Mthatha, South Africa                      Department of Community Medicine, University of Ibadan, Ibadan, Nigeria                      Research Institute for Endocrine Sciences, Shahid Beheshti University of Medical Sciences, Tehran, Iran                      Institute for Physical Activity and Nutrition, Deakin University, Burwood, VIC, Australia                      Sydney Medical School, University of Sydney, Sydney, NSW, Australia                      Injury Division, George Institute for Global Health, Newtown, NSW, Australia                      Department of Global and Community Health, George Mason University, Fairfax, VA, United States                      School of Management and Medical Education, Shahid Beheshti University of Medical Sciences, Tehran, Iran                      Safety Promotion and Injury Prevention Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran                      Department for Health Care and Public Health, I.M. Sechenov First Moscow State Medical University, Moscow, Russian Federation                      Institute of Medicine, University of Colombo, Colombo, Sri Lanka                      Faculty of Graduate Studies, University of Colombo, Colombo, Sri Lanka                      Department of Community Medicine, Banaras Hindu University, Varanasi, India</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Ophthalmology, Heidelberg University, Mannheim, Germany</p> <p>Beijing Institute of Ophthalmology, Beijing Tongren Hospital, Beijing, China</p> <p>Social Determinants of Health Research Center, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran</p> <p>Department of Family Medicine and Public Health, University of Opole, Opole, Poland</p> <p>Institute of Family Medicine and Public Health, University of Tartu, Tartu, Estonia</p> <p>Minimally Invasive Surgery Research Center, Iran University of Medical Sciences, Tehran, Iran</p> <p>Department of Neurology, University of Washington, Seattle, WA, United States</p> <p>Hematology-Oncology and Stem Cell Transplantation Research Center, Tehran University of Medical Sciences, Tehran, Iran</p> <p>Pars Advanced and Minimally Invasive Medical Manners Research Center, Iran University of Medical Sciences, Tehran, Iran</p> <p>Department of Dermatology, Wolaita Sodo University, Wolaita Sodo, Ethiopia</p> <p>Non-communicable Diseases Research Unit, Medical Research Council South Africa, Cape Town, South Africa</p> <p>Department of Medicine, University of Cape Town, Cape Town, South Africa</p> <p>Department of Public Health and Community Medicine, Jordan University of Science and Technology, Ramtha, Jordan</p> <p>Social Determinants of Health Research Center, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran</p> <p>School of Food and Agricultural Sciences, University of Management and Technology, Lahore, Pakistan</p> <p>Epidemiology and Biostatistics Department, Health Services Academy, Islamabad, Pakistan</p> <p>Department of Public Health, Imam Muhammad Ibn Saud Islamic University, Riyadh, Saudi Arabia</p> <p>Department of Health Policy and Management, Johns Hopkins University, Baltimore, MD, United States</p> <p>Clinical Epidemiology Unit, Lund University, Lund, Sweden</p> <p>Department of Preventive Medicine, Korea University, Seoul, South Korea</p> <p>Department of Health Sciences, Northeastern University, Boston, MA, United States</p> <p>School of Health Sciences, Kristiania University College, Oslo, Norway</p>				

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	<p>CIBERSAM, San Juan de Dios Sanitary Park, Sant Boi de Llobregat, Spain                      Catalan Institution for Research and Advanced Studies (ICREA), Barcelona, Spain                      Department of Demography, University of Montreal, Montreal, QC, Canada                      Department of Social and Preventive Medicine, University of Montreal, Montreal, QC, Canada                      Department of Public Health, Yuksek Ihtisas University, Ankara, Turkey                      Department of Public Health, Hacettepe University, Ankara, Turkey                      Department of Psychiatry, University of Nairobi, Nairobi, Kenya                      Division of Psychology and Language Sciences, University College London, London, United Kingdom                      School of Dentistry, University of Queensland, Brisbane, QLD, Australia                      Institute of Health Policy and Development Studies, National Institutes of Health, Manila, Philippines                      Department of Community and Family Medicine, University of Baghdad, Baghdad, Iraq                      HelpMeSee, New York City, NY, United States                      International Relations Department, Mexican Institute of Ophthalmology, Queretaro, Mexico                      College of Optometry, Nova Southeastern University, Fort Lauderdale, FL, United States                      School of Public Health, University of Haifa, Haifa, Israel                      Department of General Surgery, Aintree University Hospital, National Health Service (NHS) Foundation Trust, Liverpool, United Kingdom                      Department of Surgery, University of Liverpool, Liverpool, United Kingdom                      Anesthesiology, Pain and Intensive Care Department, Federal University of Saõ Paulo, Sao Paulo, Brazil                      Radiology Department, Mansoura Faculty of Medicine, Mansoura, Egypt                      Ophthalmology Department, Aswan Faculty of Medicine, Aswan, Egypt                      Institute of Medicine, Tribhuvan University, Kathmandu, Nepal                      Department of Public Health, Trnava University, Trnava, Slovakia                      Department of Primary Care and Public Health, Imperial College London, London, United Kingdom                      Digestive Diseases Research Institute, Tehran University of Medical Sciences, Tehran, Iran                      Non-communicable Diseases Research Center, Shiraz University of</p>				



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Faculty of Internal Medicine, Kyrgyz State Medical Academy, Bishkek, Kyrgyzstan            Department of Atherosclerosis, Coronary Heart Disease, National Center of Cardiology and Internal Disease, Bishkek, Kyrgyzstan            Institute of Addiction Research (ISFF), Frankfurt University of Applied Sciences, Frankfurt, Germany            Department of Biostatistics, Hamadan University of Medical Sciences, Hamadan, Iran            Hamadan University of Medical Sciences, Hamadan, Iran            Health Systems and Policy Research Unit, Ahmadu Bello University, Zaria, Nigeria            Faculty of Life Sciences and Medicine, King's College London, London, United Kingdom            Clinical Epidemiology and Public Health Research Unit, Burlo Garofolo Institute for Maternal and Child Health, Trieste, Italy            Department of Biomedical and Dental Sciences and Morphofunctional Imaging, University of Messina, Messina, Italy            Department of Neurology, Oasi Research Institute, Troina, Italy            Department of Public Health Sciences, University of Miami, Miami, FL, United States            Center for Health Systems Research, National Institute of Public Health, Cuernavaca, Mexico            Department of Public Health Medicine, University of KwaZulu-Natal, Durban, South Africa            Health Sciences Research Center, Mazandaran University of Medical Sciences, Sari, Iran            Social Determinants of Health Research Center, Kurdistan University of Medical Sciences, Sanandaj, Iran            Department of Epidemiology and Biostatistics, Kurdistan University of Medical Sciences, Sanandaj, Iran            Preventive Medicine and Public Health Research Center, Iran University of Medical Sciences, Tehran, Iran            International Laboratory for Air Quality and Health, Queensland University of Technology, Brisbane, QLD, Australia            Gorgas Memorial Institute for Health Studies, Panama City, Panama            Department of Surgery, University of Washington, Seattle, WA, United States            1st Department of Ophthalmology, University of Athens, Athens, Greece            Biomedical Research Foundation, Academy of Athens, Athens, Greece            Health Management Reserach Center, Baqiyatallah University of Medical Sciences, Tehran, Iran</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
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	<p>Udyam-Global Association for Sustainable Development, Bhubaneswar, India</p> <p>Department of Public Health Sciences, University of North Carolina at Charlotte, Charlotte, NC, United States</p> <p>School of Public Health, Imperial College London, London, United Kingdom</p> <p>Market Access Department, Bayer, Istanbul, Turkey</p> <p>School of Health Sciences, Federal University of Santa Catarina, Ararangua, Brazil</p> <p>Department of Psychology, University of Alabama at Birmingham, Birmingham, AL, United States</p> <p>Department of Psychiatry, Stellenbosch University, Cape Town, South Africa</p> <p>Independent Consultant, Karachi, Pakistan</p> <p>School of Medicine, Dezful University of Medical Sciences, Dezful, Iran</p> <p>School of Medicine, Alborz University of Medical Sciences, Karaj, Iran</p> <p>Chronic Diseases (Home Care) Research Center, Hamadan University of Medical Sciences, Hamadan, Iran</p> <p>Centre for Medical Informatics, University of Edinburgh, Edinburgh, United Kingdom</p> <p>Division of General Internal Medicine and Primary Care, Harvard University, Boston, MA, United States</p> <p>Center for Pediatric Trauma Research, Research Institute, Nationwide Children's Hospital, Columbus, OH, United States</p> <p>National Institute of Infectious Diseases, Tokyo, Japan</p> <p>Finnish Institute of Occupational Health, Helsinki, Finland</p> <p>Institute of Medical Epidemiology, Martin Luther University Halle-Wittenberg, Halle, Germany</p> <p>Department of Medicine, University of Alabama at Birmingham, Birmingham, AL, United States</p> <p>Medicine Service, US Department of Veteran Affairs, Birmingham, AL, United States</p> <p>Department of Epidemiology, School of Preventive Oncology, Patna, India</p> <p>Department of Epidemiology, Healis Sekhsaria Institute for Public Health, Mumbai, India</p> <p>Department of Diseases and Noncommunicable Diseases and Health Promotion, Federal Ministry of Health, Brasilia, Brazil</p> <p>Hospital Universitario de la Princesa, Autonomous University of Madrid, Madrid, Spain</p> <p>Centro de Investigación Biomédica en Red Enfermedades Respirato</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Background: The epidemiological transition of non-communicable diseases replacing infectious diseases as the main contributors to disease burden has been well documented in global health literature. Less focus, however, has been given to the relationship between sociodemographic changes and injury. The aim of this study was to examine the association between disability-adjusted life years (DALYs) from injury for 195 countries and territories at different levels along the development spectrum between 1990 and 2017 based on the Global Burden of Disease (GBD) 2017 estimates. Methods: Injury mortality was estimated using the GBD mortality database, corrections for garbage coding and CODEm-the cause of death ensemble modelling tool. Morbidity estimation was based on surveys and inpatient and outpatient data sets for 30 cause-of-injury with 47 nature-of-injury categories each. The Socio-demographic Index (SDI) is a composite indicator that includes lagged income per capita, average educational attainment over age 15 years and total fertility rate. Results: For many causes of injury, age-standardised DALY rates declined with increasing SDI, although road injury, interpersonal violence and self-harm did not follow this pattern. Particularly for self-harm opposing patterns were observed in regions with similar SDI levels. For road injuries, this effect was less pronounced. Conclusions: The overall global pattern is that of declining injury burden with increasing SDI. However, not all injuries follow this pattern, which suggests multiple underlying mechanisms influencing injury DALYs. There is a need for a detailed understanding of these patterns to help to inform national and global efforts to address injury-related health outcomes across the development spectrum. © 2020 Author(s).</p>				
202.	<p>Han MH(1), Park YY(2), Pratap S(3), Han YD(4), Cho MS(1), Hur H(1), Min BS(1), Lee KY(1), Kim NK(1).  Short-term Outcomes After Upfront Chemotherapy Followed by Curative Surgery in Metastatic Colon Cancer: A Comparison With Upfront Surgery Patients.  Ann Coloproctol. 2019 Dec;35(6):327-334.  doi: 10.3393/ac.2019.03.04.1. Epub 2019 Dec 31.</p> <p><b>Author information:</b>  (1)Department of Surgery, Yonsei University College of Medicine, Seoul, Korea.  (2)Department of Surgery, Uijeongbu St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Uijeongbu, Korea.  (3)Department of Surgery, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p>	INT	JUL TO DEC	Surgery	<b>PMID: 31937072</b> <b>PMCID: PMC6968719</b> <b>Impact Factor:0.82</b> <b>(Journal Website)</b> <b>H-Index: 17</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>(4)Department of Surgery, Yonsei University College of Medicine, Yongin Severance Hospital, Yongin, Korea.</p> <p>PURPOSE: Upfront systemic chemotherapy with target agents has been recommended for patients with stage IV colon cancer. Some with partial response are considered for curative resection. There is high risk of developing postoperative complications following upfront systemic chemotherapy. We aimed to evaluate short-term perioperative outcomes of curative surgery after upfront chemotherapy in comparison with upfront surgery in patients with metastatic colon cancer. METHODS: Between January 2010 and October 2015, 146 patients (80 in the surgery first group, 66 in the upfront chemotherapy group) who underwent surgical resection before or after systemic chemotherapy for metastatic colon cancer were included in the present study. All decisions for treatment were made through a multidisciplinary team. Postoperative clinical outcomes and complications were analyzed to compare the groups. RESULTS: There was no difference between the 2 groups in terms of postoperative clinical outcomes. Overall complication rates were not different between the groups (surgery first group: 46.3% vs. upfront chemotherapy group: 60.6%; P = 0.084). When classified according to the Clavien-Dindo method, there was no difference between the 2 groups in terms of major complications (grade 3 or more) (surgery first group: 18.9% vs. upfront chemotherapy group: 27.5%; P = 0.374). CONCLUSION: There was no significant increase in major postoperative complications in metastatic colon cancer patients who received upfront chemotherapy followed by curative surgery. Careful patient selection and treatment planning are important. DOI: 10.3393/ac.2019.03.04.1</p>				
203.	<p>Haque MA(1), Platts-Mills JA(2), Mduma E(3), Bodhidatta L(4), Bessong P(5), Shakoor S(6), Kang G(7), Kosek MN(2)(8)(9), Lima AAM(10), Shrestha SK(11), Alam MA(12), Havt A(10), Samie A(5), Guerrant RL(2), Lang D(13), Mahfuz M(12), Bhutta ZA(6), Houpt ER(2), Ahmed T(12).</p> <p>Determinants of Campylobacter infection and association with growth and enteric inflammation in children under 2 years of age in low-resource settings. Sci Rep. 2019 Nov 20;9(1):17124. doi: 10.1038/s41598-019-53533-3.</p> <p><b>Author information:</b> (1)Nutrition and Clinical Services Division, icddr,b, Dhaka, Bangladesh. ahshanul.haque@icddr.org.</p>	INT	JUL TO DEC	Wellcome Research Unit	<p><b>PMID: 31748573</b>  <b>PMCID: PMC6868199</b>  <b>Impact Factor: 4.011</b>  <b>(BIOXBIO:2018- 2019)</b>  <b>H-Index: 149</b></p>



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>(2)Division of Infectious Diseases and International Health, University of Virginia, Charlottesville, USA.            (3)Haydom Lutheran Hospital, Haydom, Tanzania.            (4)Armed Forces Research Institute of Medical Sciences, Bangkok, Thailand.            (5)University of Venda, Thohoyandou, South Africa.            (6)Aga Khan University, Karachi, Pakistan.            (7)<b>Christian Medical College, Vellore, India.</b>            (8)Asociación Benéfica PRISMA, Iquitos, Peru.            (9)Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD, USA.            (10)Clinical Research Unit and Institute of Biomedicine, Federal University of Ceara, Fortaleza, Brazil.            (11)Walter Reed/AFRIMS Research Unit Nepal (WARUN), Kathmandu, Nepal.            (12)Nutrition and Clinical Services Division, icddr,b, Dhaka, Bangladesh.            (13)Foundation for the National Institutes of Health, Bethesda, MD, USA.</p> <p>Campylobacter species infections have been associated with malnutrition and intestinal inflammation among children in low-resource settings. However, it remains unclear whether that association is specific to Campylobacter jejuni/coli. The aim of this study was to assess the association between both all Campylobacter species infections and Campylobacter jejuni/coli infections on growth and enteric inflammation in children aged 1-24 months. We analyzed data from 1715 children followed from birth until 24 months of age in the MAL-ED birth cohort study, including detection of Campylobacter species by enzyme immunoassay and Campylobacter jejuni/coli by quantitative PCR in stool samples. Myeloperoxidase (MPO) concentration in stool, used as a quantitative index of enteric inflammation, was measured. The incidence rate per 100 child-months of infections with Campylobacter jejuni/coli and Campylobacter species during 1-24 month follow up were 17.7 and 29.6 respectively. Female sex of child, shorter duration of exclusive breastfeeding, lower maternal age, mother having less than 3 living children, maternal educational level of &lt;6 years, lack of routine treatment of drinking water, and unimproved sanitation were associated with Campylobacter jejuni/coli infection. The cumulative burden of both Campylobacter jejuni/coli infections and Campylobacter species were associated with poor growth and increased intestinal inflammation.</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	DOI: 10.1038/s41598-019-53533-3				
204.	<p>Hariharan, T. D., Chandu, V. J., George, J., Mathew, A. J., Premnath, J., Pragasam, A. K., Prakash, J. J., Oomen, A. T. and Poonnoose, P. M.</p> <p>Microbiological profile and outcomes of two-stage revision hip arthroplasty</p> <p>Indian J Med Microbiol; 2019, 37 (1): 67-71</p> <p><b>Address:</b> Department of Orthopaedic Surgery, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Background: Prosthetic joint infection (PJI) is one of the most challenging cases that confront modern orthopaedics. Two-stage revision, which is the standard of care for PJI, is the preferred mode of treatment for these infections. Aims and Objectives: To study the microbiological profile of prosthetic joint infections (PJI) in the hip and to assess the efficacy of a two stage revision surgery for PJI. We also aimed to study the sensitivity and specificity of ESR and CRP in the diagnosis of PJI. Materials and Methods: The microbiological profile, clinical and radiological outcomes of 22 patients who had a two-stage revision for PJI of the hip between 2013 and 2017 were retrospectively analysed. PJI was defined using the criteria provided by the International Consensus Statement on PJI 2013. Results: Staphylococcus aureus was found to be the most common organism in PJI. Debridement was successful in removing the organism in 74% of PJI. At the time of re-implantation (second stage), six joints grew organisms that were different from that isolated at the index debridement - coagulase-negative staphylococci (3cases) and enterococci (3cases). Other infection parameters for these patients were negative. None of the patients who had two-stage revision surgery had clinical evidence of reinfection or radiological evidence of loosening at a mean of 2-year follow-up. An ESR cut off of &gt;30mm/hr had a sensitivity of 75% and specificity of 88% in predicting PJI. A CRP &gt;10mg/L had a sensitivity of 75% and specificity of 69%. The sensitivity and specificity of using both ESR and CRP cut-offs in the diagnosis of infection were 57% and 94%, respectively. The positive predictive value was 94% and negative predictive value was 56%. Conclusion: The outcomes of the study justify a two-stage revision arthroplasty for PJI of the hip. The use of ESR and CRP as screening tests for the success of debridement has value - but should be interpreted with caution.</p>	NAT	JUL TO DEC	Orthopaedic Surgery, Clinical Microbiology	<p><b>PMID:</b> 31424013</p> <p><b>Impact Factor:</b> 0.950</p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 41</b></p>
205.	<p>Hariharan, T. D., Joseph, Christina Marie, Samuel, Sumant, Elangovan, Divyaa, Livingston, Abel, Ramasamy, Boopalan,</p>	NAT	JUL TO DEC	Orthopedics, Clinical Microbiology	<p><b>PMID:</b> WOS:000481989800004</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Nithyananth, Manasseh and Jepegnanam, Petal Early outcome of culture-negative infection in open fractures of the lower limb: A prospective study Indian Journal of Medical Microbiology; 2019, 37 (1): 19-23</p> <p><b>Addresses:</b> [ 1 ] <b>Christian Med Coll &amp; Hosp</b>, Dept Orthopaed, Vellore 632004, Tamil Nadu, India [ 2 ] <b>Christian Med Coll &amp; Hosp</b>, Dept Clin Microbiol, Vellore, Tamil Nadu, India E-mail Addresses: <a href="mailto:Livings78@gmail.com">Livings78@gmail.com</a></p> <p>Background: Culture-negative infections in open long bone fractures are frequently encountered in clinical practice. We aimed to identify the rate and outcome of culture-negative infections in open long bone fractures of lower limb. Methodology: A prospective cohort study was conducted from November 2015 to May 2017 on Gustilo and Anderson Grade III open long bone fractures of the lower limb. Demographic data, injury details, time from injury to receiving antibiotics and index surgical procedure were noted. Length of hospital stay, number of additional surgeries and occurrence of complications were also noted. Patients with infected open fractures were grouped as culture positive or culture negative depending on the isolation of infecting microorganisms in deep intraoperative specimen. The clinical outcome of these two groups was statistically analysed. Results: A total of 231 patients with 275 open fractures involving the femur, tibia or fibula were studied. There was clinical signs of infection in 84 patients (36.4%) with 99 fractures (36%). Forty-three patients (51.2%) had positive cultures and remaining 41 patients had negative cultures (48.8%). The rate of culture-negative infection in open type III long bone fractures in our study was 17.7%. There was no statistical difference in the clinical outcome between culture-negative and culture-positive infections. Conclusion: Failure to identify an infective microorganism in the presence of clinical signs of infection is routinely seen in open fractures and needs to be treated aggressively.</p>				<p><b>Impact Factor: 0.950</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 41</b></p>
206.	<p>Hemalatha, R., Pai, R., Manipadam, M. T., Rebekah, G., Cherian, A. J., Abraham, D. T., Rajaratnam, S., Thomas, N., Ramakant, P. and Jacob, P. M. Presurgical Screening of Fine Needle Aspirates from Thyroid Nodules for BRAF Mutations: A Prospective Single Center Experience Indian J Endocrinol Metab; 2018, 22 (6): 785-792</p>	NAT	JAN TO JUN	Pathology, Endocrine, Endocrinology and Metabolism. Biostatistics, Surgery, and	<p><b>PMID:30766819</b> <b>PMC ID:6330867</b> <b>Impact Factor: 1.70</b> <b>(Resurchiefy.com)</b> <b>H-Index: 19</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> Department of Pathology, <b>Christian Medical College</b>, Ida Scudder Road, Vellore, Tamil Nadu, India.                      Department of Biostatistics, <b>Christian Medical College</b>, Ida Scudder Road, Vellore, Tamil Nadu, India.                      Department of Endocrine Surgery, <b>Christian Medical College</b>, Ida Scudder Road, Vellore, Tamil Nadu, India.                      Department of Endocrinology and Metabolism, <b>Christian Medical College</b>, Ida Scudder Road, Vellore, Tamil Nadu, India.</p> <p>Objective: Analysis of BRAF V600E mutation in thyroid fine needle aspirates (FNA) is an important adjunct to cytology, particularly among FNA placed in the "indeterminate category." However, such a prospective evaluation of FNA obtained from patients with thyroid nodules has been lacking from India. Material and Methods: FNA from 277 patients were prospectively evaluated for BRAF mutations by Sanger's sequencing. A subset of 30 samples was also analyzed by pyrosequencing using the PyroMark BRAF mutation kit. Results: Overall, 27.2% of FNA samples were positive for mutations including 19 (35.8%) of the 53 histologically confirmed papillary thyroid carcinoma (PTC), 2 of the 25 follicular variants of PTC, and 1 anaplastic thyroid carcinoma. Only 1 (2.7%) of the 37 samples in the atypia of undetermined significance/follicular lesion of unknown significance category was BRAF positive. The sensitivity of cytology improved marginally from 67.1% to 68.3% when evaluated with BRAF. Further, a comparison of the clinicopathological characteristics of BRAF positive and negative PTCs showed a significant association (P = 0.05) between lymph node metastasis and BRAF positivity. Conclusion: BRAF positivity was lower than that reported from East Asia with the test being useful in confirming malignancies among the suspicious of malignancy and malignant categories.</p>				
207.	<p>Honavar, A. G., Anuranjana, A., Markose, A. P., Dani, K., Yadav, B. and Abhilash, K. P. P.                      Profile of patients presenting with seizures as emergencies and immediate noncompliance to antiepileptic medications                      J Family Med Prim Care; 2019, 8 (12): 3977-3982</p> <p><b>Address:</b> Department of Emergency Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>Introduction: Seizure is a common manifestation of the many neurological conditions faced by primary care physicians. This study aims to determine the prevalence, etiology, and predictors of immediate noncompliance of adult patients presenting with seizures</p>	NAT	JUL TO DEC	Emergency Biostatistics  Medicine,	<p><b>PMID:31879646</b>  <b>PMC ID:6924224</b>  <b>Impact Factor: 0.21</b>  <b>(RG-2018)</b>  <b>H-Index: NA</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	to the department of emergency (ED). Materials and Methods: We conducted this study in the ED of CMC, Vellore from November 2015 to February 2016. Retrospective chart review was used to gather specific data regarding these consecutive cases. Results: During the study period, 477 patients presented with seizures. The prevalence of nontrauma seizures in the ED was 2.3% [Figure 1]. The mean age was 41.4 +/- 17.25 years. There was a male predominance (63.1%). About 11.7% had active seizures at presentation to the ED and less than a quarter (21.8%) were determined to have status epilepticus. Nearly 41% had new-onset seizures with common etiologies being idiopathic generalized epilepsy (22.6%), metabolic causes (17.9%), acute febrile illnesses (14.42%), and space-occupying lesions (12.3%). Among those with a history of seizures (58.9%), 87.9% were advised regular medications but 58.5% of them were immediately noncompliant. Phenytoin (58.6%), sodium valproate (20.5%), and levetiracetam (18%) were the most commonly used antiepileptics with 23% on multidrug therapy. About 60% were discharged stable from the ED. Univariate analysis showed chronic alcohol consumption (OR: 2.78; 95% CI: 1, 7.7) and female sex (OR: 1.45; 95% CI: 1-2.5) to be predictors of immediate noncompliance to antiepileptics. Conclusion: Common etiologies of new-onset seizures in the ED are idiopathic generalized epilepsy, metabolic causes, and acute febrile illnesses. More than half the patients with a known seizure disorder are immediately noncompliant to the advised medications. Knowledge among primary healthcare physicians about the importance of emphasizing compliance will greatly reduce the burden of seizures.				
208.	<p>Illangeswaran, R. S. S., Das, S., Paul, D. Z., Mathews, V. and Balasubramanian, P.</p> <p>A personalized approach to acute myeloid leukemia therapy: current options</p> <p>Pharmgenomics Pers Med; 2019, 12 167-179</p> <p><b>Address:</b> Department of Haematology, <b>Christian Medical College, Vellore, India.</b></p> <p>Therapeutic options for acute myeloid leukemia (AML) have remained unchanged for nearly the past 5 decades, with cytarabine and anthracyclines and use of hypomethylating agents for less intensive therapy. Implementation of large-scale genomic studies in the past decade has unraveled the genetic landscape and molecular etiology of AML. The approval of several novel drugs for targeted therapy, including midostaurin, enasidenib, ivosidenib, gemtuzumab-ozogamicin, and CPX351 by the US Food and Drug Administration has widened the treatment options for clinicians</p>	INT	JUL TO DEC	Haematology	<p><b>PMID:</b> 31447578</p> <p><b>Impact Factor:</b> 1.93</p> <p><b>(RG - 2018)</b></p> <p><b>H-Index: 22</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	treating AML. This review focuses on some of these novel therapies and other promising agents under development, along with key clinical trial findings in AML.				
209.	<p>Inja, R. R., Paul, R. R., Varghese, L., Santosh, S., Sebastian, T. and Mathews, S. S.                      Voice Change Following Adenotonsillectomy in Pediatric Population: Myth or Reality?-A Pilot Study                      Indian J Otolaryngol Head Neck Surg; 2019, 71 (Suppl 1): 574-579</p> <p><b>Address:</b> Department of ENT, <b>Christian Medical College, Vellore,</b> Tamil Nadu India.grid.11586.3b0000 0004 1767 8969</p> <p>Modifications in the structure of pharynx following adenotonsillectomy are presumed to cause changes in the voice characteristics of patients. Data on effect of tonsillectomy/adenotonsillectomy on changes in voice among Indian children are sparse. This study was thus conducted to study the effect of adenotonsillectomy/tonsillectomy on childrens' voice. It was a prospective observational study of children aged 4-15 years undergoing tonsillectomy with or without adenoidectomy. Measures of voice were noted preoperatively, 1 and 3 months post-operatively. Subjective evaluation was done using Paediatric Voice Outcome Survey (PVOS) questionnaire administered to participants' parents. Objective evaluation was done by recording and analyzing using PRAAT voice analysis software which is an open-software tool. Statistical analysis was done using the statistical software SPSS 17.0 version. There were 31 children between 4 and 14 years of age 65% being male. Adenotonsillectomy was done in 83.5%. There was statistically significant difference in the subjective scores (PVOS) pre-operatively and 3 month postoperative score (p value = 0.001). However, there was no statistically significant difference between any other pre op and post op parameters. Though the only significant post tonsillectomy voice changes noted was subjective by parents 3 months later, it does raise concern whether this could be a reality and not a myth. Further studies with larger number of patients, including involving the subjective evaluation (PVOS) by another person in addition to patients' parent need to be undertaken to address this issue.</p>	NAT	JUL TO DEC	ENT	<p><b>PMID:</b> 31742023  <b>Impact Factor: 0.11 (RG - 2018)</b>  <b>H-Index: 16</b></p>
210.	<p>Iyadurai, R., Viggesswarpu, S. and Zachariah, A.                      Career destination and reason for career destination preferences among medical graduates from Christian Medical College Vellore - Does rural service obligation increase retention of medical graduates in rural service?</p>	NAT	JUL TO DEC	Medicine, Geriatrics	<p><b>PMID:</b> 31463265  <b>Impact Factor: 0.21 (BIOXBIO - 2018)</b>  <b>H-Index: NA</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>J Family Med Prim Care; 2019, 8 (7): 2401-2404  <b>Address:</b> Department of Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Department of Geriatrics, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Objectives: To find out the career destination of a cohort of doctors who have graduated from Christian Medical College (CMC) and to identify the reasons for their choice. Background: CMC is a training institution for medical graduates among a network of mission hospitals in India. After their graduation, most students complete a sponsorship obligation of 2 years in primary or secondary, rural and semi-urban hospitals. Methods Study population: The study population was obtained from the electronic database of the medical graduates. The batches of medical graduates from 1966 to 1995 were analyzed. Quantitative data regarding the career destination were obtained from this database. Survey Instrument: A structured qualitative questionnaire was devised with both open and closed questions regarding their present area of work and the reason for their choice. This questionnaire was sent via email and posted to others who did not have email access; 17.5% responded to this questionnaire. Results: Data revealed that 57.4% of our alumni were working in India and 42.3% were working abroad. In India, 29% were working in the corporate sector, 21% in CMC, and 10% in rural hospitals. The pull factors for the doctors who stayed in India and in rural area were a felt need to serve. The pull factors for doctors to go abroad were pursuit of academic excellence and perceived better quality of life. The push factors against the pursuit of rural career were prior adverse experiences in the rural hospitals they had worked in. Conclusion: The career destinations depend mainly on satisfaction with work and familial expectations.</p>				
211.	<p>Iyadurai, Ramya Z. A., Abraham, O. C., Thambu, D., Sowmya, S. and Karthik, G.                      Clinical Profile of Patients Presenting with Heavy Metal Toxicity Presenting to A Teaching Hospital In South India                      Transactions of the Royal Society of Tropical Medicine and Hygiene; 2019, 113 S215-S215</p>	INT	JUL TO DEC	Medicine, Infectious Diseases	<p><b>PMID:</b> WOS:000493064400534  <b>Impact Factor:</b> 2.307  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 97</b></p>
212.	<p>Iype, G. R., Kalipatnapu, S., Masih, D. and Varghese, G.                      Not all colonic growths are malignant                      BMJ Case Rep; 2019, 12 (7): <b>Address:</b> Division of General Surgery, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Pathology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      We present the case of a 34-year-old woman who was diagnosed to</p>	INT	JUL TO DEC	General Surgery, Pathology	<p><b>PMID:</b> 31337625  <b>Impact Factor:</b> 0.22  <b>(RG-2018)</b>  <b>H-Index: 20</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	have adenocarcinoma of the caecum based on the clinical, radiological, histopathological and intraoperative findings. However, postoperative histopathology showed only features of xanthogranulomatous inflammation without any evidence of malignancy. This benign chronic inflammatory condition could present as a histological surprise. It is important for both surgeons and pathologists alike to be aware of this.				
213.	<p>J, M., R, R., A, M., V, P., S, N. and A, Z.                      Role of Diagnostic Splenectomy in Patients Presenting with Pyrexia of Unknown Origin with Splenomegaly and Non-Contributory Pre-surgical Evaluation                      J Assoc Physicians India; 2019, 67 (8): 42-45</p> <p><b>Address:</b> Senior Resident, Department of Medicine, St. John's Medical College, Bangalore, Karnataka.                      Associate Professor, Corresponding Author.                      Professor, Department of Medicine.                      Assistant Professor, Department of Medicine.                      Professor, Department of Surgery, <b>CMCH</b>.                      Professor Department of Medicine, <b>CMCH, Vellore</b>, Tamil Nadu.</p> <p>Aims: To describe the clinical and laboratory profile, post-surgical complications and longitudinal outcomes in a historical cohort of pyrexia of unknown origin (PUO) patients with splenomegaly who underwent a diagnostic splenectomy following non-contributory extensive pre-surgical laboratory and radiological evaluation.                      Materials and Methods: This retrospective study was conducted in a 2700 bed teaching hospital in South India, in eligible patients, over a 10-year period. Results: Out of 38 PUO patients who underwent diagnostic splenectomy, a final diagnosis was established in 30 patients. Overall, infections contributed to 44 % (13/30), and neoplasia to 56% (17/30) of all cases. Of PUO patients with infections 3/13 (23%) were diagnosed with disseminated tuberculosis, 7/13 (54%) with melioidosis, 1/13 (8%) with Candidal splenic abscess with infective endocarditis and 2/13 (15%) with Colistin-resistant E. coli splenic abscess. Amongst PUO patients with neoplasia (17/30), all patients were diagnosed with hematological neoplasia. Of these 94% (16/17) were diagnosed with Non-Hodgkin's lymphoma and 6% (1/17) with Hodgkin's disease. Splenectomy was non-contributory in 21% (8/38) patients. Post-operative complications were seen in 6/38 patients who required monitoring in the intensive care unit (ICU). In-hospital mortality was noted in 10.5% (4/38) patients. Conclusion: Diagnostic splenectomy has high diagnostic utility in the evaluation</p>	NAT	JUL TO DEC	Medicine, Surgery	<p><b>PMID:</b> 31562716  <b>Impact Factor: 0.34</b>  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 53</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	of PUO patients with reticuloendothelial system involvement after an extensive negative investigative workup. The diagnosis of lymphoma in such patients is more common than an infective cause.				
214.	<p>Jacob KS(1). Understanding black magic and other systems of belief. Natl Med J India. 2019 May-Jun;32(3):167-170. doi: 10.4103/0970-258X.278683.</p> <p>Author information: (1)Department of Psychiatry, <b>Christian Medical College, Vellore 632002, Tamil Nadu, India.</b> DOI: 10.4103/0970-258X.278683; Conflict of interest statement: None</p>	NAT	JUL TO DEC	Psychiatry	<p><b>PMID: 32129313</b> <b>Impact Factor: 0.786</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 38</b></p>
215.	<p>Jacob TJK(1), James Sam C(2), Jacob Kurian J(3), Karl IS(3), Kisku SMC(3), Sen S(4). Transureteroureterostomy as an adjunctive antireflux procedure in children undergoing bladder augmentation for neurogenic bladder with major reflux.</p> <p>J Pediatr Urol. 2019 Dec 19. pii: S1477-5131(19)30430-9. doi: 10.1016/j.jpuro.2019.12.006. [Epub ahead of print]</p> <p>Author information: (1)Department of Paediatric Surgery, <b>Christian Medical College, Vellore, India.</b> Electronic address: <a href="mailto:tarunjki@gmail.com">tarunjki@gmail.com</a>. (2)Department of Paediatric Surgery, PSG Medical College and Hospital, Coimbatore, India. (3)Department of Paediatric Surgery, <b>Christian Medical College, Vellore, India.</b> (4)Department of Paediatric Surgery, <b>Christian Medical College, Vellore, India;</b> Department of Paediatric Surgery, PSG Medical College and Hospital, Coimbatore, India.</p> <p>INTRODUCTION: Transureteroureterostomy (TUU) provides urinary drainage of both renal systems to the bladder via a single ureter and is useful in selected situations of complex urological reconstructions. Herein we discuss its use, advantages and complications in children with neurogenic bladders and high-grade (4/5) reflux who have undergone augmentation cystoplasty. PATIENTS AND METHODS: Children with neurogenic bladder complicated by unilateral or bilateral high-grade vesicoureteric reflux (VUR), who underwent TUU along with augmentation cystoplasty (BA), were selected from two</p>	INT	JUL TO DEC	Paediatric Surgery	<p><b>PMID: 31932241</b> <b>Impact Factor: 1.736</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 37</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>institutions. Eighteen children with an average age of 5 years at presentation were identified from a retrospective chart review. RESULTS: All had bilateral hydroureteronephrosis (HUN) of which there were 30 refluxing megaureters. While BA reduced bladder pressure, VUR was managed by refluxing to non-refluxing TUU in six cases with unilateral VUR and unilateral reimplantation with TUU to the reimplanted ureter in 12 cases of bilateral VUR, thus minimizing reimplantation to 12 of 30 ureters. The average time of follow-up was 51 months. Follow-up cystograms showed complete resolution of VUR in all. HUN improved/stabilized in all but one child. Serum creatinine remained normal in all but two cases. Other advantages of TUU include the use of the distal ureter as a catheterizable channel and ease of undiversion when the ureter has been diverted as a ureterostomy. An unusual complication of a TUU site stricture is discussed and the innovative technique of using a cecal patch to salvage the anastomosis is detailed. CONCLUSION: We conclude that a TUU is a safe and useful adjunctive procedure in children undergoing BA for neurogenic bladder with high-grade VUR, minimizing the need for ureteric reimplant in an unhealthy bladder. Copyright © 2019 Journal of Pediatric Urology Company. Published by Elsevier Ltd. All rights reserved. DOI: 10.1016/j.jpuro.2019.12.006</p>				
216.	<p>Jacob, J. J., Anandan, S., Venkatesan, M., Neeravi, A., Vasudevan, K., Pragasam, A. K. and Veeraraghavan, B. Genomic analysis of human invasive Salmonella enterica serovar Typhimurium ST313 isolate B3589 from India Infect Genet Evol; 2019, 73 416-424</p> <p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College</b> and Hospital, Vellore 632004, Tamil Nadu, India. Department of Clinical Microbiology, <b>Christian Medical College</b> and Hospital, Vellore 632004, Tamil Nadu, India. Electronic <b>Address:</b> vbalaji@cmcvellore.ac.in.</p> <p>Salmonella Typhimurium ST313 is known to cause invasive disease in sub Saharan African (sSA) countries while the same sequence type is often associated with gastro-intestinal infections in the UK and Brazil. Although S. Typhimurium has been frequently isolated from human samples in India, the prevalence and invasive nature of infection of ST313 is currently unknown. The present study elucidates the phenotypic and genotypic characteristics of S. Typhimurium strain B3589 that belongs to ST313. The isolate was</p>	INT	JAN TO JUN	Clinical Microbiology	<p><b>PMID:31170530</b> <b>PMC</b> <b>Impact Factor: 2.545</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 74</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	subjected to serotyping and antimicrobial susceptibility test to understand its phenotypical characteristics. Whole genome sequencing and comparative genomic analysis was carried out to provide an insight into S. Typhimurium ST313 lineage in India. The results suggests antibiotic resistance against aminoglycoside was associated with the presence of aminoglycoside modifying enzymes aac(6')-Ia in the genome. Phylogenetic analysis revealed the India-ST313 isolates are genotypically distinct from the known African, UK and Brazilian ST313 lineages. The isolate possess the characteristic prophage gene repertoire except BTP-5. The presence of BTP-1 and more importantly bstA virulence gene has been the distinguishable feature of strain B3589 among other non-African isolates. In addition the genome degradation of African ST313 lineage-2 was not conserved in the Indian ST313 isolates. Fewer genome degradation events as well as the absence of plasmid mediated MDR locus suggest the Indian ST313 isolates are of low risk. The identification of ST313 isolates in India reveals the previously unknown characteristics of ST313 S. Typhimurium isolated from India.				
217.	Jacob, J. J., Veeraraghavan, B. and Vasudevan, K. Metagenomic next-generation sequencing in clinical microbiology Indian J Med Microbiol; 2019, 37 (2): 133-140 <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b> - 632 004, Tamil Nadu, India.	NAT	JUL TO DEC	Clinical Microbiology	<b>PMID:</b> 31745012 <b>Impact Factor:</b> 0.950 <b>(BIOXBIO - 2018)</b> <b>H-Index: 41</b>
218.	Jacob, K. S. Medical Council of India's New Competency-Based Curriculum for Medical Graduates: A Critical Appraisal Indian J Psychol Med; 2019, 41 (3): 203-209  <b>Address:</b> Professor of Psychiatry (Retired), <b>Christian Medical College, Vellore</b> , Tamil Nadu, India. Department of Psychiatry, Ballarat Health Services, Ballarat, VIC, Australia.	NAT	JAN TO JUN	Psychiatry	<b>PMID:</b> 31142920 <b>PMC ID:</b> 6532388 <b>Impact Factor: 0.64</b> <b>(RG-2018)</b> <b>H-Index: 17</b>
219.	Jacob, K. S. Translating psychiatric research into good clinical practice Asian J Psychiatr; 2019, 44 177-178 <b>Address:</b> <b>Christian Medical College, Vellore</b> , 632002 India. Electronic <b>Address:</b> ksJacob1959@gmail.com.	INT	JUL TO DEC	Psychiatry	<b>PMID:</b> 31398682 <b>Impact Factor:</b> 0.64 <b>(RG - 2018)</b> <b>H-Index: 24</b>
220.	Jacob, K. S. Idioms of distress, mental symptoms, syndromes, disorders and transdiagnostic approaches Asian J Psychiatr; 2019, 46 7-8 <b>Address:</b> <b>Christian Medical College, Vellore</b> 632002 India.	INT	JUL TO DEC	Psychiatry	<b>PMID:</b> 31568981 <b>Impact Factor:</b> 0.64 <b>(RG - 2018)</b> <b>H-Index: 24</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID	
	<p>Electronic <b>Address:</b> ksJacob1959@gmail.com.</p> <p>Euro-American idioms of distress and their corresponding symptom clusters have been universalised as mental disorders and are now the gold standard for psychiatric diagnosis around the globe. This paper discusses issues related to mental disorder diagnosis from a cultural perspective. It argues that psychiatric diagnoses, while having good inter-rater reliability, lack external validity. It contends that psychiatric categories and labels are supported by the current political economy of health. Nevertheless, it suggests that (i) all symptoms have a metaphoricity to convey a variety of distress, (ii) idioms are polysemious and have a capacity for multiple meaning and pragmatic implications, beyond local and cultural inferences, (iii) idioms of distress are performative, are a form of social action that effects social change, and are prone to improvisation of expression that is associated with adoption in new and changing contexts, (iv) psychiatric idioms are as easily accepted as local and folk beliefs and expressions, (v) idioms of distress are used for negotiating access to care, cure and healing across regions and cultures. The paper argues that new (psychiatric) idioms are easily adopted across regions and societies, and that they eventually change contexts and cultures.</p>					
221.	<p>Jagadesan, I., Agarwal, I., Chaturvedi, S., Jose, A., Sahni, R. D. and Fleming, J. J.</p> <p>Urinary Neutrophil Gelatinase Associated Lipocalin - A Sensitive Marker for Urinary Tract Infection in Children                      Indian J Nephrol; 2019, 29 (5): 340-344</p> <p><b>Address:</b> Department of Paediatrics, Paediatric Nephrology Division, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Department of Clinical Biochemistry, Paediatric Nephrology Division, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Early antibiotic treatment for urinary tract infection (UTI) in young children can prevent renal scarring. Sensitivity of pyuria and positive urine nitrite test as indicators of UTI are low, whereas results of urine culture, the gold standard for diagnosing UTI, may not be available for 48--72 h. Novel markers for rapid and accurate diagnosis of UTI would help in the early initiation of treatment in children with suspected UTI. We studied the utility of urinary neutrophil gelatinase-associated lipocalin (NGAL) as an early marker of UTI. This study included 100 children between 3 months and 5 years with suspected UTI. After parental consent, a midstream clean catch or suprapubic aspirate urine specimen was sent for culture and NGAL analysis. Sensitivity and specificity of urine NGAL as a marker of UTI</p>	NAT	JUL TO DEC	Paediatrics, Biochemistry, Microbiology.	Clinical Clinical	<p><b>PMID:</b> 31571741  <b>Impact Factor:</b> 0.38  <b>(RG - 2018)</b>  <b>H-Index:</b> 19</p>

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	were estimated. Of the 100 children evaluated, urine culture was positive in 34%. Median urine NGAL values were higher in culture-positive children than in culture-negative children (223.20 vs 13.65, P = 0.0001). Receiver operating curve analysis showed an optimal cutoff level of 27 ng/ml for urine NGAL (odds ratio, 8.2, 95% confidence interval, 3.1--22.1) correlating best with culture positivity. Sensitivity and specificity of urine NGAL estimation were significantly better (79.4% and 68.2%) when compared with urine white blood cell estimation (70.6% and 53%). Urine NGAL is a sensitive and specific marker to predict UTI in children with a cutoff level of 27 ng/ml. It may serve as a screening test for detecting simple, uncomplicated UTI in young children.				
222.	<p>Jain, A., Aruldas, K., Tobey, E., Mozumdar, A. and Acharya, R. Adding a Question About Method Switching to the Method Information Index Is a Better Predictor of Contraceptive Continuation Glob Health Sci Pract; 2019, 7 (2): 289-299</p> <p><b>Address:</b>            Population Council, Washington. DC, USA. apjain@popcouncil.org.            Population Council, New Delhi, India. Now with <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.            Population Council, Washington. DC, USA.            Population Council, New Delhi, India.</p> <p>INTRODUCTION: The Method Information Index (MII) is 1 of 18 core indicators used to monitor progress toward achieving Family Planning 2020's goal of 120 million more women using a modern method of family planning by 2020. The 3 questions of the MII are intended to measure informed choice at method initiation. Although routinely used in the Demographic and Health Surveys and the Performance Monitoring and Accountability 2020 project in cross-sectional household surveys, the MII may not adequately reflect all key aspects of quality of care or predict contraceptive continuation. In the current study, a question was added to the MII regarding the possibility of switching to a different contraceptive method if the current method is not suitable. The revised MII is referred to as MIIplus. METHODS: A total of 2,699 married women aged 15-49 who started a new episode of use of intrauterine device, injectable, or oral contraceptive pills between December 2016 and October 2017 were followed for 1 year in India and interviewed at method start and 3, 6, and 12 months later. Of these women, 2,267 were interviewed 3 months later and included in the analysis. Using 3 Cox proportional hazard models, we estimated hazard ratios for risk</p>	INT	JAN TO JUN	Obstetrics and Gynecology	<p><b>PMID:31249024</b>  <b>Impact Factor: 1.76</b>  <b>(RG-2018)</b>  <b>H-Index: 19</b></p>

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	of discontinuation, based on the MII, MIIplus, and a recategorization of MIIplus into a 3-category variable. RESULTS: The modern method continuation rate 100 days ( approximately 3 months) later was 91% overall. Women who received the information in MIIplus were more likely to continue using a method at 100 days (95%) compared to those who received information covered in the MII (82%) or less than 3 components of the MII (89%) (P<.001). Women who received all components in the MIIplus were 69% (adjusted hazard ratio, 0.31; 95% confidence interval: 0.17 to 0.61) less likely than those who received information in the MII to discontinue using a modern method 100 days later. Discontinuation was not significantly different between women who received information on less than the 3 components of the MII compared to the complete MII. CONCLUSION: We recommend including the question about the possibility of switching to another family planning method in routine measurement because it better predicts contraceptive continuation than the MII alone and ensures that another domain of quality of care is reflected in the measurement. When programs provide information on the possibility of switching, women are better informed about voluntary family planning choice and their options to continue family planning when a method is not suitable.				
223.	Jain, A., Sase, N. N., Mathew, A. R., Paul, I. J., Abhilash Kundavaram, P. P. and Ganesan, P. Last Breath in the Emergency Department J Emerg Trauma Shock; 2019, 12 (4): 263-267 <b>Address:</b> Department of Emergency Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India. Background: Early and aggressive time to intervention has been shown to increase the odds of survival and decrease mortality in critically ill patients. Since emergency medicine is a nascent specialty in India, a review and assessment of the mortality profile in the Emergency Department (ED) would help improve the quality of care. Aims: The aim of the study is to determine the mortality profile and causes of preventable deaths at large ED in South India. Methods: This retrospective chart review was conducted between January and December 2017. Patients admitted with Triage priority 1 and priority 2 of our ED, who died, despite treatment, were recruited in the study. Two ED consultants blinded from each other, independently audited all the charts to determine preventable and nonpreventable causes of death. Results: There were a total of 69,369 patients during the study period who presented to the ED. Despite resuscitation 189 (0.7%) died, the mortality rate was 2.43%. Cardiac-related (32%) and sepsis-related (31%) causes were the most common cause of	NAT	JUL TO DEC	Emergency Medicine	<b>PMID:31798240</b> <b>PMC ID:6883502</b> <b>Impact Factor:0.56</b> <b>(RG – 2018)</b> <b>H-Index:22</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	death, 23.8% were due to preventable causes and 16.9% of which were due to inappropriate management. In patients with sepsis, the odds of death due to preventable causes were significantly high (odds ratio 4.31, 95% confidence intervals: 1.96-9.47; P < 0.001). Conclusions: Cardiac- and sepsis-related causes of death, together accounted for most of the mortality. In patients with sepsis, the odds of death due to preventable causes were more than four times higher than those without preventable causes.				
224.	Jaleel, Rajeeb, Kurien, Reuben and Chowdhury, Sudipta Per Oral Endoscopic Myotomy "Penetrating Vessels" simple method to identify GE Junction Journal of Gastroenterology and Hepatology; 2019, 34 644-644	INT	JUL TO DEC	Gastroenterology	<b>PMID:</b> WOS:000495492605124 <b>Impact Factor: 3.632</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 117</b>
225.	James JV(1), Varghese J(1), Mckie AT(2), Vaulont S(3), Jacob M(4). Enhanced insulin signaling and its downstream effects in iron-overloaded primary hepatocytes from hepcidin knock-out mice. Biochim Biophys Acta Mol Cell Res. 2020 Feb;1867(2):118621. doi:10.1016/j.bbamcr.2019.118621. Epub 2019 Dec 5.  <b>Author information:</b> (1)Department of Biochemistry, <b>Christian Medical College</b> , Vellore 632002, India. (2)Diabetes and Nutritional Sciences Division, School of Medicine, King's College, London, UK. (3)Université de Paris, Institut Cochin, INSERM, CNRS, F-75014 Paris, France and Laboratory of Excellence GR-Ex, Paris, France. (4)Department of Biochemistry, <b>Christian Medical College</b> , Vellore 632002, India. Electronic <b>Address:</b> mjacob@cmcvellore.ac.in.  BACKGROUND: Increased body iron stores have been implicated in the pathogenesis of diabetes mellitus. However, the molecular mechanisms involved are unclear. The liver plays a central role in homeostasis of iron and glucose in the body. Mice deficient in hepcidin (the central regulator of systemic iron homeostasis) (Hamp1 <sup>-/-</sup> mice) accumulate iron in the liver in vivo. The effects of such iron loading on hepatic insulin signaling and glucose metabolism are not known. METHODS: Hepatocytes isolated from Hamp1 <sup>-/-</sup> mice were studied for markers of insulin signaling (and its downstream effects), glucose production, expression of gluconeogenic and lipogenic enzymes, and markers of AMPK (AMP-activated protein kinase) activation and oxidative stress. These parameters were studied both in the absence and presence of insulin, and also with the use of an iron chelator. RESULTS: Akt in the insulin signaling	INT	JUL TO DEC	Biochemistry	<b>PMID: 31812496</b> <b>Impact Factor:4.739</b> <b>(BIOXBIO: 2018 – 2019)</b> <b>H-Index:155</b>

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	<p>pathway was found to be activated in the Hamp1-/- hepatocytes to a greater extent than wild-type (WT) cells, both under basal conditions and in response to insulin. Incubation of the Hamp1-/- hepatocytes with an iron chelator attenuated these effects. There was no evidence of oxidative stress or AMPK activation in the Hamp1-/- hepatocytes. Glucose production by these cells was similar to that by WT cells. Gene expression of key gluconeogenic enzymes was decreased in these cells. In addition, they showed evidence of increased lipogenesis. CONCLUSIONS: Hepatocytes from Hamp1-/- mice showed evidence of greater sensitivity to the effects of insulin than WT hepatocytes. This may explain the insulin-sensitive phenotype that has been reported in classical hemochromatosis. Copyright © 2019. Published by Elsevier B.V. DOI: 10.1016/j.bbamcr.2019.118621</p>				
226.	<p>Jamkhandi, Dimple, Oommen, Anu Mary, George, Kuryan and Prasad, Jasmin                      Incidence of metabolic syndrome in rural pre-menopausal women and associated risk factors                      International Journal of Diabetes in Developing Countries; 2019, 39 (4): 692-697</p> <p><b>Address:</b>                      Community Health Department, <b>Christian Medical College, Vellore, India</b></p> <p>The prevalence of metabolic syndrome (MetS) is increasing in the Asia Pacific region, as well as globally. This study was aimed at determining the incidence of MetS and associated risk factors among pre-menopausal women in rural Vellore, Tamil Nadu, South India. A community-based non-concurrent cohort design was used to study the incidence and risk factors associated with MetS in women from a rural block in Vellore district. Pre-menopausal women aged 38-45 years free of MetS in 2011-2012 were followed up 5 years later, for MetS. Body mass index (BMI), waist circumference, blood pressure, fasting glucose, and lipids were measured in addition to diet and physical activity. Cumulative incidence was calculated, and adjusted odds ratios (OR) obtained using logistic regression to measure association with risk factors. The cumulative 5-year incidence of metabolic syndrome among women aged 38-45 years was 32.5% (95% confidence interval (CI), 25.9-39. 1%). Women engaged in moderate physical activity alone were more likely to have MetS than those with vigorous activity (adjusted odds ratio (OR), 2.68; 95% confidence interval, 1.08-6.69). Those with BMI <math>\geq</math> 23 kg/m<sup>2</sup> were more likely to have MetS compared to those with a lower BMI</p>	INT	JUL TO DEC	Community Health	<p><b>WOS:000501903800015</b>  <b>PMC 35447</b>  <b>Impact Factor:0.585</b>  <b>(BIOXBIO: 2018 – 2019)</b>  <b>H-Index:22</b></p>



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	(adjusted OR, 10.38; 95% CI, 3.50-30.80). Around one-third of pre-menopausal women aged 38-45 years developed metabolic syndrome within 5 years, in rural Vellore, South India. This high incidence emphasizes the need for raising awareness about risk factors for metabolic syndrome and encouraging lifestyle changes that may eventually help in reducing overall cardiovascular risk.				
227.	<p>Janardana, R., Nair, A. M., Surin, A. K., Prakash, J. A. J., Gowri, M. and Danda, D.</p> <p>Unique clinical and autoantibody profile of a large Asian Indian cohort of scleroderma-do South Asians have a more aggressive disease? Clin Rheumatol; 2019, 38 (11): 3179-3187</p> <p><b>Address:</b> Department of Clinical Immunology and Rheumatology, <b>Christian Medical College, Vellore,</b> 632004, India. Department of Microbiology, <b>Christian Medical College, Vellore, India.</b> Department of Biostatistics, <b>Christian Medical College, Vellore, India.</b> Department of Clinical Immunology and Rheumatology, <b>Christian Medical College, Vellore,</b> 632004, India. debashisdandacmc@hotmail.com.</p> <p>AIM AND METHODS: A single-centre retrospective study was conducted using electronic medical records (EMR) of inpatients and outpatients with the diagnosis of "scleroderma" or "systemic sclerosis" visiting our clinic over the preceding 5 years. RESULTS: A total of 327 patients' charts met our selection criteria; 301 were females. The median (IQR (inter quartile range)) age at onset of first non-Raynaud's symptom was 34.67 (27-43) years and median (IQR) disease duration prior to presentation to our department was 2.5 (1-5) years. Of these, 310 (94.8%) belonged to diffuse systemic sclerosis variety, 13 (4%) had limited systemic sclerosis, and 4 (1.2%) were of sine scleroderma type. A total of 289/302 (95.7%) patients were positive for ANA; of them, 245/327 (74.9%) were Scl-70 antibody-positive and 4% were CENP antibody-positive. Interstitial lung disease (ILD) was present in 288/327 (88.1%) patients. Among patients with available baseline forced vital capacity (FVC) data, 20% had a normal lung function and 28.4% had severe restriction. Pulmonary hypertension as assessed by echocardiography was present in 8.1% of patients. A significant association of Scl-70 antibody positivity with the presence of interstitial lung disease (ILD) (<math>p = 0.000</math>) and pulmonary hypertension (<math>p = 0.035</math>) was seen. On the other hand, presence of CENP antibody showed a protective trend against muscle weakness</p>	INT	JUL TO DEC	Clinical Immunology and Rheumatology, Microbiology, Biostatistics.	<p><b>PMID:</b> 31309339</p> <p><b>Impact Factor:</b> 2.293</p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 74</b></p>

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	and/or muscle enzyme elevation ( $p = 0.052$ ). Presence of arthritis was protective against development of digital ulceration ( $p = 0.021$ ) and PAH (0.004). Patients younger than 40 years of age had significantly higher frequency of Scl-70 positivity ( $p = 0.038$ ), whereas CENP antibody positivity was more likely in those aged > 40 years ( $p = 0.002$ ). CONCLUSION: Younger age of onset and high prevalence of Scl-70 antibody are unique South Asian features common with large Indian, Thai, and Chinese series. High prevalence of ILD is a feature common to Indian and Chinese series. Strong correlation of Scl-70 antibody with younger age and pulmonary hypertension were unique features of our cohort. KEY POINTS: * Asian Indian scleroderma patients are younger by 2 decades compared to Caucasian series. * Higher prevalence of Scl-70 antibody, its association with young age, interstitial lung disease and pulmonary hypertension are features of our cohort. * High prevalence of interstitial lung disease (88.1%) was noted ; among those with baseline spirometry data (141/327), two thirds(66%) had moderate to severe restriction. * Younger age at onset, higher prevalence of Scl-70 antibody are features common to other Indian, Thai and Chinese series.				
228.	Janeela, Asisha, Zachariah, Anand and Fleming, Joe A mechanistic study to assess the efficacy of gastric lavage in acute organophosphate poisoning Clinical Toxicology; 2019, 57 (12): 1174-1174 <b>Author Information</b> <b>Addresses:</b> [1] <b>Christian Med Coll &amp; Hosp</b> , Dept Med, Vellore, Tamil Nadu, India [2] <b>Christian Med Coll &amp; Hosp</b> , Dept Clin Biochem, Vellore, Tamil Nadu, India	INT	JUL TO DEC	Medicine, Biochemistry  Clinical	<b>WOS:000500830800035</b> <b>PMC 35453</b> <b>Impact Factor:4.398</b> <b>(BIOXBIO: 2018 – 2019)</b> <b>H-Index:85</b>
229.	Jasper, Anitha Liver and Splenic Volumes in the Indian Population: Is There a Single CT Measurement Correlate? Journal of Clinical and Diagnostic Research; 2019, 13 (8): TC01-TC05 <a href="https://www.doi.org/10.7860/JCDR/2019/41932/13038">https://www.doi.org/10.7860/JCDR/2019/41932/13038</a>  <b>PARTICULARS OF CONTRIBUTORS:</b> 1. Associate Professor, Department of Radiology, <b>Christian Medical College, Vellore</b> , Tamil Nadu, India.  Introduction: Several techniques using Computed Tomography (CT)	NAT	JUL TO DEC	Radiology	<b>PMC 35616</b> <b>Impact Factor: 0.41</b> <b>(RG - 2018)</b> <b>H-Index: 28</b>

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	<p>have been used to determine liver and splenic volumes/ sizes. Aim: To calculate liver and splenic volumes in patients with normal livers and spleens on cross-sectional imaging and determine if there is a single CT measurement index that can correlate with liver or splenic volume. Materials and Methods: This was a retrospective study in which liver and splenic volumes were measured using CT in 100 patients. Volumes were obtained by summing the area of the liver or spleen on each section and multiplying it by the image reconstruction interval using available software. The relationship between liver and splenic volumes with various unidimensional indexes and other variables were assessed using Pearson's correlation coefficient. Linear regression equations were obtained to correlate these indices with liver and splenic volumes. Results: Mean liver and splenic volumes were 1281±219 cm<sup>3</sup> and 94.6±78 cm<sup>3</sup> respectively. The upper limit of normal for the anteroposterior diameter of the liver was 16.15 cm (r=0.56, p-value &lt;0.001) and the upper limit of normal for splenic length was 10.81 cm (r=0.74, p-value &lt;0.05). Multi-dimensional indices correlated better with liver and splenic volume than the unidimensional indices. A significant positive correlation was seen between the height, weight, Body mass index (BMI) and Body Surface Area (BSA) of the patient with liver volume; however, no significant correlation was seen between height, weight, BMI and BSA with splenic volume. Conclusion: In this study, authors have determined that the antero-posterior diameter of the liver of 16.15 cm and splenic length of 10.81 cm are simple measurements which can be used as reliable indicators of hepatosplenomegaly during routine practice.</p>				
230.	<p>Jayanth, S. T., Dangi, A. D., Mukha, R. P., Kumar, S., Varughese, S., David, V. G., Valsan, A., Chandrasingh, J., Devasia, A. and Kekre, N. Renal transplantation into optimized abnormal lower urinary tract - Impact on graft outcomes, patient survival, and complications Indian J Urol; 2019, 35 (1): 67-72</p> <p><b>Address:</b> Department of Nephrology and Urology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Introduction: Literature regarding the outcomes of renal transplant in patients with abnormal lower urinary tracts (LUTs) is conflicting. The study aimed to determine the graft outcomes and complications of renal transplantation in an optimized abnormal LUT as compared to those with a normal LUT. Materials and Methods: In this single-center retrospective-matched cohort study, we identified 31 patients with an optimized abnormal LUT in our transplant database</p>	NAT	JAN TO JUN	Nephrology, Urology	<p><b>PMID:30692727</b>  <b>PMC ID:6334589</b>  <b>Impact Factor: 0.82</b>  <b>(RG-2018)</b>  <b>H-Index: 26</b></p>

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	between 2006 and 2016 (Group A) and selected an equal number of matched controls (Group B). The primary outcome was graft survival, and secondary outcomes were overall survival and complications. Results: The median age was 24 years (range: 12-45), and the median duration of follow-up was 36 months in both groups. On Kaplan-Meier analysis, the estimated mean graft survival was 106 months (confidence interval [CI]: 91-120) in Group A versus 128 months (CI:117-139) in Group B (P = 0.47, log-rank analysis). On subgroup analysis of Group A, augmented bladders had the poorest mean survival (81 months, CI: 56-106), P = 0.09). The mean estimated patient survival was comparable between Group A and B (109 months, CI: 96-122 versus 139 months, CI: 134-144), P = 0.13). Infective complications (27 episodes vs. 1) and re-admissions (77 vs. 30) were significantly higher in Group A (P = 0.04 and P < 0.01). Clean intermittent catheterization was a risk factor for infections (63% vs. 37%, P = 0.033, odds ratio: 5). Conclusions: The graft and overall survival was comparable at 3 years in both groups. Infective complications were higher in Group A.				
231.	Jeba, J. and Murray, S. A. Palliative care: Emphasis on early integration with oncology care The BMJ; 2019, 365 <b>Address:</b> Christian Medical College Hospital, Vellore, India Primary Palliative Care Group, Usher Institute of Population Health Sciences and Informatics, University of Edinburgh, Edinburgh, United Kingdom	INT	JUL TO DEC	Palliative Care	<b>PMC Letter 35371</b>
232.	Jehangir, S., Barnes, E. H., Mcdowell, D. and Holland, A. J. A. Publishing trends in Journal of Paediatric Surgery, Pediatric Surgery International and European Journal of Pediatric Surgery over the past three decades Pediatr Surg Int; 2019, 35 (4): 413-418  <b>Address:</b> Level 3, Department of Paediatric Surgery, The Children's Hospital at Westmead, Corner Hawkesbury Road and Hainsworth Street, Westmead, Sydney, NSW, 2145, Australia. Department of Paediatric Surgery, <b>Christian Medical College, Vellore, India.</b> NHMRC Clinical Trials Centre, Faculty of Medicine and Health, University of Sydney, Sydney, NSW, Australia. Level 3, Department of Paediatric Surgery, The Children's Hospital at Westmead, Corner Hawkesbury Road and Hainsworth Street, Westmead, Sydney, NSW, 2145, Australia. andrew.holland@health.nsw.gov.au. University of Sydney School of Medicine, Sydney, NSW, Australia.	INT	JAN TO JUN	Paediatric Surgery,	<b>PMID:30694362</b> <b>PMC Impact Factor: 1.11 (RG-2018)</b> <b>H-Index: 56</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>andrew.holland@health.nsw.gov.au.</p> <p>The aim of this study was an analysis of the changing publication trends over the last three decades in the Journal of Pediatric Surgery (JPS), Pediatric Surgery International (PSI) and European Journal of Pediatric Surgery (EJPS) by studying the bibliometric variables, authorship, collaboration, and citation trends. A previously applied methodology using intermittent years was applied to review the archives of JPS, PSI and EJPS over the last 30 years. Citation data were collected from the Web of Science database. Statistical analysis was performed using SAS 9.4 software. A total of 1917 articles originating from 63 countries met the inclusion criteria. The number of articles published every year increased significantly in the last three decades from 336 in 1987 to 626 in 2017 (P &lt; 0.0001). Multinational papers made up 5% of the total, of which 58% involved more than one continent. A majority of papers (75%) were single institution papers, there was strong evidence of an increase in multi-institution publications over time. There was a statistically significant increase in the number of female first and corresponding author. The publishing landscape of paediatric surgery has evolved to be more inclusive with increased collaboration, female authors and mentors and more publications from developing nations.</p>				
233.	<p>Jehangir, S., Nanjundaiah, P., Sigamani, E., Burad, D., Manipadam, M. T., Lea, V., Ly, T. and Holland, A. J. A.</p> <p>Pathological prognostication of paediatric adrenocortical tumours: Is a gold standard emerging?  <i>Pediatr Blood Cancer</i>; 2019, 66 (4): e27567</p> <p><b>Address:</b> Department of Paediatric Surgery, <b>Christian Medical College, Vellore, India.</b>            Department of Paediatric Surgery, The Children's Hospital at Westmead, Sydney, Australia.            Department of Clinical Pathology, <b>Christian Medical College, Vellore, India.</b>            Department of Anatomical Pathology, The Children's Hospital at Westmead, Sydney, Australia.            University of Sydney School of Medicine, Sydney, Australia.</p> <p>BACKGROUND: Criteria for the pathological classification of adult adrenocortical tumours (ACTs) have been found to overestimate the malignant potential of childhood ACTs. We sought to evaluate the accuracy and utility of criteria developed for paediatric ACT compared to current criteria for adults. METHODS: ACTs treated between January 2006 and December 2016 in two paediatric institutions were evaluated. Patients classified clinically as malignant</p>	INT	JUL TO DEC	Paediatric Surgery, Clinical Pathology	<p><b>PMID:</b> 30548169  <b>Impact Factor:</b> 2.486  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 93</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>(CM) had locally invasive disease at surgery requiring extensive en bloc resection to achieve clear margins, had local recurrence or distant metastasis. Slides were reviewed by pathologists blinded to the clinical outcome. A grade was assigned to each tumor according to the Weiss, Aubert, Wieneke and Dehner-Hill criteria. The pathological grade was compared to the clinical outcome. RESULTS: The median follow-up was 60 months (interquartile range 25-80 months). Based on clinical criteria, of 22 patients 14 (64%) had a benign course and eight (34%) behaved malignant. The malignant potential was overestimated by Weiss criteria in 23% and Aubert criteria in 27%. Wieneke and Dehner-Hill criteria showed good clinicopathological correlation; no child who had a benign course was classified as malignant. The Dehner-Hill criteria, however, classified five (23%) children as intermediate risk of which three had a clinically benign and two a CM course. CONCLUSION: The Wieneke criteria accurately predicts the clinical course in childhood ACTs and could be considered the gold standard in their pathological characterization.</p>				
234.	<p>Jehangir, S., Soundappan, S. V. S., Krivanek, M., Arbuckle, S. and Graf, N.            Pullthrough Operation for Hirschsprung's Disease: Importance of a Circumferential (Donut) Biopsy at the Level of the Anastomosis            European J Pediatr Surg Rep; 2019, 7 (1): e55-e57  <b>Address:</b> Department of Paediatric Surgery, <b>Christian Medical College, Vellore, India.</b>            Department of Paediatric Surgery, The Children's Hospital at Westmead, Sydney, New South Wales, Australia.            Department of Anatomical Pathology, The Children's Hospital at Westmead, Sydney, New South Wales, Australia.            Hirschsprung's disease is characterized by the absence of ganglia in the distal colon, resulting in a functional obstruction. It is managed by excision of the aganglionic segment and anastomosis of the ganglionated bowel just above the dentate line. The level of aganglionosis is determined by performing multiple seromuscular biopsies and/or full thickness biopsy on the antimesenteric border of the bowel to determine the level of pullthrough. The transition zone is described as being irregular, and hence a doughnut biopsy is recommended so that the complete circumference can be assessed. Herein, we described a child in whom there was a selective absence of ganglion cells in 30% of the circumference of the bowel along the mesenteric border for most of the transverse colon. This case defies the known concept of neural migration in an intramural and transmesenteric fashion and emphasizes the importance of a</p>	INT	JUL TO DEC	Paediatric Surgery	<b>PMID: 31312590</b> <b>Impact Factor: NA</b> <b>H-Index: NA</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	doughnut biopsy of the pulled-down segment.				
235.	<p>Jeyabalan, S., Thampi, S. M., Karuppusami, R. and Samuel, K. Comparing the efficacy of aprepitant and ondansetron for the prevention of postoperative nausea and vomiting (PONV): A double blinded, randomised control trial in patients undergoing breast and thyroid surgeries Indian J Anaesth; 2019, 63 (4): 289-294</p> <p><b>Address:</b> Department of Anesthesia, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India. Department of Biostatistics, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Background and Aims: Aprepitant, a Neurokinin-1 receptor antagonist, has been evaluated in abdominal and neurosurgeries, but its effect is less clear in breast and thyroid surgeries, which are also known to be high risk for post-operative nausea and vomiting (PONV). This study was done to compare the antiemetic efficacy of ondansetron and aprepitant in women undergoing mastectomy and thyroidectomy. Methods: One hundred and twenty-five ASA I and II, female patients, aged between 18 and 65 years were randomly assigned into Group I (ondansetron group, n = 62) or Group II (aprepitant group, n = 63), by computer-generated random sequencing. Per protocol analysis was done to assess the incidence and severity of PONV, use of rescue antiemetics, and patient satisfaction with PONV control between the two groups, till 24 h post-surgery. Results: In the immediate postoperative period, 79.7% of patients in Group I and 85.2% in Group II were free of emesis (P value: 0.49). In Group I, the first episode of vomiting occurred within a median duration 90 min (IQR 25-75: 45-147) postoperatively, whereas the median duration in Group II was 160 min (IQR 25-75: 26-490), with request for rescue antiemetic at 60 min in Group I (IQR 25-75: 27-360) and 147 min in Group II (IQR 25-75: 11-457). Conclusion: A single dose of oral aprepitant has comparable effects to injection ondansetron administered eighth hourly in preventing PONV, the severity of nausea, number of rescue antiemetics, and the time to first emetic episode in the 24-h postoperative period. CTRI Reg No: REF/2017/06/014637.</p>	NAT	JAN TO JUN	Anesthesia, Biostatistics	<p><b>PMID:31000893</b> <b>PMC ID:6460978</b> <b>Impact Factor: 0.17</b> <b>(RG-2018)</b> <b>H-Index: 22</b></p>
236.	<p>Jeyaseelan, L. Interpreting the meta-analysis of efficacy of vitamin D supplementation in major depression J Postgrad Med; 2019, 65 (2): 70-71</p>	INT	JAN TO JUN	Biostatistics	<p><b>PMID:31036776</b> <b>PMC ID:6515788</b> <b>Impact Factor: 0.60</b> <b>(RG-2018)</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<b>Address:</b> Department of Biostatistics, <b>Christian Medical College, Vellore</b> - 632 002, Tamil Nadu, India.				<b>H-Index: 49</b>
<b>237.</b>	<p>Jeyashanth Riju, Konduru Vidya, Amit Tirkey            ABS-136: Retrospective Analysis on Factors Influencing Contralateral Nodal Metastasis in Squamous Cell Carcinoma of Tongue            Journal of Head &amp; Neck Physicians and Surgeons; 2019, 7 (3):S77</p> <p>Department of Head and Neck Surgery, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. E-mail: <a href="mailto:jjriju@yahoo.co.in">jjriju@yahoo.co.in</a></p> <p>Background/Purpose: Oral cavity is the most common site of cancers in India, tongue forms the most common single subsite. Neck node involvement plays an important prognostic role in disease-free survival and overall survival. Most of the nodal metastasis are occult and only an elective neck dissection can disclose the nodal metastasis, which is accepted only when the risk of metastasis exceeds 15-20%. Contralateral nodal metastasis (CLNM) are rarely analyzed due to sparse event. Methods: Retrospectively analysis of factors influencing CLNM in carcinoma tongue was analyzed between April 2017 to March 2019 from the department of head and neck surgery, a p-value &lt; 0.05 was considered to be significant. The categorical variables were reported using frequency and or proportions and continuous variables were represented using mean and standard deviation. Results: 149 patients which included 102 men and 47 women, with a mean age of 51 years, were considered. 13 patients (8.7%) had CLNM. Pathological T stage (p&lt;0.001) and N stage (p&lt;0.001) had a significant influence of CLNM. With respect to primary site, floor of mouth (FOM) involvement (p=0.001) and lesion crossing midline (p&lt;0.001) had an increased chance of CLNM. Extranodal extension (ENE) (p&lt;0.001) and lymph node ratio (p=0.002) in ipsilateral node influences CLNM. Suspicion of CLNM either clinically/radiologically was a good predictor of metastasis (p&lt;0.001) in our cases. Discussion and Conclusion: CLNM in tongue cancers was significantly influenced by FOM involvement and lesion crossing midline. ENE and high lymph node ratio in ipsilateral node might predict CLNM. Contralateral neck dissection should be performed in any case with clinical suspicion of nodal involvement.</p>	<b>NAT</b>	<b>JUL TO DEC</b>	Head and Neck Surgery	<b>Impact Factor: 0.472</b> <b>H-Index: NA</b>
<b>238.</b>	<p>Joel, Jerry, Osahan, Narjeet, Rai, Ekta, Daniel, Priyanka and Bhaggi, Sunimal            Is combined spinal-epidural more effective compared to epidural for labor analgesia?            CHRISMED Journal of Health and Research; 2019, 6 (3): 156-161</p>	<b>NAT</b>	<b>JUL TO DEC</b>	Anesthesia, Anatomy	<b>PMC Original Article</b> <b>35622</b>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address for correspondence:</b>            Departments of Anaesthesia and 2. Anatomy, <b>Christian Medical College, Vellore</b>, Tamil Nadu,            1. Department of Anaesthesia, Christian Medical College, Ludhiana, Punjab, India</p> <p>Dr. Sunimal Bhaggien, Department of Anaesthesia, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. E-mail: <a href="mailto:smelpinks@gmail.com">smelpinks@gmail.com</a></p> <p><b>Aims and Objectives:</b> This study aims to compare the effectiveness of combined spinal-epidural (CSE) analgesia and low-dose epidural analgesia in labor and study their effects on maternal and fetal well-being. <b>Material and Methods:</b> Sixty parturients classified as the American Society of Anesthesiologists I, in established labor and requesting epidural, were alternately divided into two groups (30 each). Group I received 0.125% bupivacaine with fentanyl 2 ug/ml epidural analgesia. Group II received CSE analgesia comprising of 25 µg fentanyl in the intrathecal space and 0.125% bupivacaine with fentanyl 2 ug/ml for epidural analgesia. Onset of analgesia, maternal hemodynamics, fetal heart rate, duration of labor, ambulation, incidence of cesarean section, instrumental delivery, side effects, and total dose of bupivacaine and fentanyl used were recorded. <b>Results:</b> Onset of analgesia in CSE group (1.48 ± 0.46 min) was significantly faster compared to the epidural group (3.87 ± 0.83 min). Duration of the first stage of labor was shorter in the CSE group (218.93 ± 78.15 min) compared to epidural group (308.03 ± 147). No significant difference between the groups was found in hemodynamic effects, duration of the second stage of labor, or in maternal and neonatal outcomes. Pruritus was seen in 50% of CSE patients. Mean total bupivacaine used in CSE group was significantly lesser than that used in Group I (56.750 ± 22.33 mg vs. 79.325 ± 28.81 mg). <b>Conclusion:</b> Both CSE and epidural analgesia provide comparable pain relief and maternal and fetal outcomes. CSE can be beneficial for parturients coming in advanced labor as its onset of action is faster.</p>				
<b>239.</b>	John O(1), Gummidi B(1), Tewari A(1), <b>Muliyil JP(2)</b> , Ghosh A(1), Sehgal M(3), Bassi A(1), Prinja S(4), Kumar V(5), Kalra OP(6), Kher V(7), Thakur JS(4), Ramakrishnan L(8), Pandey CM(9), Sivakumar V(10), Dhaliwal RS(11), Khanna T(11), Kumari A(12), Sharma	<b>INT</b>	<b>JUL TO DEC</b>	Community Medicine	<b>PMID: 31701050</b> <b>PMCID: PMC6829197</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>J(13), Malakondiah P(14), Jha V(1)(15).            Study to Test and Operationalize Preventive Approaches for CKD of Undetermined Etiology in Andhra Pradesh, India.            Kidney Int Rep. 2019 Jun 21;4(10):1412-1419.            doi: 10.1016/j.ekir.2019.06.003.eCollection 2019 Oct.</p> <p><b>Author information:</b>            (1)George Institute for Global Health, University of New South Wales, New Delhi, India.            (2)Department of Community Health, <b>Christian Medical College, Vellore</b>, India.            (3)The Energy and Resources Institute, New Delhi, India.            (4)School of Public Health, Postgraduate Institute of Medical Education and Research, Chandigarh, India.            (5)Department of Nephrology, Postgraduate Institute of Medical Education and Research, Chandigarh, India.            (6)Pandit B D Sharma University of Health Sciences, Rohtak, India.            (7)Kidney and Urology Institute, Medanta Hospital, Gurgaon, India.            (8)Department of Biochemistry, All Indian Institute of Medical Sciences, New Delhi, India.            (9)Department of Biostatistics and Health Informatics, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, India.            (10)Department of Nephrology, Sri Venkateswara Institute of Medical Sciences, Tirupati, India.            (11)Non-communicable Disease Division, Indian Council of Medical Research, New Delhi, India.            (12)Department of Health, Government of Andhra Pradesh, Andhra Pradesh, India.            (13)Kalam Institute of Technology, Vishakhapatnam, India.            (14)Department of Health Medical and Family Welfare, Government of Andhra Pradesh, Andhra Pradesh, India.            (15)George Institute for Global Health, University of Oxford, Oxford, UK.</p> <p>Introduction: High prevalence of chronic kidney disease (CKD) not associated with known risk factors has been reported from coastal districts of Andhra Pradesh. The Study to Test and Operationalize Preventive Approaches for Chronic Kidney Disease of Undetermined Etiology in Andhra Pradesh (STOP CKDu AP) aims to ascertain the burden (prevalence and incidence) of CKD, the risk factor profile, and the community perceptions about the disease in the Uddanam area of Andhra Pradesh. Methods: Study participants will be sampled from the Uddanam area using multistage cluster random sampling.</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Information will be collected on the demographic profile, occupational history, and presence of conventional as well as nonconventional risk factors. Glomerular filtration rate (GFR) will be estimated using the Chronic Kidney Disease Epidemiology Collaboration equation, and proteinuria will be measured. All abnormal values will be confirmed by repeat testing after 3 months. Cases of CKD not associated with identified etiologies will be identified. Biospecimens will be stored to explore future hypotheses. The entire cohort will be followed up every 6 months to determine the incidence of CKD and to identify risk factors for decline in kidney function. Qualitative studies will be performed to understand the community perceptions and expectations with respect to the interventions. Implications: CKD is an important public health challenge in low- and middle-income countries. This study will establish the prevalence and determine the incidence of CKD not associated with known risk factors in a reported high-burden region, and will provide insights to help design targeted health systems responses. The findings will contribute to the policy development to tackle CKD in the region and will permit international comparisons with other regions with similar high prevalence. © 2019 International Society of Nephrology. Published by Elsevier Inc. DOI: 10.1016/j.ekir.2019.06.003				
240.	John, Anoop, Rathore, Swathi, Mathews, Jiji, Regi, Annie, Beck, Manisha, Goel, Ashish, Sharma, Anand, Kumar, Shyam, Zachariah, Uday and Eapen, C. E. Outcomes of pregnancy in patients with portal hypertension Journal of Gastroenterology and Hepatology; 2019, 34 149-149	INT	JUL TO DEC	Gastroenterology, Hepatology	<b>PMID:</b> WOS:000495492600210 <b>Impact Factor:</b> 3.632 <b>(BIOXBIO - 2018)</b> <b>H-Index: 117</b>
241.	John, H. B., Suraj, C., Padankatti, S. M., Sebastian, T. and Rajapandian, E. Nonnutritive Sucking at the Mother's Breast Facilitates Oral Feeding Skills in Premature Infants: A Pilot Study Adv Neonatal Care; 2019, 19 (2): 110-117 <b>Address:</b> Departments of Neonatology (Ms John), Physical Medicine and Rehabilitation (Ms Suraj), Occupational Therapy (Messrs Padankatti and Rajapandian), and Biostatistics (Ms Sebastian), <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> BACKGROUND: Premature infants have difficulties in transitioning from gavage to breastfeeding. Targeted interventions to support breastfeeding in premature infants in the neonatal intensive care unit are scarce. PURPOSE: This pilot study evaluates the effectiveness of nonnutritive sucking at the mother's breast in premature infants to facilitate breastfeeding performance and exclusive breastfeeding. METHODS: The study design constituted a single-blinded	INT	JUL TO DEC	Occupational Therapy, Physical Medicine and Rehabilitation, Biostatistics	<b>PMID:</b> 30102620 <b>Impact Factor:</b> 0.48 <b>(RG - 2018)</b> <b>H-Index: 36</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>randomized control trial, with 9 participants randomly allocated into experimental (n = 4) and control (n = 5) groups. The intervention, nonnutritive sucking at the mother's breast thrice a day for 5 minutes, till nutritive breastfeeding was started, was done in addition to standard care, which was nonnutritive sucking on a finger during gavage feeds. The control group received only standard care. Nonnutritive sucking was assessed using "Stages of Nonnutritive Sucking Scale," and breastfeeding performance was assessed using the "Preterm Infant Breastfeeding Behavior Scale" by a blinded assessor unaware of the infants' allocation. RESULTS: Five infants in the control arm and 4 in the intervention arm completed the study. The infants in the intervention group showed faster transition to mature stages of nonnutritive sucking (P = .05) and had longer sucking bursts during breastfeeding (P = .06) than those in the control group. There was no difference in the rates of exclusive breastfeeding at 6 months in the intervention and control groups. IMPLICATIONS FOR PRACTICE: Early initiation of nonnutritive sucking at the mother's breast in very preterm infants is a safe and effective intervention to facilitate maturation of oral feeding and breastfeeding behavior. IMPLICATIONS FOR RESEARCH: Nonnutritive sucking at the mother's breast can be explored as an intervention, with a larger sample, to facilitate exclusive breastfeeding and to establish intervention fidelity.</p>				
242.	<p>John, J. R., Hephzibah, J., Oommen, R., Shanthly, N. and Mathew, D. Ga-68 DOTATATE Positron Emission Tomography-Computed Tomography Imaging in Oncogenic Osteomalacia: Experience from a Tertiary Level Hospital in South India Indian J Nucl Med; 2019, 34 (3): 188-193 <b>Address:</b> Department of Nuclear Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Aim: Utility of Ga68 DOTATATE PETCT imaging to localise cause for oncogenic osteomalacia (OOM). Materials and Methods: Retrospective analysis between March 2015 to March 2018 of all patients with a clinical diagnosis (based on a combination of clinical history, hypophosphatemia and elevated FGF-23 values) of OOM who underwent Ga-68 DOTATATE PET/CT. Results: Total of 27 patients had undergone Ga-68 DOTATATE PET/CT imaging in our centre from March 2015 to March 2018. Of these 16 patients with clinically suspected oncogenic osteomalacia were included in our study. Age range 18-61 years of which 12 were males. Total of 13 (81.25%) patients were found to be positive on imaging for a possible mesenchymal tumour. Most common site of tumour was the lower limb (76%). Most common presenting symptom was bone pain</p>	NAT	JUL TO DEC	Nuclear Medicine	<p><b>PMID:</b> 31293296 <b>Impact Factor:</b> 0.16 <b>(BIOXBIO - 2018)</b> <b>H-Index:</b> 10</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	(81%) followed by muscle weakness (19%). Overall, 10 patients underwent surgery, all of whose biopsy was reported as phosphaturic mesenchymal tumour. During the three month follow up, serum phosphorous measured in 15/16, post-surgical/ medical treatment had normalised in all except two patients who had undergone only medical therapy with neutral phosphate. Fall in FGF-23 was more pronounced in surgically treated patients as compared to those who received medical treatment. Conclusion: Ga68-DOTATE PET/CT is a useful investigatory modality for localizing cause for oncogenic osteomalacia.				
243.	John, K. J., Gunasekaran, K., Prasad, J. D., Mathew, D., Das, S., Sultan, N., Abraham, A. M. and Iyyadurai, R. Predictors of Major Bleeding and Mortality in Dengue Infection: A Retrospective Observational Study in a Tertiary Care Centre in South India Interdiscip Perspect Infect Dis; 2019, 2019 4823791 <b>Address:</b> Department of Medicine, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India. Department of Clinical Virology, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India. We conducted a retrospective observational study to describe the clinical profile and outcomes of patients admitted with a diagnosis of dengue fever in a tertiary hospital in South India. A total of 159 patients admitted from April 2014 to October 2018 were included in the study. Vomiting (70.4%), myalgia (60.4%), headache (42.1%), abdominal pain (38.4%), bleeding (38%), and rash (37.1%) were the most common symptoms at presentation. The mean duration of hospital stay was 4.9 days (SD +/- 2.4), and the median cost was INR 19,708 (\$285) (IQR INR 12,968-32,056 (\$188-\$305)). Major bleeding was associated with elevated SGOT and SGPT, severe dengue, and secondary dengue. Mortality was associated with elderly age; elevated total leukocyte count, serum bilirubin, serum creatinine, SGOT, and SGPT; and high SOFA score. In view of these observations, we recommend stratifying patients according to the WHO classification of dengue and avoiding the use of thrombocytopenia as a single marker of the severity of the illness.	INT	JUL TO DEC	Medicine, Clinical Virology	<b>PMID:</b> 31565054 <b>Impact Factor:</b> 1.45 <b>(RG - 2018)</b> <b>H-Index: 22</b>
244.	John, K. J., Gunasekaran, K., Sultan, N. and Iyyadurai, R. Cytomegalovirus ventriculoencephalitis presenting with hydrocephalus in a patient with advanced HIV infection Oxf Med Case Reports; 2019, 2019 (10): omz104 <b>Address:</b> Department of Medicine, <b>Christian Medical College, Vellore, India.</b> A 38-year-old lady with advanced human immunodeficiency virus	INT	JUL TO DEC	Medicine,	<b>PMID:31798920</b> <b>PMC ID:6874864</b> <b>35260</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>(HIV) infection presented to the emergency department with headache, vomiting and fluctuating alertness for 3 weeks. On examination, she had tachycardia, bilateral papilledema, restriction of upward gaze, gaze-evoked nystagmus and signs of meningeal irritation. Magnetic resonance imaging of the brain showed hydrocephalus and periventricular high T2-signal regions with restriction on diffusion-weighted imaging. Polymerase chain reaction done on the cerebrospinal fluid obtained after the insertion of an external ventricular drain was positive for cytomegalovirus (CMV). She was treated with intravenous ganciclovir followed by oral valganciclovir with which she made a dramatic recovery. CMV ventriculoencephalitis can present with hydrocephalus in HIV-infected individuals. A high index of suspicion must be maintained to diagnose this disease and start appropriate therapy on time.</p>				
245.	<p>John, K. J., Mishra, A. K. and Iyyadurai, R.            A case report of cardiac amyloidosis presenting with chronic pericardial effusion and conduction block            Eur Heart J Case Rep; 2019, 3 (4): 1-7  <b>Address:</b> Department of Medicine, <b>Christian Medical College, Ida Scudder Road, Vellore 632004, Tamil Nadu, India.</b>            Background: Amyloidosis is caused by the deposition of abnormal proteins in the extracellular space of various organs. The clinical features of amyloidosis depend on the type of amyloid protein and the organ system involved. Case summary: A 51-year-old woman developed complete heart block which warranted a permanent pacemaker insertion. She was referred for evaluation of chronic pericardial effusion. The patient had stable vital signs and muffled heart sounds on examination of the cardiovascular system. Her chest X-ray film showed a permanent pacemaker in situ, and echocardiogram showed a chronic pericardial effusion without features of tamponade. On further evaluation, she was found to have an M band on serum electrophoresis, elevated free light chain ratio and amyloid deposits in bone marrow biopsy. Technetium pyrophosphate (Tc-PYP) scintigraphy was consistent with cardiac amyloidosis. Discussion: Cardiac amyloidosis can have diverse clinical presentations. Chronic pericardial effusion and conduction block can be a rare presentation of cardiac amyloidosis and needs to be considered while evaluating the same. Cardiac magnetic resonance imaging and Tc-PYP imaging can be used in establishing the diagnosis of cardiac amyloidosis, if endomyocardial biopsy is not feasible.</p>	INT	JUL TO DEC	Medicine,	<b>PMID:31911988</b> <b>PMC ID:6939806</b> <b>35261</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
246.	<p>John, K. J., Sadiq, M., Thomas, M. and Turaka, V. P. Henoch-Schonlein purpura associated with HLA-B27 positive axial spondyloarthritis in a young man BMJ Case Rep; 2019, 12 (5): <b>Address:</b> Department of Internal Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Pathology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Axial spondyloarthropathies are characterised by bilateral sacroiliitis, asymmetric oligoarthritis, association with the human leucocyte antigen (HLA)-B27, enthesitis and dactylitis. Although IgA nephropathy has a well-documented association with seronegative spondyloarthropathies, the association with Henoch-Schonlein purpura (HSP) has been documented only in few case reports. The present case is that of a 26-year-old man who presented with fever, lower limb arthritis, abdominal pain, palpable purpura over the buttocks and lower limbs, and clinical features of sacroiliitis. His blood tests showed elevated inflammatory markers and rheumatoid factor was negative. CT scan of the sacroiliac joints confirmed sacroiliitis. Skin biopsy revealed neutrophilic small vessel vasculitis. HLA-B27 was positive in blood. A diagnosis of HSP with HLA-B27 positive axial spondyloarthritis was made. HSP can be associated with HLA-B27 positive axial spondyloarthritis and has to be considered while evaluating for causes of cutaneous small vessel vasculitis in such patients.</p>	INT	JAN TO JUN	Internal Medicine, Pathology	<p><b>PMID:31129640</b> <b>PMC</b></p> <p><b>Impact Factor: 0.22</b> <b>(RG-2018)</b> <b>H-Index: 20</b></p>
247.	<p>John, K., Varughese, K., Boaz, R. J. and George, T. Lupus cystitis: unusual cause of renal failure in systemic lupus erythematosus BMJ Case Reports Dec 2019, 12 (12) e233446; DOI: 10.1136/bcr-2019-233446 <b>Address:</b> Internal Medicine, <b>Christian Medical College, Vellore, Vellore, Tamil Nadu, India.</b> Urology, Christian Medical College and Hospital Vellore, Vellore, Tamil Nadu, India. Internal Medicine, <b>Christian Medical College, Vellore, Vellore, Tamil Nadu, India tarunkg@gmail.com.</b></p> <p>A 42-year-old woman presented with chronic fever, abdominal pain, intermittent loose stools and dysuria for 3 months. She had recently developed acute dyspnoea with acute kidney injury. She was found to have a contracted, thick-walled bladder with bilateral</p>	INT	JUL TO DEC	Internal Medicine,	<p><b>PMID:31862817</b> <b>PMC 35259</b></p> <p><b>Impact Factor: 0.22</b> <b>(RG-2018)</b> <b>H-Index: 20</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	hydronephrosis. She underwent bilateral percutaneous nephrostomies, following which her renal function recovered. She satisfied the clinical and immunological features of the Systemic Lupus International Collaborating Clinics criteria for systemic lupus erythematosus (SLE). She was initiated on immunosuppression. Lupus cystitis with a contracted bladder is an uncommon presentation of SLE.				
248.	<p>John, R., Putta, T., Simon, B., Eapen, A., Jebasingh, F., Thomas, N. and Rajaratnam, S.            Normal adrenal gland thickness on computerized tomography in an Asian Indian adult population            Indian J Radiol Imaging; 2018, 28 (4): 465-469</p> <p><b>Address:</b> Department of Radiodiagnosis, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>            Department of Endocrinology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Context: The size and morphology of the adrenal glands are affected by several physiological and pathological conditions. Radiologists need to be aware of the normal thickness of adrenal gland to accurately assess patients with suspected adrenal pathology. However, there is limited data on the normal size of the adrenal glands. Moreover, this has not been studied in our population. Aims: To study the normal thickness of adrenal gland on computerized tomography (CT) in Indian adult population. Settings and Design: Retrospective study in a tertiary care hospital in Southern India. Subjects and Methods: Our study included 586 adults who underwent a CT abdominal angiogram over 15 months, and excluding patients with clinical or imaging evidence of adrenal disease. The measurements made included: the maximum thickness of the body, medial and lateral limbs, measured perpendicular to the long axis. Results: The median age was 51 (range: 18-85) years. The mean maximum thickness of the adrenal body, medial, and lateral limbs were 7.2 +/- 1.8, 4.1 +/- 1.1, and 4.3 +/- 1.1 mm on the right side and 8.8 +/- 1.9, 4.7 +/- 1.1, and 4.9 +/- 1.3 mm on the left. The cumulative thickness of the body and the limbs were 15.6 +/- 3.7 mm and 18.4 +/- 3.8 mm on the right and left sides, respectively. There was a statistically significant difference in all the measurements between the right and left adrenal glands (all P values = 0.000) and between men and women, being larger in men (P value &lt;0.05). Among our patients 27% had at least one adrenal gland</p>	NAT	JAN TO JUN	Radiodiagnosis, Endocrinology	<b>PMID:30662212</b> <b>PMC ID:6319091</b> <b>Impact Factor: 0.33 (RG-2018)</b> <b>H-Index: 21</b>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	body measuring $\geq 10$ mm in thickness. Conclusions: Our study has defined the normal range of adrenal gland thickness in an Asian Indian adult population, which may be used as a baseline reference for future research and as a reference for radiological reporting.				
249.	<p>John, T. J. Should there be a World Health Assembly resolution for malaria eradication? Opinion against Malar J; 2019, 18 (1): 353 <b>Address:</b> Departments of Clinical Microbiology and Clinical Virology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India. <a href="mailto:tjacobjohn@yahoo.co.in">tjacobjohn@yahoo.co.in</a> , Thekkekara, 439 Civil Supplies Godown Street, Kamalakshipuram, Vellore, Tamil Nadu, 632002, India. <a href="mailto:tjacobjohn@yahoo.co.in">tjacobjohn@yahoo.co.in</a>. A resolution for eradicating malaria, if passed by the World Health Assembly (WHA), will have a distracting effect on all countries with malaria. The continued prevalence of malaria is indicative of weak public health infrastructure. True, smallpox was eradicated by international efforts following WHA resolution: the success factor was primary prevention using a safe and effective vaccine. A resolution to eradicate polio was passed in 1988, with a target year of 2000, but even in 2019 success is not within reach. Public health experts are hesitant to move forward with measles eradication before polio is eradicated. Country by country elimination of malaria is a better way, ensuring the strengthening of public health infrastructure, with many other health benefits.</p>	INT	JUL TO DEC	Clinical Microbiology	<b>PMID:</b> 31630677 <b>Impact Factor:</b> 2.798 <b>(BIOXBIO - 2018)</b> <b>H-Index: 87</b>
250.	<p>John, T. J. and Dharmapalan, D. An ethical appraisal of the choice of vaccines against Poliomyelitis Indian J Med Ethics; 2019, 4 (1): 26-29 <b>Address:</b> Retired Professor, <b>Christian Medical College, Vellore</b>, Tamil Nadu 632004., <a href="mailto:tjacobjohn@yahoo.co.in">tjacobjohn@yahoo.co.in</a>. Consultant in Paediatrics and Paediatric Infectious Diseases, Apollo Hospitals, CBD Belapur, Navi Mumbai 400614., <a href="mailto:drdhanyaroshan@gmail.com">drdhanyaroshan@gmail.com</a>. Medical ethics is invoked for immunisation of children as it involves an interaction between a healthcare professional and the child. Immunisation under the national immunisation programme is a public health intervention and the common belief is that ethics is not relevant. Two vaccines with contrasting safety and efficacy profiles were available against polio before the national immunisation programme was launched: the inactivated poliovirus vaccine (IPV) and the live attenuated oral poliovirus vaccine (OPV). India chose OPV and excluded IPV. We carried out an ethical appraisal of that choice. Principles of medical ethics comprising four</p>	NAT	JUL TO DEC	Clinical Microbiology	<b>PMID:</b> 30473498 <b>Impact Factor:</b> 0.17 <b>(RG - 2018)</b> <b>H-Index: 14</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	elements-non-maleficence, beneficence, autonomy and justice-was already in vogue at the time. Applying each of them, a head-to-head comparison between IPV and OPV is made. The results clearly show that the choice of vaccine was made without using ethical principles, resulting in serious adverse effects in hundreds of thousands of children. We recommend that medical ethics must be applied to all choices of public health interventions.				
251.	<p>John, T. J. and Dharmapalan, D. The moral dilemma of the polio eradication programme Indian J Med Ethics; 2019, 4 (NS) (4): 294-297 <b>Address:</b> Retired Professor, <b>Christian Medical College, Vellore, 632 002</b> Tamil Nadu INDIA. Consultant in Paediatric Infectious Diseases, Apollo Hospitals, CBD Belapur, Navi Mumbai. 400 614 INDIA. During the last five years, globally, cases of polio caused by vaccine viruses have outnumbered those of polio caused by natural (wild) polioviruses, posing a moral dilemma. Public health ethics should ensure the best interests of the community, with equity in sharing benefits and risks irrespective of socioeconomic disparities. Vaccine viruses in oral polio vaccine (OPV) cause vaccine-associated paralytic polio (VAPP), while paralytic polio is also caused by vaccine-derived polioviruses (VDPVs). By its policy of the use of OPV in low and middle-income countries, while rich countries use the safe inactivated polio vaccine (IPV), the Global Polio Eradication Programme has been responsible for social injustice. In 2017 and 2018, there were outbreaks of polio in Syria and Papua New Guinea due to circulating VDPVs, after many years of these countries remaining free of polio due to wild polioviruses. The only ethical way forward for global polio eradication is to replace OPV with IPV in all countries.</p>	NAT	JUL TO DEC	Pediatric Infectious Diseases,	<p><b>PMID:31791935</b> <b>PMC 35262</b> <b>Impact Factor: 0.17</b> <b>(RG-2018)</b> <b>H-Index: 14</b></p>
252.	<p>Jose, P. S., Radhakrishna, V. N., Sahoo, B. and Madhuri, V. An Assessment of the Applicability of Shriners Hospital Upper Extremity Evaluation as a Decision-making Tool and Outcome Measure in Upper Limb Cerebral Palsy in Indian Children Indian J Orthop; 2019, 53 (1): 15-19 <b>Address:</b> Paediatric Orthopaedics Unit, Department of Orthopedics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>  Background: The aim of this study was to assess the applicability and performance of the Shriners Hospital Upper Extremity Evaluation (SHUEE) and to determine its usefulness in clinical decision-making and as an outcome measure with reference to Indian children</p>	NAT	JAN TO JUN	Orthopaedics	<p><b>PMID:30905978</b> <b>PMC ID:6394174</b> <b>Impact Factor: 0.980</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 24</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	suffering from cerebral palsy. Materials and Methods: The SHUEE videos of 40 children with cerebral palsy with spastic hemiplegia or asymmetrical diplegia were analyzed and scored. Seven children had undergone upper extremity surgery based on a preoperative evaluation. All seven had a postoperative evaluation. Pre- and postoperative scores were compared. Intra- and interobserver reliability was assessed. The level of familiarity and comfort of the children with the assigned tasks was gauged. Results: Analysis of the scores revealed that patients could be categorized into three discrete groups based on the modified House scores and Spontaneous Functional Analysis (SFA) scores, which helps in identifying the patients who would benefit from surgical intervention. In the seven children who were operated, there was a mean increase in the postoperative SFA (2.97, P = 0.259), Dynamic Positional Analysis (3.15, P = 0.229) and Grasp/Release Analysis (4.96, P = 0.334) scores, though the differences were not statistically significant. There was excellent intraobserver (r - 0.98) and interobserver reliability (r - 0.97, 0.96) based on the intraclass correlation coefficient. The children were familiar with the assigned tasks and were not duly uncomfortable while attempting to perform them. Conclusions: SHUEE is a useful modality to assess upper limb function in Indian children with cerebral palsy, and can be used as a decision-making tool and mode of documentation.				
253.	Joseph, Aneez, Zachariah, Anand, Fleming, Jude Joseph, Jose, Arun, Horst, Thiermann and Worek, Franz Evaluation of RBC acetylcholinesterase point of care testing using "CHE check mobile" in diagnosis of organophosphate poisoning Clinical Toxicology; 2019, 57 (12): 1174-1174 <b>Author Information</b> <b>Addresses:</b> [1] <b>Christian Med Coll &amp; Hosp</b> , Dept Med, Vellore, Tamil Nadu, India [2] <b>Christian Med Coll &amp; Hosp</b> , Dept Clin Biochem, Vellore, Tamil Nadu, India	INT	JUL TO DEC	Medicine, Biochemistry, Microbiology  Clinical Clinical	<b>WOS:000500830800034</b> <b>PMC 35454</b> <b>Impact Factor:4.398</b> <b>(BIOXBIO: 2018 – 2019)</b> <b>H-Index:85</b>
254.	Joseph, C. M., Gunasekaran, C., Livingston, A., Chelliah, H., Jepeganam, T. S. and Boopalan, Prjvc Outcome of screw post fixation of neglected posterior cruciate ligament bony avulsions Injury; 2019, 50 (3): 784-789  <b>Address:</b> Department of Orthopaedics Unit 3, <b>Christian Medical College</b> , Ida Scudder Road, Vellore, Tamil Nadu 632004, India. Department of Orthopaedics Unit 3, <b>Christian Medical College</b> , Ida	INT	JAN TO JUN	Orthopaedics	<b>PMID:30773214</b> <b>PMC</b> <b>Impact Factor: 1.62</b> <b>(RG-2018)</b> <b>H-Index: 109</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Scudder Road, Vellore, Tamil Nadu 632004, India. Electronic Address: livings78@gmail.com. Department of Biostatistics, <b>Christian Medical College</b>, Ida Scudder Road, Vellore, Tamil Nadu 632004, India.</p> <p>BACKGROUND: Contrary to acute posterior cruciate ligament (PCL) bony tibial avulsions, surgical management of chronic injuries is technically challenging and appears to be controversial. We sought to assess the outcome of a novel screw post augmentation technique in neglected cases. METHODS: 16 patients were followed up in a tertiary single-center retrospective study. The bony fragment was fixed using a lag screw with a spiked washer and an additional screw post through an open posterior approach. The pre- and postoperative knee range of movement (ROM), laxity, and modified Tegner-Lysholm (TL) scores were compared. RESULTS: The median time from injury to surgery was 10 weeks (range, 3-260). The mean clinical follow-up time was 24.25 +/- 9.21 months. At the final follow-up, the mean knee ROM flexion was 130 degrees +/- 11.55 degrees with no extension lag. 3 patients had grade 1 laxity. The TL grade was predominantly excellent, and the overall median score improved from 76 preoperatively to 95 postoperatively (p &lt; 0.0004). Bony union was achieved in all cases. CONCLUSION: The described screw post fixation technique results in an excellent outcome for these rare injuries. LEVEL OF EVIDENCE: Level IV, case series.</p>				
255.	<p>Joseph, C. M., Rama-Prasad, Y. S., Boopalan, P. and Jepeganam, T. S. Long Term Follow-up of an Open Bicondylar Hoffa Fracture with a Disrupted Extensor Mechanism: A Case Report Malays Orthop J; 2019, 13 (2): 59-62 Address: Department of Orthopaedics, <b>Christian Medical College, Vellore, India.</b> Department of Orthopaedics, Amulya hospital, Visakhapatnam, India. &gt;Department of Orthopaedics, <b>Christian Medical College, Vellore, India.</b> This is the first report of a long-term follow-up of an open bicondylar Hoffa with patella fracture. It is interesting to note the radiological changes of osteoarthritis 15 years after global intra-articular injury of the distal femur. The good clinical outcome is possibly due to the integrity of the knee ligaments and reconstruction of the extensor mechanism in addition to stable anatomical reduction and fixation.</p>	INT	JUL TO DEC	Orthopaedics	PMID: 31467656 Impact Factor: NA H-Index: 2
256.	<p>Joseph, G. Treatment of Ascending Aortic Pathology With Arch Endografts That</p>	INT	JAN TO JUN	Cardiology	PMID:31204594 PMC

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Extend Proximally J Endovasc Ther; 2019, 26 (4): 463-466 <b>Address:</b> 1 Department of Cardiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>				<b>Impact Factor: 2.732 (BIOXBIO-2018)</b> <b>H-Index: 93</b>
257.	Joseph, G. Fenestrated total arch thoracic endovascular aortic repair: Coming of age Postepy w Kardiologii Interwencyjnej; 2019, 15 (4): 387-390 <b>Address:</b> Department of Cardiology, <b>Christian Medical College, Vellore, 632004, India</b>	INT	JUL TO DEC	Cardiology	<b>PMC Review 35392</b> <b>Impact Factor:1.160 (BIOXBIO - 2018)</b> <b>H-Index: 12</b>
258.	Joseph, T., Selliah, H. Y., Karthikeyan, M., Chandy, A., Kunjummen, A. T. and Kamath, M. S. Comparison of Perinatal Outcomes of Singletons Following Vanishing Twin Phenomenon and Singletons with Initial Single Gestational Sac Conceived Following Assisted Reproductive Technology: A Retrospective Analysis J Hum Reprod Sci; 2019, 12 (2): 164-168 <b>Address:</b> Department of Reproductive Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Aim: The aim of the study was to compare the perinatal outcomes between singletons following vanishing twin phenomenon and singletons arising from initial single gestational sac following assisted reproductive technology (ART) treatment. Setting and Design: This was a retrospective cohort study. Materials and Methods: A retrospective cohort study included analysis of all singleton births following ART over a period of 7 years (January 2010 -December 2016). All women who underwent fresh or frozen embryo ART cycles were followed up. The study population included all singleton births following spontaneous reduction of one of the gestational sacs in dichorionic diamniotic twin pregnancies. The perinatal outcome of this group was compared with those of singletons arising from the initial single gestational sac. Results: A total of 521 singleton births were recorded during the study period. In the study group, 72 singleton births had spontaneous reduction of one of the gestational sacs (vanishing twin group) and the remaining 449 had an initial single gestational sac. The risk for low birth weight (LBW) (14/72, 19.4% vs. 96/449, 21.6%) and preterm birth (PTB) (17/72, 23.6% vs. 134/449, 29.8%) was not significantly different between those singletons who had spontaneous reduction from two gestational sacs to single sac compared to those with initial single sac. The	INT	JUL TO DEC	Reproductive Medicine, Biostatistics	<b>PMID: 31293332</b> <b>Impact Factor: 1.19 (RG - 2018)</b> <b>H-Index: 25</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	miscarriage rate was significantly lower in vanishing twin group compared to control group (7/84, 8.3% vs. 157/622, 25.2%; P = 0.01). The subgroup analysis based on spontaneous reduction occurring before or after the appearance of the embryonic pole also showed similar risk of PTB (11/41, 26.8.% vs. 9/31, 29.0%) and LBW (7/41, 17.1% vs. 9/31, 29.0%). Conclusion: Perinatal outcomes in singleton live births following vanishing twin phenomenon are similar to those pregnancies with an initial single gestational sac following ART.				
259.	<p>Kabeerdoss, Jayakanthan, Thomas, Meera, Goel, Ruchika, Mohan, Hindumathi, Danda, Sumita, Jeyaseelan, L. and Danda, Debashish High expression of S100 calgranulin genes in peripheral blood mononuclear cells from patients with Takayasu arteritis Cytokine; 2019, 114 61-66</p> <p>Background: Toll-like receptors (TLR) 1 to 4 are highly expressed in aorta. Activation of TLR4 causes transmural arteritis in Human temporal artery-SCID chimera model. Neither TLR-4 nor its ligands have been studied in TA patients as yet. Aim of this study was to examine the expression of TLR4 and its endogenous ligands in peripheral blood mononuclear cells (PBMCs) of patients with Takayasu arteritis (TA). Methods: mRNA expression of TLR4, RAGE and various endogenous TLR4 ligands were quantified in PBMCs of 24 TA patients and 19 sex and age matched healthy controls by real time PCR using specific primers and SYBR Green qPCR master mix. S100A8/A9 and S100A12 were measured in cell culture supernatant of PBMCs from TA patients and healthy controls, both in un-stimulated state as well as, after lipopolysaccharides (LPS) stimulated cultures for 4 h. Expression of S100A8/A9 in aortic tissues was assessed by immunohistochemistry. Results: The mRNA expression of S100A8, S100A9, S100A12 and TLR4 were higher, while expression of RAGE and HSP70 were lower in TA as compared to healthy controls. Induction with LPS led to increase in secretion of both S100A8/A9 and S100A12 levels in TA as well as healthy controls. The fold of induction, measured by LPS stimulated/unstimulated control was higher in healthy controls [2.88 (1.7-3.53) fold] as compared to TA [1.345 (1-1.82) fold]; p &lt; 0.05. Numerically, S100A8/A9 was also higher in healthy controls [2.04 (1.7-5.6) fold] as compared to TA [1.38 (1.09-3.6) fold], but it didn't reach statistical significance; p = 0.129. Mild to moderate intensity expression of S100A8/A9 protein was noted in aortic tissues from patients with TA. Conclusion: mRNA expression of TLR4 and its ligand S100A8, S100A9, and S100A12 in PBMCs of TA patients was higher as compared to healthy controls. LPS stimulation led to higher</p>	INT	JUL TO DEC	Clinical Biostatistics      Cytogenetics,	<p>PMID:WOS:000462694400009</p> <p><b>Impact Factor: 3.078</b> <b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 103</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	induction of S100A12 secretion in healthy controls as compared to TA. Expression of S100A8/A9 was detected in inflamed aortic tissues from patients with TA.				
260.	Kailasam A, Kannan B, Lochan EB, Sathya Narayanan K, Chaudhuri S, <b>Mohan VR.</b> Household food security in rural Tamil Nadu: a survey from Kaniyambadi block, Vellore district. Int J Community Med Public Health. 2019 Sep;6(9):3928-3933. DOI: <a href="http://dx.doi.org/10.18203/2394-6040.ijcmph20193995">http://dx.doi.org/10.18203/2394-6040.ijcmph20193995</a>  Department of Community Health, <b>Christian Medical College, Vellore</b> , Tamil Nadu, India	INT	JUL TO DEC	Community Health	<b>Impact Factor:NA</b> <b>H-Index: NA</b>
261.	Kalipatnapu, S., Kota, A. A. and Agarwal, S. Giant splenic artery aneurysm J Vasc Surg; 2019, 69 (6): 1940  <b>Address:</b> Department of Vascular Surgery, <b>Christian Medical College, Vellore, India.</b> Department of Vascular Surgery, <b>Christian Medical College, Vellore, India.</b> Electronic <b>Address:</b> albertkota@cmcvellore.ac.in.	INT	JAN TO JUN	Vascular Surgery	<b>PMID:31159988</b> <b>PMC</b>  <b>Impact Factor: 3.294</b> <b>(BIO-2019)</b> <b>H-Index: 178</b>
262.	Kalipatnapu, Sasank and Agarwal, Sunil Vascular Surgery in a Tertiary Care Center-Profile and Outcomes of Intraoperative Consultations Journal of Vascular Surgery; 2019, 69 (6): E94-E94	INT	JUL TO DEC	Vascular Surgery	<b>PMID:</b> WOS:000469220300098 <b>Impact Factor: 3.243</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 178</b>
263.	Kalipatnapu, Sasank, Kota, Albert A., Stephen, Edwin and Agarwal, Sunil Range of Ankle Movements and Foot Arch Measurements in Patients With Chronic Venous Disease Journal of Vascular Surgery; 2019, 69 (6): E66-E66	INT	JUL TO DEC	Vascular Surgery	<b>PMID:</b> WOS:000469220300045 <b>Impact Factor: 3.243</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 178</b>
264.	Kalyani Sridharan, Aaron Chapla, Hesarghatta Shyamasunder Asha, Thomas V. Paul, Denny Varghese, R. Parthibhan, Simon Rajaratnam, Felix Jebasingh, Riddhi Das Gupta, Sandeep Kumar Agarwal, R. Lavanya, J. Jabasteen, Sarah Mathai1, Sophy Korula1, Anna Simon1, Nihal Thomas Mutational profile of maturity-onset diabetes in the young in India differs from that seen in the Western population Indian J Endocrinol Metab; 2019, 23 (7): S8  Departments of Endocrinology, Diabetes and Metabolism and 1	NAT	JUL TO DEC	Endocrinology	<b>Impact Factor: 1.70</b> <b>(resurchify.com)</b> <b>H-Index: 19</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Paediatrics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. E-mail: <a href="mailto:sridharan.kalyani22@gmail.com">sridharan.kalyani22@gmail.com</a></p> <p>ESICON 2019 Abstracts: Background: Maturity-onset diabetes of the young (MODY) is an important etiology of early-onset diabetes mellitus. The genetic landscape of MODY in the Indian population has been shown to be different from that of the West. Aims: The aim of this study is to assess the mutational profile of patients with young-onset diabetes mellitus with a clinical suspicion of MODY referred for genetic testing. Methods: This is a retrospective observational study conducted between 2012 and 2018. Patients, who were clinically suspected to have MODY by the referring physician and referred to our center for genetic testing, were included in the study. A multiplex polymerase chain reaction-based target enrichment was established, followed by next-generation sequencing on the Ion Torrent Personal Genome Machine. All the mutations and rare variants were confirmed by Sanger sequencing. Results: We included 231 patients who were clinically diagnosed with MODY and had the relevant clinical data. Eighty-four of them had MODY-related variants; 31 (13.4%) were pathogenic or likely pathogenic (5 in HNF1A, 3 in ABCC8, 4 in HNF4A, 2 in WFS1, 1 in HNF1B, 1 in INS, and 1 in EIF2AK3) or variants of undetermined significance (VUS) present in more than one subject (6 in PDX1 E224K, 4 in NEUROD1 H241Q, 2 in PDX1 P33T, and 2 in PAX4 R105C). The rest of the variants were benign or likely benign or VUS present in only a single subject. Seven patients had two MODY-related variants each and 1 had 3 variants. Conclusion: The mutational profile of subjects with MODY in India shows a preponderance in HNF1A, ABCC8, HNF4A, PDX1, and NEUROD1 which is different from that in the Western population. Keywords: Maturity-onset diabetes in the young, mutations in maturity-onset diabetes of the young, young-onset diabetes</p>				
265.	<p>Kalyani Sridharan, Kripa Elizabeth Cherian, Nitin Kapoor, Thomas V. Paul</p> <p>Utility of anthropometric indicators in predicting osteoporosis in ambulant postmenopausal women from South India</p> <p>Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. E-mail: <a href="mailto:sridharan.kalyani22@gmail.com">sridharan.kalyani22@gmail.com</a></p> <p>Background: Use of dual-energy X-ray absorptiometry (DXA) is limited by availability and cost in resource-limited settings. Ethnicity-derived anthropometric cutoffs are good surrogate markers</p>	NAT	JUL TO DEC	Endocrinology	<p><b>Impact Factor: 1.70</b> (resurchify.com)</p> <p><b>H-Index: 19</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>in predicting osteoporosis. Aims: The aim of this study is to assess the correlation between bone mineral density (BMD) measured by DXA scan and anthropometric variables such as body weight, body mass index (BMI), waist circumference (WC), hip circumference (HC), and neck circumference (NC) and derive receiver operating characteristic (ROC) curves for these variables. Methods: This is a cross-sectional observational study which recruited postmenopausal South Indian women from the community. Anthropometric variables such as weight, BMI, WC, HC, and NC were measured. BMD was assessed by means of DXA scan. Correlation between the anthropometric variables and DXA BMD at the neck of femur (NOF) and lumbar spine (LS) was assessed. ROC cutoffs were derived for the individual anthropometric measures. Results: A total of 308 postmenopausal women were included in the study. All the anthropometric variables showed significant independent positive correlation with DXA BMD at both the skeletal sites, whereas age showed a significant negative correlation. Weight showed the best correlation (<math>r = 0.48</math>; <math>P &lt; 0.01</math>) and at a cutoff of 49.5 kg had a sensitivity of 95.4% and a specificity of 33% and an area under the curve (AUC) (95% confidence interval) of 0.757 (0.695–0.818) for the derived ROC with NOF osteoporosis. The cutoffs at which other anthropometric measures predicted NOF osteoporosis are as follows: NC – 20.25 cm (85.3% sensitivity, 31.9% specificity; AUC: 0.668 [0.602–0.734]; WC – 82.5 cm (89.4% sensitivity, 28.6% specificity; AUC: 0.651 [0.580–0.722]; and HC – 90.5 cm (89.9% sensitivity, 34.1% specificity; AUC: 0.690 [0.622–0.757]). Conclusion: We derived cutoffs for various anthropometric variables from the ROCs and the sensitivity and specificity at these cutoffs. Given the ease of measurement of these anthropometric variables and the cost and unavailability of DXA scanners at all places, these could be used to screen for osteoporosis. Keywords: Anthropometry, bone mineral density, osteoporosis, postmenopausal</p>				
266.	<p>Kalyani Sridharan, Shipra Singh<sup>1</sup>, Judy A. John<sup>1</sup>, Kripa Elizabeth Cherian, Nitin Kapoor, Thomas V. Paul                      A cross-sectional study of body composition and metabolic parameters in men with chronic traumatic paraplegia                      ESICON 2019, 23(7): 5-83                      Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. E-mail: <a href="mailto:sridharan.kalyani22@gmail.com">sridharan.kalyani22@gmail.com</a></p> <p>Background: Traumatic paraplegia due to road traffic accidents predominantly affects young men. Sarcopenia and metabolic</p>	NAT	JUL TO DEC	Endocrinology	<b>Impact Factor: 1.70 (resurchify.com)</b> <b>H-Index: 19</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>parameters are less-studied aspects in these individuals. Aims: We aimed to examine body composition and measures of insulin resistance in paraplegic men and compare these parameters with age-, sex-, and body mass index (BMI)-matched controls. Methods: Men aged 18–45 years with traumatic paraplegia, 1–3 years post injury with T2–L1 neurological level, belonging to American Spinal Cord Injury Association (ASIA) impairment scale A or B, were recruited between 2016 and 2018 and compared to age-, sex-, and BMI-matched controls. Patients on drugs affecting bone metabolism, renal failure, severe infections, and malabsorption were excluded from the study. Body composition was measured by dual-energy X-ray absorptiometry scan. Fasting glucose and insulin were measured, and Homeostatic Model Assessment of Insulin Resistance (HOMA-IR) and Quantitative Insulin Sensitivity Check Index (QUICKI) were calculated. Results: Compared to controls (n = 36), cases (n = 43) had higher total body fat (%) (25.5 [21.2–28.9] vs. 20.2 [15.9–22.2]; P &lt; 0.01) and lower appendicular lean mass/height<sup>2</sup> (5.81 ± 1.26 vs. 8.17 ± 1.12; P &lt; 0.01). HOMA-IR was higher in cases (1.33 [1.03– 2.12] vs. 0.94 [0.52–1.78]; P = 0.02), whereas QUICKI was lower (0.36 ± 0.04 vs. 0.38 ± 0.05; P = 0.02) when compared to controls. When subcategorized by ASIA category, ASIA A (complete neurological injury) had lower trunk to leg fat (0.61 ± 0.16 vs. 0.73 ± 0.10; P = 0.03), higher HOMA-IR (1.64 [1.14–3.33] vs. 1.0 [0.83–1.32]; P = 0.016) and lower QUICKI (0.34 ± 0.03 vs. 0.38 ± 0.02; P = 0.016) compared to ASIA B (incomplete neurological injury). Conclusion: Measures of body composition and insulin indices indicate sarcopenia and insulin resistance in men with traumatic paraplegia which is more profound in the subcategory with complete neurological injury. Well-designed longitudinal studies are needed to confirm the findings. Keywords: Body composition, insulin resistance, paraplegia, sarcopenia</p>				
267.	<p>Kamath, M. S., Antonisamy, B. and Sunkara, S. K. Zygotic splitting following embryo biopsy: a cohort study of 207 697 single-embryo transfers following IVF treatment BJOG; 2019, <b>Address:</b> Department of Reproductive Medicine, <b>Christian Medical College, Vellore, India.</b> Department of Biostatistics, <b>Christian Medical College, Vellore, India.</b></p>	INT	JUL TO DEC	Biostatistics	<p><b>PMID:31828906</b>  <b>PMC 35264</b>  <b>Impact Factor: 5.193</b>  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 148</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Division of Women's Health, Faculty of Life Sciences and Medicine, King's College London, London, UK.</p> <p>OBJECTIVE: To evaluate the risk of monozygotic splitting with embryo biopsy during in vitro fertilisation (IVF). DESIGN: A cohort study. SETTING: Anonymised assisted reproductive technology national data from the Human Fertilisation and Embryology Authority, UK. POPULATION: Women undergoing single-embryo transfer (SET) following either pre-implantation genetic testing (PGT) involving embryo biopsy or IVF without PGT. METHODS: Data on women undergoing SET either following PGT and non-PGT IVF treatment in 2000-2016 were analysed to compare the risk of zygotic splitting and monozygotic twinning. Logistic regression analysis was performed adjusting for potential confounders. MAIN OUTCOMES: Monozygotic spitting, monozygotic twin birth. RESULTS: Data comprising a total of 207 697 SET cycles (4544 following PGT and 203 153 following non-PGT IVF) were analysed. The live birth rate per embryo transfer was 31.9% (95% confidence interval [CI] 30.5-33.2%) following PGT and 26.9% (95% CI 26.7-27.1%) following non-PGT IVF. The incidence of zygotic splitting following PGT was 2.4% (95% CI 1.7-3.3%) versus 1.5% (95% CI 1.4-1.6%) following non-PGT IVF. There was a significantly higher risk of zygotic splitting with PGT versus non-PGT IVF cycles (odds ratio [OR] 1.64, 95% CI 1.19-2.27). The higher risk of zygotic splitting with PGT cycles remained significant after adjusting for potential confounders (adjusted OR 1.51, 95% CI 1.06-2.15). CONCLUSIONS: The present study demonstrated an increased risk of monozygotic splitting with embryo biopsy. Given the current sparse literature, it is important to accumulate further evidence to validate the findings. TWEETABLE ABSTRACT: A likely increased risk of monozygotic splitting following embryo biopsy.</p>				
268.	<p>Kamath, M. S., Bosteels, J., D'hooghe, T. M., Seshadri, S., Weyers, S., Mol, B. W. J., Broekmans, F. J. and Sunkara, S. K.</p> <p>Screening hysteroscopy in subfertile women and women undergoing assisted reproduction</p> <p>Cochrane Database Syst Rev; 2019, 4 CD012856</p> <p><b>Address:</b> Department of Reproductive Medicine, <b>Christian Medical College</b>, Ida Scudder Road, Vellore, Tamil Nadu, India, 632004.</p> <p>BACKGROUND: Screening hysteroscopy in infertile women with unexplained infertility, or prior to intrauterine insemination (IUI) or in vitro fertilisation (IVF) may reveal intrauterine pathology that may not be detected by routine transvaginal ultrasound. Hysteroscopy,</p>	INT	JAN TO JUN	Reproductive Medicine	<p><b>PMID:30991443</b></p> <p><b>PMC ID:6472583</b></p> <p><b>Impact Factor: 6.754</b></p> <p><b>(BIOXBIO-2018)</b></p> <p><b>H-Index: 244</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>whether purely diagnostic or operative may improve reproductive outcomes. OBJECTIVES: To assess the effectiveness and safety of screening hysteroscopy in subfertile women undergoing evaluation for infertility, and subfertile women undergoing IUI or IVF. SEARCH METHODS: We searched the Cochrane Gynaecology and Fertility Group Specialised Register, CENTRAL CRSO, MEDLINE, Embase, ClinicalTrials.gov, and the World Health Organization International Clinical Trials Registry Platform (September 2018). We searched reference lists of relevant articles and handsearched relevant conference proceedings. SELECTION CRITERIA: Randomised controlled trials comparing screening hysteroscopy versus no intervention in subfertile women wishing to conceive spontaneously, or before undergoing IUI or IVF. DATA COLLECTION AND ANALYSIS: We independently screened studies, extracted data, and assessed the risk of bias. The primary outcomes were live birth rate and complications following hysteroscopy. We analysed data using risk ratio (RR) and a fixed-effect model. We assessed the quality of the evidence by using GRADE criteria. MAIN RESULTS: We retrieved 11 studies. We included one trial that evaluated screening hysteroscopy versus no hysteroscopy, in women with unexplained subfertility, who were trying to conceive spontaneously. We are uncertain whether ongoing pregnancy rate improves following a screening hysteroscopy in women with at least two years of unexplained subfertility (RR 4.30, 95% CI 2.29 to 8.07; 1 RCT; participants = 200; very low-quality evidence). For a typical clinic with a 10% ongoing pregnancy rate without hysteroscopy, performing a screening hysteroscopy would be expected to result in ongoing pregnancy rates between 23% and 81%. The included study reported no adverse events in either treatment arm. We are uncertain whether clinical pregnancy rate is improved (RR 3.80, 95% CI 2.31 to 6.24; 1 RCT; participants = 200; very low-quality evidence), or miscarriage rate increases (RR 2.80, 95% CI 1.05 to 7.48; 1 RCT; participants = 200; very low-quality evidence), following screening hysteroscopy in women with at least two years of unexplained subfertility. We included ten trials that included 1836 women who had a screening hysteroscopy and 1914 women who had no hysteroscopy prior to IVF. Main limitations in the quality of evidence were inadequate reporting of study methods and higher statistical heterogeneity. Eight of the ten trials had unclear risk of bias for allocation concealment. Performing a screening hysteroscopy before IVF may increase live birth rate (RR 1.26, 95% CI 1.11 to 1.43; 6 RCTs; participants = 2745; I(2) = 69 %; low-quality evidence). For a typical clinic with a 22% live birth rate, performing a screening</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>hysteroscopy would be expected to result in live birth rates between 25% and 32%. However, sensitivity analysis done by pooling results from trials at low risk of bias showed no increase in live birth rate following a screening hysteroscopy (RR 0.99, 95% CI 0.82 to 1.18; 2 RCTs; participants = 1452; I(2) = 0%). Only four trials reported complications following hysteroscopy; of these, three trials recorded no events in either group. We are uncertain whether a screening hysteroscopy is associated with higher adverse events (Peto odds ratio 7.47, 95% CI 0.15 to 376.42; 4 RCTs; participants = 1872; I(2) = not applicable; very low-quality evidence). Performing a screening hysteroscopy before IVF may increase clinical pregnancy rate (RR 1.32, 95% CI 1.20 to 1.45; 10 RCTs; participants = 3750; I(2) = 49%; low-quality evidence). For a typical clinic with a 28% clinical pregnancy rate, performing a screening hysteroscopy would be expected to result in clinical pregnancy rates between 33% and 40%. There may be little or no difference in miscarriage rate following screening hysteroscopy (RR 1.01, 95% CI 0.67 to 1.50; 3 RCTs; participants = 1669; I(2) = 0%; low-quality evidence). We found no trials that compared a screening hysteroscopy versus no hysteroscopy before IUI. <b>AUTHORS' CONCLUSIONS:</b> At present, there is no high-quality evidence to support the routine use of hysteroscopy as a screening tool in the general population of subfertile women with a normal ultrasound or hysterosalpingogram in the basic fertility work-up for improving reproductive success rates. In women undergoing IVF, low-quality evidence, including all of the studies reporting these outcomes, suggests that performing a screening hysteroscopy before IVF may increase live birth and clinical pregnancy rates. However, pooled results from the only two trials with a low risk of bias did not show a benefit of screening hysteroscopy before IVF. Since the studies showing an effect are those with unclear allocation concealment, we are uncertain whether a routine screening hysteroscopy increases live birth and clinical pregnancy, be it for all women, or those with two or more failed IVF attempts. There is insufficient data to draw conclusions about the safety of screening hysteroscopy.</p>				
269.	<p>Kamath, M. S., Mascarenhas, M., Franik, S., Liu, E. and Sunkara, S. K.                      Clinical adjuncts in in vitro fertilization: a growing list                      Fertility and Sterility; 2019, 112 (6): 978-986  <b>Address:</b> Department of Reproductive Medicine, <b>Christian Medical College, Vellore, India</b>                      Leeds Fertility, Leeds Teaching Hospitals NHS Trust, Leeds, United Kingdom</p>	INT	JUL TO DEC	Reproductive Medicine	PMID:31703943

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Radboud University Medical Center, Radboud Institute for Health Sciences, Department of Obstetrics and Gynaecology, Nijmegen, Netherlands                      Fertility Plus, Auckland District Health Board, Auckland, New Zealand                      Division of Women's Health, Faculty of Life Sciences &amp; Medicine, King's College London, London, United Kingdom</p> <p>A growing list of clinical adjuncts are being used during in vitro fertilization (IVF) treatment. Most of these IVF add-ons (such as growth hormone, aspirin, heparin, dehydroepiandrosterone, testosterone, male and female antioxidants, and screening hysteroscopy) are being introduced into routine clinical practice in a hurried manner without any clear evidence of benefit in most cases. These add-ons make the IVF more complicated and increase the overall cost for the treatment, which is borne by the couples and health care providers. Our current review found no high-quality evidence to support the use of these IVF add-ons in routine practice. Large, well-designed, randomized trials must be conducted to evaluate the effectiveness and safety of these interventions. There is also a pressing need to develop an evidence-dictated mechanism for introducing newer interventions into routine clinical settings. © 2019 American Society for Reproductive Medicine                      DOI:10.1016/j.fertnstert.2019.09.019</p>				
270.	<p>Kamath,V.Srivastava,V.M.,Yuvarani,S.Chacko,M.P.,Bhattacharya,S.K.,Oommen,S.P.,Sumita,D.Korula,G.(2019)                      The Constitutional Balanced Translocation t(11;22)(q23;q11.2)-An Indian Account,                      Journal of Clinical and Diagnostic Research. 2019 Jan, Vol-13(1): GC01-GC04.  <a href="https://www.doi.org/10.7860/JCDR/2019/36950/12438">https://www.doi.org/10.7860/JCDR/2019/36950/12438</a></p> <p><b>PARTICULARS OF CONTRIBUTORS:</b>                      1. Associate Professor, Department of Cytogenetics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.                      2. Professor and Head, Department of Cytogenetics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.                      3. Technologist, Department of Cytogenetics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.                      4. Professor, Department of Cytogenetics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.                      5. Tutor, Department of Cytogenetics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</p>	NAT	JAN TO JUN	Cytogenetics, Developmental Paediatrics, Medical Genetics, Reproductive Medicine Unit	<b>Impact Factor:</b> 0.41 <b>(RG - 2018)</b> <b>H-Index: 28</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>6. Professor, Department of Developmental Paediatrics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</p> <p>7. Professor, Department of Medical Genetics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</p> <p>8. Professor, Department of Reproductive Medicine Unit, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India</p> <p>Introduction: The balanced translocation t(11;22) is one of the most common constitutional genetic abnormality detected in humans. Carriers of the t(11;22) are usually phenotypically normal and their carrier status is ascertained only if they present with reproductive losses, infertility or a child with an abnormal phenotype. The t(11;22) translocations are a cumulative effect of recombination errors occurring during meiosis. Children with Emanuel syndrome show a gain of additional genetic material in the form of der(22) chromosome on conventional karyotype inherited either from the carrier parents or de novo in origin. Children with der(22) chromosome presented with microcephaly, hypotonia, preauricular sinus and developmental delay. Aim: To study the mode of inheritance and outcome of the balanced translocation t(11;22) in the families. Materials and Methods: A total of 16 individuals from six unrelated families underwent cytogenetic analysis at the <b>Christian Medical College, Vellore</b>, Tamilnadu, India, and their karyotype showed the balanced t(11;22)(q23;q11.2) or a der(22)t(11;22)(q23;q11.2) inherited from a t(11;22) carrier parent. Also, karyogram of the spouses of the carrier individuals were also studied. Conventional cytogenetic analysis of phytohaemagglutinin-stimulated peripheral blood cultures was performed. Fluorescence In Situ Hybridization (FISH) was performed to confirm the der(22) t(11;22)(q23;q11.2). Results: Seven individuals from six unrelated families showed the balanced t(11;22). These included six adults and one child (five females and two males). All six adult carriers were phenotypically normal. In three adults, the translocation was ascertained because their children had abnormal phenotypes. The remaining three adults were from families being investigated for recurrent pregnancy losses. One of these subsequently underwent amniocentesis which showed a translocation morphologically identical to that in the father. All the three carrier parents had children with abnormal phenotypes. And their karyogram showed 47 chromosomes due to gain of a supernumerary chromosome+der(22)t(11;22)(q23;q11.2) of maternal origin, while the fourth child presented with a t(11;22) identical to that of her carrier father, but was lost to follow-up.</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Conclusion: It is important to be aware of this balanced translocation and its varied outcomes, so that members of the family can be studied. This would help to determine the mode of inheritance and to predict the likelihood of other carriers in the family having children with chromosomal imbalance.				
271.	<p>Kandagaddala, M., Sundaramoorthy, M., Keshava, S. N., Gibikote, S., Mahata, K. M., Kavitha, M. L., Poonnoose, P. and Srivastava, A. A new and simplified comprehensive ultrasound protocol of haemophilic joints: the Universal Simplified Ultrasound (US-US) protocol Clin Radiol; 2019, 74 (11): 897 e9-897 e16 <b>Address:</b> Radiology, <b>Christian Medical College, Vellore, India.</b> Radiology, <b>Christian Medical College, Vellore, India.</b> Electronic <b>Address:</b> aparna_shyam@yahoo.com. Haematology, <b>Christian Medical College, Vellore, India.</b> Orthopaedics, <b>Christian Medical College, Vellore, India.</b> AIM: To present a new protocol to optimise ultrasound (US) assessment of haemophilic arthropathy. MATERIALS AND METHODS: Ultrasound of haemophilic arthropathy joints was performed using three different ultrasound protocols, namely, the Toronto-Vellore Comprehensive Ultrasound (TVC-US) protocol, the Haemophilia Early Arthropathy Detection with Ultrasound (HEAD-US), and the newly developed Universal Simplified Ultrasound (US-US) protocol. Synovial hypertrophy, haemosiderin deposition, effusion, erosion, and cartilage loss were evaluated in 20 joints. The reliability and diagnostic efficiency of these protocols was compared using magnetic resonance imaging (MRI). RESULTS: The correlation between the TVC-US and US-US protocols for synovial hypertrophy was excellent: kappa significance (KS) was 1, but was substantial (KS=0.65) with the HEAD-US protocol. For effusion, both the TVC-US and the HEAD-US protocols had substantial correlation with the US-US protocol (KS=0.7 and 0.6 respectively). The correlation for erosion and cartilage loss was excellent between the TVC-US and the US-US with MRI (KS=1), but poor (KS=0) with the HEAD-US protocol. The US-US protocol also had good interobserver agreement (KS=1). CONCLUSION: The accuracy of the US-US protocol is comparable to the TVC-US protocol and MRI and is superior to the HEAD-US protocol in the assessment of haemophilic arthropathy.</p>	INT	JUL TO DEC	Radiology, Haematology, Orthopaedics	<p><b>PMID:</b> 31474302 <b>WOS:</b>000490192300020 <b>Impact Factor:</b> 2.082 <b>(BIOXBIO - 2018)</b> <b>H-Index:</b> 82</p>
272.	<p>Kandaswamy, D., Murthy, M., S, M. G., Alexander, M. and Krothapalli, S. B. Handling objects with very wet skin reduce variability during precision grip task Neurosci Lett; 2019, 703 177-183</p>	INT	JAN TO JUN	Neurological Sciences, Biostatistics.	<p><b>PMID:</b>30922851 <b>PMC</b> <b>Impact Factor:</b> 2.159 <b>(BIOXBIO-2018)</b> <b>H-Index:</b> 155</p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> Department of Neurological Sciences, <b>Christian Medical College, Vellore, India.</b>            Department of Biostatistics, <b>Christian Medical College, Vellore, India.</b>            Department of Neurological Sciences, <b>Christian Medical College, Vellore, India.</b> Electronic <b>Address:</b> srinivas@cmcvellore.ac.in.</p> <p>Several extrinsic factors affect precision grip task variability. Presence of moisture in glabrous skin can regulate the impact of extrinsic factors. Consequently, wetness may influence the precision grip task variability per se by regulating its force, rate and time parameters. This study aims to examine the influence of age, coefficient of skin friction (CF) and object weight (extrinsic factors) on precision grip task variability in dry skin condition (DSC) and very wet skin conditions (VWSC). Eighty healthy subjects performed precision grip task with four different weights (1.3N, 1.4N, 1.5N, and 1.7N) sequentially in DSC and VWSC. Simple and multiple linear regression analysis were performed to estimate the independent and combined effect of extrinsic factors on precision grip parameters. Our results show that the extent of variability caused by the extrinsic factors on precision grip task significantly reduced when objects were held with VWSC than DSC. Wetting of the skin also decreased standard deviation and coefficient of variation of friction. The frictional range of individuals was widespread in DSC (0.62-3.42) while VWSC brought it to a closer range (0.77-1.64). Our findings suggest that wetness of skin reduces precision grip task variability, and further knowledge on this may help in designing precision grip as a quantitative screening tool for patients with hand dysfunction.</p>				
273.	<p>Kang, G.            Improving the performance of oral rotavirus vaccines            Lancet Glob Health; 2019, 7 (11): e1472-e1473  <b>Address:</b> Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore</b> 632004, India. Electronic <b>Address:</b> gkang@cmcvellore.ac.in.</p>	INT	JUL TO DEC	Gastrointestinal Sciences	<b>PMID:</b> 31607450 <b>Impact Factor:</b> NA <b>H-Index:</b> 53
274.	<p>Kanodia, P., Kaur, G., Coshic, P., Chatterjee, K., Neeman, T., George, A., Rath, S., Bal, V. and Prabhu, S. B.            Characterization of biological variation of peripheral blood immune cytochrome in an Indian cohort            Scientific Reports; 2019, 9 (1): <b>Address:</b> National Institute of Immunology, Aruna Asaf Ali Marg, New Delhi, India            Laboratory Oncology, Dr. B. R. Ambedkar Institute Rotary Cancer Hospital, All India Institute of Medical Sciences, New Delhi, India</p>	INT	JUL TO DEC	Immunology, Wellcome Trust Research Laboratory	<b>PMC Article</b> <b>35379</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Department of Transfusion Medicine, All India Institute of Medical Sciences, New Delhi, India Department of Statistics, Australian National University, ACT, Canberra, Australia Wellcome Trust Research Laboratory, <b>Christian Medical College, Vellore, Tamil Nadu, India</b>				
275.	<p>Kapoor N(1), Cherian KE(1), Sajith KG(2), Thomas M(3), Eapen CE(2), Thomas N(1), Paul TV(4). Renal Tubular Function, Bone Health and Body Composition in Wilson's Disease: ACross-Sectional Study from India.</p> <p>Calcif Tissue Int. 2019 Nov;105(5):459-465. doi: 10.1007/s00223-019-00588-z. Epub 2019 Jul 17.</p> <p><b>Author information:</b> (1)Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College, Vellore, Tamil Nadu, 632004, India.</b> (2)Department of Hepatology, <b>Christian Medical College, Vellore, India.</b> (3)Department of Neurology, <b>Christian Medical College, Vellore, India.</b> (4)Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College, Vellore, Tamil Nadu, 632004, India.</b> <a href="mailto:thomasvpaul@yahoo.com">thomasvpaul@yahoo.com</a></p> <p>There is limited literature from India with regard to the prevalence and magnitude of renal tubular and bone manifestations in Wilson's disease (WD). Thus, we studied the prevalence of renal tubular acidosis among Indian patients with WD and also evaluated bone health and body composition in them. It was a cross-sectional study conducted at a south Indian tertiary care center. Twenty-five consecutive patients with WD aged more than 12 years attending the hepatology and neurology departments and 50 age, sex and BMI-matched controls were recruited. After clinical assessment, they underwent biochemical testing to assess renal tubular dysfunction. Bone mineral density (BMD) and body composition were assessed using a dual energy X-ray absorptiometry (DXA) scanner. Fifty-six percent (14/25) of patients with WD had renal tubular acidosis (RTA). Of them, 24% were diagnosed to have distal RTA. RTA was more common in hepatic WD patients who had prolonged duration of illness. Patients with WD had significantly lower BMD as compared to control subjects (<math>p &lt; 0.05</math>). Low BMI, low IGF-1 and a</p>	INT	JUL TO DEC	Endocrinology, Diabetes and Metabolism, Hepatology, Neurology	<p><b>PMID:</b> 31317233 <b>Impact Factor:</b> 3.265 <b>(BIOXBIO - 2018)</b> <b>H-Index: 106</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	shorter duration of therapy were key determinants of low bone mass in them ( $p < 0.05$ ).Patients with WD had significantly more body fat ( $p = 0.01$ ) and lower lean muscle mass ( $p = 0.03$ ) when compared to age, sex and BMI-matched controls. Inconclusion, renal tubular acidosis was common in patients with Wilson's disease. These patients had a lower bone mineral density, higher body fat percentage and lower lean muscle mass as compared to controls. DOI: 10.1007/s00223-019-00588-z				
<b>276.</b>	<p>Kapoor N(1), Furler J(2), Paul TV(1), Thomas N(1), Oldenburg B(3). The BMI-adiposity conundrum in South Asian populations: need for further research J Biosoc Sci; 2019, 51 (4): 619-621</p> <p><b>Address:</b> 1Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College</b> &amp; Hospital, Vellore, Tamil Nadu, India. 3Department of General Practice, Faculty of Medicine, Dentistry and Health Science, University of Melbourne, Australia. 2Melbourne School of Population and Global Health, Faculty of Medicine, Dentistry and Health Science, University of Melbourne, Australia.</p> <p>High body fat in apparently lean individuals is a commonly described phenotype in individuals of Asian descent, but very limited consolidated scientific literature is available on this topic. This phenotype is known as 'normal-weight obesity' and may explain the large disparity between the prevalence of obesity (as measured by BMI) and diabetes that occurs in these individuals. Routine use of obesity indicators that best predict body fat content would help to identify these individuals in clinical practice. In this debate, we would like to highlight that even though fat and BMI have a good correlation, as suggested by Kryst et al. (2019), clinicians, public health researchers and policymakers should consider the use of these indicators in conjunction with each other rather than individually. Future research is needed on pathogenic mechanisms, diagnostic modalities and therapeutic options in these individuals which will help to further characterize and manage these patients appropriately.</p>	<b>INT</b>	<b>JAN TO JUN</b>	Endocrinology, Diabetes and Metabolism	<b>PMID:30944050</b> <b>PMC</b> <b>Impact Factor: 1.217</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 47</b>
<b>277.</b>	<p>Kapoor, N., Chapla, A., Furler, J., Paul, T. V., Harrap, S., Oldenburg, B. and Thomas, N.</p> <p>Genetics of obesity in consanguineous populations - A road map to provide novel insights in the molecular basis and management of obesity</p>	<b>INT</b>	<b>JAN TO JUN</b>	Endocrinology, Diabetes and Metabolism	<b>PMID:30638866</b> <b>PMC ID:6412867</b> <b>Impact Factor: 3.40</b> <b>(RG-2018)</b> <b>H-Index: 37</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Ebiomedicine; 2019, 40 33-34</p> <p><b>Address:</b> Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamil Nadu, India; Non Communicable Disease Unit, Melbourne School of Population &amp; Global Health, Faculty of Medicine, Dentistry and Health Science, The University of Melbourne, Australia. Electronic <b>Address:</b> nitin.kapoor@cmcvellore.ac.in.</p> <p>Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Department of General Practice, Faculty of Medicine, Dentistry and Health Science, The University of Melbourne, Australia.</p> <p>Department of Physiology, Faculty of Medicine, Dentistry and Health Science, The University of Melbourne, Australia.</p> <p>Non Communicable Disease Unit, Melbourne School of Population &amp; Global Health, Faculty of Medicine, Dentistry and Health Science, The University of Melbourne, Australia</p>				
<b>278.</b>	<p>Kapoor, N., Furler, J., Paul, T. V., Thomas, N. and Oldenburg, B.</p> <p>Kapoor, N., Furler, J., Paul, T. V., Thomas, N. and Oldenburg, B. Ethnicity-specific cut-offs that predict co-morbidities: the way forward for optimal utility of obesity indicators J Biosoc Sci; 2019, 51 (4): 624-626</p> <p><b>Address:</b> 1Department of Endocrinology,Diabetes and Metabolism,<b>Christian Medical College&amp; Hospital,Vellore,Tamil Nadu,India.</b> 3Department of General Practice,Faculty of Medicine,Dentistry and Health Science,University of Melbourne,Australia. 2Melbourne School of Population and Global Health,Faculty of Medicine,Dentistry and Health Science,University of Melbourne,Australia.</p> <p>Obesity indicators are useful clinical tools in the measurement of obesity, but it is important for clinicians to appropriately interpret their values in individuals with different ethnicities. Future research is needed to identify optimal cut-offs that can predict the occurrence of cardio-metabolic comorbidities in individuals of different ethnic descent. Assessment of more recently developed indicators like the Edmonton Obesity Staging System and visceral adipose tissue are able to appropriately identify metabolically at-risk individuals.</p>	<b>INT</b>	<b>JAN TO JUN</b>	Endocrinology,Diabetes and Metabolism	<b>PMID:30944046</b> <b>PMC</b> <b>Impact Factor: 1.217</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 47</b>
<b>279.</b>	<p>Kapoor, N., Furler, J., Paul, T. V., Thomas, N. and Oldenburg, B.</p> <p>Normal Weight Obesity: An Underrecognized Problem in Individuals</p>	<b>INT</b>	<b>JUL TO DEC</b>	Endocrinology, Diabetes and Metabolism	<b>PMID: 31270012</b> <b>Impact Factor: 2.935</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>of South Asian Descent Clin Ther; 2019, 41 (8): 1638-1642 <b>Address:</b> Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamil Nadu, India; Melbourne School of Population and Global Health, Faculty of Medicine, Dentistry and Health Science, The University of Melbourne, Melbourne, Australia. Electronic <b>Address:</b> <a href="mailto:nitin.kapoor@cmcvellore.ac.in">nitin.kapoor@cmcvellore.ac.in</a> Department of General Practice, Faculty of Medicine, Dentistry and Health Science, The University of Melbourne, Melbourne, Australia. Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamil Nadu, India. Melbourne School of Population and Global Health, Faculty of Medicine, Dentistry and Health Science, The University of Melbourne, Melbourne, Australia. PURPOSE: Obesity has attained pandemic proportions across the world, and its prevalence in developing countries is also on the rise. Nevertheless, there is still a large gap in understanding the reasons behind a disproportionately high prevalence of diabetes as opposed to a lesser degree of obesity seen in individuals of South Asian origin. This research letter highlights the importance of identifying individuals with normal weight obesity, which may partially bridge this knowledge gap. METHODS: We reviewed recently published evidence on normal weight obesity. FINDINGS: Normal weight obesity is a common public health problem and may be prevalent in up to one-third of individuals of certain Asian ethnicities. Literature is emerging on its pathophysiology and association with metabolic diseases, such as type 2 diabetes mellitus, hypertension, and dyslipidemia. More recently, normal weight obesity was also identified as an independent strong predictor of cardiovascular mortality. However, evidence is particularly lacking on its appropriate management. IMPLICATIONS: Normal weight obesity is an underrecognized yet widely prevalent problem in individuals of Asian descent. Further research on pathogenic mechanisms, diagnostic modalities, and therapeutic options in individuals with normal weight obesity is needed to appropriately manage this condition.</p>				(BIOXBIO - 2018) H-Index: 123
280.	<p>Karthikeyan, M., Arakkal, D., Mangalaraj, A. M. and Kamath, M. S. Comparison of Conventional Slow Freeze versus Permeable Cryoprotectant-Free Vitrification of Abnormal Semen Sample: A Randomized Controlled Trial J Hum Reprod Sci; 2019, 12 (2): 150-155 <b>Address:</b> Department of Reproductive Medicine, Reproductive Medicine Unit, <b>Christian Medical College and Hospital, Vellore</b>,</p>	INT	JUL TO DEC	Reproductive Medicine	PMID: 31293330 Impact Factor: 1.19 (RG - 2018) H-Index: 25

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Tamil Nadu, India.</p> <p>Background: The cryopreservation of semen samples by slow freezing remains as standard protocol. Recently, vitrification of spermatozoa was successfully reported with superior outcome. Till date, there is no randomized trial comparing the two different protocols. Aim: The aim of the present study is to evaluate the slow freezing with vitrification of the subfertile men spermatozoa to evaluate the progressive motility, vitality, and chromatin integrity. Setting: The study was conducted at University teaching hospital. Design: Study design involves randomized control trial. Materials and Methods: Twenty subfertile men with semen characteristics of severe oligoasthenozoospermia (SOA) and very SOA (VSOA) randomized to undergo slow freezing and vitrification protocol and cryopreserved at 1-month and 6-month storage interval, postthawed or warmed, samples were assessed for progressive motility, vitality, and hyaluronan binding. SPSS version 14 software was used for statistical analysis. Results: The SOA samples at 1 month revealed significantly higher motility (42% [22%-74%] vs. 7% [1%-13%]; P = 0.015) and vitality (57% [45%-78%] vs. 34.5% [27-42]; P &lt; 0.001) following vitrification compared to slow-freeze method. For Very severe oligoasthenozoospermia (VSOA), the motility was significantly higher following vitrification (14.5% [2%-32%] vs. 2.5% [0%-4%]; P = 0.007). At 6 months, no statistically significant difference in motility was found between the two groups for Severe Oligoasthenozoospermia (SOA) samples (27% [13%-62%] vs. 8% [0%-11%]; P = 0.066), but motility was significantly higher following vitrification for VSOA samples (12.5% [3%-32%] vs. 2% [1%-5%]; P = 0.019). The hyaluronan-binding assay was comparable in both the groups at 6 months. Conclusions: The current study found the vitrification method involving the use of only nonpermeable cryoprotectants for cryopreservation of abnormal semen sample to be an effective alternative to the conventional slow-freeze technique.</p>				
281.	<p>Karthikeyan, V. S., Karthikeyan, A., Sivanandam, S. E., Kumar, M. and Venkatesh, U.</p> <p>Efficacy of percutaneous nephrolithotomy in patients with chronic kidney disease due to renal calculi</p> <p>International Journal of Urology; 2019, 26 69-69</p>	INT	JUL TO DEC	Urology	<p><b>PMID:</b> WOS:000479045500173</p> <p><b>Impact Factor: 2.107</b> <b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 61</b></p>
282.	<p>Karthikeyan, V. S., Karthikeyan, A., Sivanandam, S. E., Kumar, M. and Venkatesh, U.</p> <p>Urodynamic profile of young males presenting with obstructive lower urinary tract symptoms and their outcomes</p> <p>International Journal of Urology; 2019, 26 123-123</p>	INT	JUL TO DEC	Urology	<p><b>PMID:</b> WOS:000479045500317</p> <p><b>Impact Factor: 2.107</b> <b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 61</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
283.	<p>Kasirajan, A., Mammen, S., Kannangai, R. and Abraham, A. M. Phylogenetic analysis of partial pre-membrane and envelope sequences of dengue viruses circulating in India Int J Infect Dis; 2019, <b>Address:</b> Dept. of Clinical Virology, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India. Dept. of Clinical Virology, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India. Electronic <b>Address:</b> asha_ma@cmcvellore.ac.in.</p> <p>OBJECTIVE: Phylogenetic characteristics of circulating Indian dengue viruses (DENV) were analysed using partial pre-membrane (PrM) and envelope (E) sequences. An immunodominant region was analysed for mutations, and alignment with common DENV PCR primers and probes was determined. METHODS: Published Indian PrM and E DENV sequences were analysed with hitherto unpublished PrM sequences from this study site. Alignments of DENV were checked for mutations in an immunodominant region and against the commonly used PCR primers and probes. RESULTS: All four serotypes of DENV circulate in India. Genotype (G) GIII and GI of DENV-1 co-circulated in the south with significant PrM mutations before and after 2012. DENV-2 American genotype was first reported after which the Cosmopolitan genotype co-circulated with it in the southwest. The Cosmopolitan strain has been the only DENV-2 genotype circulating, although an Asian American genotype was recently reported. Significant mutations were found in the E region of DENV-2 strains. DENV-3 strains were GIII across the country. DENV-4 GI from the south and west has now spread across India. No significant mutations were found for DENV-3 or DENV-4. Indian strains showed mutations in an immunodominant region of the E gene and in the regions targeted by commonly used PCR primers and probes. CONCLUSIONS: The genetic variability of Indian DENV with co-circulation of multiple genotypes suggests that genotype surveillance is crucial to determining the composition of dengue vaccines and understanding their contribution to epidemiology, virus fitness and pathogenesis. Some mutations seen in an immunodominant region of the E gene may allow these viruses to evade host immune cells. The mutations in the regions targeted by commonly used primers and probes necessitate higher degeneracy.</p>	INT	JAN TO JUN	Clinical Virology	<p><b>PMID:31002930</b> <b>PMC</b> <b>Impact Factor: 0.81</b> <b>(RG-2018)</b> <b>H-Index: 73</b></p>
284.	<p>Katti Sara, Regi Thomas ABS-068: Rare but Aggressive Tumors of the Anterior Skull Base Journal of Head &amp; Neck Physicians and Surgeons; 2019, 7 (3):S39 Department of ENT, Unit 1, <b>CMC, Vellore</b>, Tamil Nadu, India.</p>	NAT	JUL TO DEC	Head and Neck Surgery	<p><b>Impact Factor: 0.472</b> <b>H-Index: NA</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>E-mail: <a href="mailto:blessysarah@gmail.com">blessysarah@gmail.com</a></p> <p>Background: Malignant tumors of the paranasal sinuses are rare (3% of all the malignancies) but can cause serious complications in adults. In this study we would like to discuss the presentation, course of management and post treatment results of rare histologies. Methods: A retrospective chart review is done and the data is collected and analyzed. Results: A total of 5 patients are recruited into this study. Of these two patients had teratocarcinosarcoma and there were one each of basaloid type of squamous cell carcinoma, metastatic clear cell carcinoma of the nasal cavity with probable primary in urogenital tract and myeloid sarcoma of sphenoid sinus. There were 4 women and 1 man in this cohort with a mean age of 45.8 years. The most common symptoms were nasal obstruction, epistaxis and pain on applying pressure over the surface of the nose. Two patients had eye symptoms at the time of presentation. These tumors are very aggressive and 3 patients has extension into intracranial and intra orbital space. Surgery followed by radiation therapy was the main stay of treatment. Myeloid sarcoma underwent chemotherapy. Survival rates are very poor in these malignancies and 3 patients had less than 5-year survival rate. Conclusion: Histological differences in the malignancies of para nasal sinuses plays a pivotal role in the presentation, treatment and outcomes of them. Aggressive histologies like the above needs a radical resection of the tumor and one should be aware of the poor prognosis in these malignancies when planning on treatment.</p>				
285.	<p>Kattula, D., Jiwanmall, S. A., Sekaran, B. S. and Sharma, S. Silent colonic perforation and enterocutaneous fistula by a ball point pen 13 years after ingestion in a patient with schizophrenia J Family Med Prim Care; 2018, 7 (5): 1093-1095</p> <p><b>Address:</b> Department of Psychiatry, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Surgery, Stanley Medical College, Chennai, Tamil Nadu, India.</p> <p>Patients with mental illness do not get medical and surgical attention as required. Here is a case of poor, unemployed gentleman with an ulcer which was carefully evaluated and treated appropriately. The presentation is novel in many other ways. The object of size 6 x 2.5 cm usually does not cross the duodenum, but in his case an 11-cm long pen had reached the splenic flexure. It also had stayed dormant for over 13 years before causing complications. When the pen perforated the bowel, the patient is expected to present with acute</p>	NAT	JAN TO JUN	Psychiatry	<p><b>PMID:30598965</b> <b>PMC ID:6259548</b> <b>Impact Factor: 0.21</b> <b>(RG-2018)</b> <b>H-Index: NA</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	abdomen, but in this case it presented as enterocutaneous fistula. This case is first of its kind in medical literature.				
286.	Kaur, N., Michael, J. S. and Toley, B. J. A modular paper-and-plastic device for tuberculosis nucleic acid amplification testing in limited-resource settings Scientific Reports; 2019, 9 (1): <b>Address:</b> Department of Chemical Engineering, Indian Institute of Science, Bangalore, 560012, India Department of Microbiology, <b>Christian Medical College, Vellore, 632004, India</b>	INT	JUL TO DEC	Microbiology	<b>PMC Article 35378</b>
287.	Kawade, A., Babji, S., Kamath, V., Raut, A., Kumar, C. M., Kundu, R., Venkatramanan, P., Lalwani, S. K., Bavdekar, A., Juvekar, S., Dayma, G., Patil, R., Kulkarni, M., Hegde, A., Nayak, D., Garg, B. S., Gupta, S., Jategaonkar, S., Bedi, N., Maliye, C., Ganguly, N., Uttam, K. G., Niyogi, P., Palkar, S., Hanumante, N., Goyal, N., Arya, A., Aslam, M., Parulekar, V., Dharmadhikari, A., Gaikwad, D., Zade, J., Desai, S., Kang, G. and Kulkarni, P. S. Immunogenicity and lot-to-lot consistency of a ready to use liquid bovine-human reassortant pentavalent rotavirus vaccine (ROTASIIL - Liquid) in Indian infants Vaccine; 2019, 37 (19): 2554-2560 <b>Address:</b> Vadu Rural Health Program, KEM Hospital Research Centre, Vadu, Pune, India The Wellcome Trust Research Laboratory, <b>Christian Medical College Vellore, India</b> Manipal Academy of Higher Education, Manipal, India Mahatma Gandhi Institute of Medical Sciences, Sevagram, India Hamdard Institute of Medical Sciences and Research Delhi, India Institute of Child Health Kolkata, India Sri Ramachandra Medical Centre, Chennai, India Bharati Vidyapeeth Medical College & Hospital, Pune, India Centre for Health Research and Development, Society for Applied Studies Delhi, India DiagnoSearch Life Sciences Pvt Ltd, Mumbai, India Serum Institute of India Pvt. Ltd., Pune, India	INT	JUL TO DEC	Wellcome Trust Research Laboratory	<b>PMC Article 35346</b> <b>Impact Factor: 3.269 (BIOXBIO - 2018)</b> <b>H-Index: 164</b>
288.	Kaza, P., Mahindroo, J., Veeraraghavan, B., Mavuduru, R. S., Mohan, B. and Taneja, N. Evaluation of risk factors for colistin resistance among uropathogenic isolates of Escherichia coli and Klebsiella pneumoniae: a case-control study J Med Microbiol; 2019, 68 (6): 837-847	INT	JAN TO JUN	Medical Microbiology	<b>PMID:31084700</b> <b>Impact Factor: 2.112 (BIOXBIO-2018)</b> <b>H-Index: 105</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> 1 Department of Medical Microbiology, PGIMER, Chandigarh, India.                      2 Department of Medical Microbiology, <b>CMC Vellore</b>, Tamil Nadu, India.                      3 Department of Urology, PGIMER, Chandigarh, India.</p> <p>INTRODUCTION: The last few years have seen the emergence of multi-drug resistant (MDR) Gram-negative infections, which are associated with high morbidity and mortality. The indiscriminate use of colistin has led to the development of resistance, which can be diagnosed effectively by broth microdilution. Studies from India are limited, and this study was conducted in order to determine the prevalence and risk factors associated with colistin resistance. METHODS: Urine samples from patients admitted with urinary tract infection (UTI), growing MDR Escherichia coli and Klebsiella pneumoniae, were tested for the minimum inhibitory concentration (MIC) of colistin by broth microdilution. Isolates with an MIC &gt;2 microg ml(-1) (resistant) were subjected to polymerase chain reaction (PCR) for the mcr1, mcr2 and mgrB genes. A case-control study with 21 cases (resistant) and 42 matched controls (sensitive) was designed to evaluate risk factors and outcomes (recurrent UTI, readmission and hospital stay &gt;2 weeks). RESULTS: Two hundred and fifty MDR isolates (E. coli=142/2319 and K.pneumoniae=108/775) from 216 patients were selected from the 25 046 isolates screened. Twenty-five isolates (20 K.pneumoniae and 5 E. coli) were resistant to colistin, with a prevalence of 3.52 % in E. coli and 18.5 % in K. pneumoniae among the MDR isolates. PCR for the mcr1 and mcr2 genes was negative. Multivariate regression showed that multiple episodes of hospitalization, hospital stay &gt;2 weeks, exposure to &gt;three antibiotic classes and abnormality/surgery of the lower urinary tract were the significant risk factors for colistin resistance. Previous use of colistin and colistin resistance had a significant effect on all outcomes. CONCLUSIONS: K. pneumoniae show six times higher prevalence of colistin resistance than E. coli, and the emergence of resistant organisms has led to an increase in morbidity in infected patients.</p>				
<b>289.</b>	<p>Kennedy, N. T., Sebastian, A., Thomas, D. S., Thomas, A., Gupta, M., Kumar, R. M. and Peedicayil, A.                      Diagnostic Accuracy of Frozen Section and Its Influence on Intraoperative Management of Indeterminate Epithelial Ovarian Tumors                      Indian J Surg Oncol; 2019, 10 (2): 268-273</p>	<b>NAT</b>	<b>JAN TO JUN</b>	Gynecologic Pathology Oncology,	<p><b>PMID:31168246</b>  <b>PMC ID:6527664</b>  <b>Impact Factor: 0.30</b>  <b>(RG-2018)</b>  <b>H-Index: 12</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> 1Department of Obstetrics &amp; Gynaecology, University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State Nigeria.grid.412738.b                      2Department of Gynecologic Oncology, <b>Christian Medical College &amp; Hospital, Vellore</b>, 632004 Tamil Nadu India.0000 0004 1767 8969grid.11586.3b                      3Department of Pathology, <b>Christian Medical College &amp; Hospital, Vellore</b>, 632004 Tamil Nadu India.0000 0004 1767 8969grid.11586.3b</p> <p>The objective of this study is to determine the diagnostic accuracy of frozen section in detecting epithelial ovarian tumor histological types and its effect on management. A retrospective review was done of all patients who had an intraoperative frozen section for an indeterminate ovarian tumor over a six-year period. The reference standard was final histology. The validity indices for frozen section in diagnosing benign, borderline, and malignant lesions were determined. One hundred thirty-five intraoperative frozen section-diagnosed epithelial ovarian tumors were reviewed. The mean age was 44.9 +/- 14.2 years, the median parity was 2, and 57% (77/135) of patients were post-menopausal. The commonest histological subtype was mucinous 48.1% (65/135) on frozen section and 46.7% (63/135) on final histology. The overall concordance rate of frozen section to final histology was 81.5% (k = 0.719, p = 0.0001). The accuracy, sensitivity, specificity, and positive predictive value of frozen section to diagnose benign lesions were 86.7%, 85.7%, 97.2%, and 79.2% respectively. In borderline tumors, the diagnostic test characteristics were 88.1%, 81.2%, 90.3%, and 72.2%. For malignant lesions, these values were 88.1%, 77.8%, 95.1%, and 91.3% respectively. The odds ratios for frozen section being correct were 40.9 (95% CI 14.8-113.5) for benign lesions, 40.3 (95% CI 13.4-121.3) for borderline tumors, and 67.4 (95% CI 20.5-222.0) for malignancy. Over-treatment or under-treatment occurred in 19.3% of patients. Intraoperative frozen section is useful in situations where the nature of the ovarian tumor is uncertain. However, borderline ovarian tumors are more likely to be over-diagnosed. About a fifth of patients received inappropriate treatments based on the frozen section report.</p>				
290.	<p>Kettimuthu, K. P., Kini, A., Manickam, A. S., Lourthuraj, A. A., Venkatraman, A., Subramani, S. and Ramachandran, A.                      Cleistanthus collinus poisoning affects mitochondrial respiration and induces oxidative stress in the rat kidney                      Toxicol Mech Methods; 2019, 29 (8): 561-568</p>	INT	JAN TO JUN	Gastrointestinal Sciences, Center for Stem Cell Research, Physiology.	<p><b>PMID:31161845</b>  <b>PMC</b></p> <p><b>Impact Factor: 1.994</b>  <b>(BIOXBIO-2018)</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> a Division of Gastrointestinal Sciences , The Wellcome Trust Research Laboratory , Vellore , India.  b Center for Stem Cell Research , Vellore , India.  c Department of Physiology , <b>Christian Medical College</b> , Vellore , India.</p> <p>Cleistanthus collinus is a poisonous shrub used for deliberate self-harm in rural areas of South India and intake of boiled decoction of leaves is a common method of self-harm. Distal renal tubular acidosis (dRTA) is an important clinical symptom observed in C. collinus poisoning, and renal V-ATPases may be potential targets of damage. However, a lack of understanding of molecular mediators involved hampers medical management, which is mainly supportive. We hypothesized that C. collinus poisoning induces renal oxidative stress; probably by inducing mitochondrial uncoupling, which compromises V-ATPase activity to ultimately produce dRTA. This was tested by exposing renal BBMV, kidney cells in culture, and Wistar rats to C. collinus poisoning. Exposure to C. collinus aqueous extract resulted in significant elevations in the lipid peroxidation marker, conjugated dienes, in cell culture and in vivo. A significant decrease in mitochondrial respiratory control ratio was observed in kidneys from C. collinus-treated animals suggesting that mitochondrial oxidative phosphorylation is uncoupled. This was accompanied by significant increase in ADP levels and a decrease in proton pump activity. Thus, these results demonstrate that C. collinus poisoning induces oxidative stress which influences proton pump activity, probably due to feedback inhibition by elevated ADP levels because of mitochondrial dysfunction in the rat kidney.</p>				<b>H-Index: 35</b>
<b>291.</b>	<p>Khanna, Soumya, Gupta, Ashish Kumar, Cherian, Anish Jacob, Yadav, Bijesh and Jacob, Paul Mazhuvanchary  Post Mastectomy Lymphedema Prospective Study of Incidence and Risk Factors  Indian Journal of Surgery; 2019, 81 (1): 16-22  The aim of this study is to document the incidence of early lymphedema and study the risk factors influencing post mastectomy lymphedema. It is a prospective cohort study involving 98 adult women who underwent surgery including axillary lymph node dissection for biopsy-proven breast carcinoma. Serial measurements of the arm were taken preoperatively and postoperatively at 3, 6 and 12 months. Lymphedema was diagnosed if there was an increase in girth by more than 2cm in the concerned limb. All patients received standard lymphedema prevention advice. Risk factors assessed were</p>	<b>NAT</b>	<b>JUL TO DEC</b>	Endocrine Surgery	<b>PMID:</b> WOS:000464183700005 <b>Impact Factor:</b> 0.550 <b>(BIOXBIO - 2018)</b> <b>H-Index: 17</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	age, body mass index, comorbid conditions, hypertension, medications, socioeconomic status, upper limb symptoms, laterality of disease, type of surgery, stage of the disease, histopathology, node status, wound complication, receptor status, seroma volume, duration of seroma drainage, radiotherapy, chemotherapy, post radiation skin reaction and post therapy weight gain. The statistical analysis was done using chi-square test with SPSS version 16. The incidence of lymphedema was 23.47%. The univariate analysis showed that prolonged or high volume seroma, taxane-based chemotherapy, radiotherapy to axilla and skin necrosis following radiation were significantly associated with lymphedema. In the multivariate analysis, only post radiation skin necrosis was significant.				
292.	<p>Khiangte, H. L., Robinson Vimala, L., Veeraraghavan, B., Yesudhasan, B. L. and Karuppusami, R. Can the imaging manifestations of melioidosis prognosticate the clinical outcome? A 6-year retrospective study Insights into Imaging; 2019, 10 (1): 17</p> <p><b>Address:</b> Department of Radiodiagnosis, <b>Christian Medical College Vellore</b>, Tamil Nadu, 632004, India. Department of Radiodiagnosis, <b>Christian Medical College Vellore</b>, Tamil Nadu, 632004, India. leenarv76@gmail.com. Department of Microbiology, <b>Christian Medical College Vellore</b>, Tamil Nadu, 632004, India. Department of Biostatistics, <b>Christian Medical College Vellore</b>, Tamil Nadu, 632004, India.</p> <p>OBJECTIVE: Melioidosis being an important cause of community-acquired sepsis, caused by Burkholderia pseudomallei in the tropical and subtropical countries, is often underreported or misinterpreted on imaging investigations. We aim to describe the spectrum of imaging manifestations of melioidosis and to evaluate its role in prognosticating clinical outcome, and look for association of specific organ involvement with risk factors. METHODS: From January 2011 to October 2017, retrospective analysis of imaging investigations of 189 consecutive patients with culture-proven melioidosis was performed. Clinical and demographic records were collected from the hospital medical records. RESULTS: Out of 67% with a localised disease musculoskeletal involvement was most common, whereas the common organs involved in disseminated infections were the lungs, spleen, liver and genitourinary tract in descending order. Twenty percent suffered unfavourable outcome</p>	INT	JAN TO JUN	Radiodiagnosis, Microbiology, Biostatistics.	<p><b>PMID:30758675</b> <b>PMC ID:6375099</b> WOS:000458923000004 <b>Impact Factor: 1.92</b> <b>(RG-2018)</b> <b>H-Index: 28</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	with a mortality rate of 8.5%. The lung involvement was associated with unfavourable outcome (OR 3.2 [95%CI 1.54-6.63] p = 0.002). The lymph node involvement (OR 0.22 [95% CI 0.05-0.95] p = 0.04) predicted a favourable outcome. Those with diabetes were at a higher risk of splenic (OR 3.05 [95% CI 1.62-5.77]; p = 0.001) and musculoskeletal involvement (OR 2.14 [95% CI 1.09-4.17] p = 0.03) of melioidosis. CONCLUSIONS: In this study, we have described the spectrum of imaging manifestation of melioidosis and evaluated its association with clinical outcome. Respiratory system involvement in melioidosis showed significant association with unfavourable outcome. Diabetes mellitus, a common risk factor for melioidosis, is more prone for infection of the spleen and musculoskeletal system. Thus awareness of imaging manifestations of melioidosis can complement microbiological diagnostic tests for accurate early diagnosis and management.				
293.	<p>Kiron, V. and George, P. V. Correlation of cumulative ST elevation with left ventricular ejection fraction and 30-day outcome in patients with ST elevation myocardial infarction J Postgrad Med; 2019, 65 (3): 146-151</p> <p><b>Address:</b> Department of Cardiology, <b>Christian Medical College, Vellore, Tamil Nadu, India, USA.</b></p> <p>Background: The electrocardiogram (ECG) is the first and often the only investigation available prior to definitive therapy in patients with ST elevation myocardial infarction (STEMI). A good prognostic marker is the left ventricular ejection fraction (LVEF) on ECG. Our aim was to assess the correlation between ST elevation (STE) in ECG and the LVEF and thereby aid the prognosis of patients with STEMI. Methods: This was a prospective cohort study of 230 patients with STEMI. A baseline 12-lead ECG was taken to calculate the sum of STE at the J point in all the leads showing elevation. The STE was measured 90 min after revascularization to calculate the ST resolution percentage (STR%). All patients underwent echocardiography, and the LVEF was measured using biplane Simpson's method. Results: A total of 136 patients with anterior myocardial infarction (MI), 35 with inferior MI, and 59 with inferoposterior MI were included in the study. Mean STE was 13 mm and was significantly higher among patients with anterior MI. There was a good inverse correlation between the STE and the LVEF with a correlation coefficient of -0.64. STR% had a correlation coefficient of 0.59 to the LVEF. A formula was generated to calculate the LVEF</p>	INT	JAN TO JUN	Cardiology	<p><b>PMID:31169133</b> <b>PMC</b> <b>Impact Factor: 0.60</b> <b>(RG-2018)</b> <b>H-Index: 49</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	based on the STE as follows: $LVEF = (37.34 - STE)/0.567$ . An STE $\geq 15$ mm predicted an LVEF $< 35\%$ with a sensitivity and specificity of 70%. Conclusion: The STE and STR% are useful surrogate markers in prognosticating patients irrespective of the type of STEMI.				
294.	<p>Kirthiga, M., Murugan, M., Saikia, A. and Kirubakaran, R.                      Risk Factors for Early Childhood Caries: A Systematic Review and Meta-Analysis of Case Control and Cohort Studies                      Pediatric Dentistry; 2019, 41 (2): 95-112</p> <p><b>Address:</b> Department of Pedodontics and Preventive Dentistry, Faculty of Dental Sciences, Sri Ramachandra Institute of Higher Education and Research, Dr. M is an Early Career Research fellow (Wellcome Trust DBT India Alliance), Chennai, Tamil Nadu, India                      Dr. Murugan is Head of Center for Early Childhood Caries Research (CECCRe), Department of Pedodontics and Preventive Dentistry, Faculty of Dental Sciences, Sri Ramachandra Institute of Higher Education and Research, Chennai, Tamil Nadu;, Email: Pedo Planet - Children's Dental Centre, Dr. Saikia is a pediatric dental surgeon, Chennai, India</p> <p><b>Christian Medical College,</b> Dr. Kirubakaran is a biostatistician, South Asian Cochrane Network and Centre, Vellore, Tamil Nadu, India</p> <p>Purpose: The purpose of this study was to perform a systematic review to assess current evidence for association between various risk factors and the prevalence or incidence of early childhood caries (ECC). Methods: Two reviewers searched various databases until January 2019. The Newcastle-Ottawa scale was used to perform risk of bias assessment. The included studies were categorized according to the World Bank classification. Data were summarized in a meta-analysis using fixed and random effects inverse-generic meta-analyses. Results: A total of 7,034 records involving 89 studies that evaluated 1,352,097 individuals were included; 23 were high, 46 were moderate, and 20 were of low quality. A total of 123 risk factors were found. Meta-analysis revealed that the strongest risk factors found in the high-income countries were presence of dentinal caries (dmft greater than zero; odds ratio [OR] equals 4.21 [2.18 to 8.16]) and high levels of mutans streptococci (OR equals 3.83 [1.81 to 8.09]). In upper-middle-income countries, presence of enamel defects (OR equals 14.62 [6.10 to 35.03]) was found to be the strongest risk factor. Conclusion: The strongest risk factors associated with early childhood caries was the presence of enamel defects, presence of dentinal caries and high levels of mutans</p>	INT	JUL TO DEC	Biostatistics, South Asian Cochrane Network and Centre	<b>PMID:</b> 30992106 <b>PMC Article 35406</b> <b>Impact Factor: 1.178 (BIOXBIO - 2018)</b> <b>H-Index: 62</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	streptococci.				
295.	<p>Kiruthiga, K. G., Kodiatte, T. A., Burad, D., Kurian, R., Raju, R. S., Rymbai, M. L., Jagannathan, A. M. and Vyas, F. L.                      Intracholecystic papillary-tubular neoplasms of the gallbladder - A clinicopathological study of 36 cases                      Ann Diagn Pathol; 2019, 40 88-93</p> <p><b>Address:</b> Department of General Pathology, <b>Christian Medical College, Vellore, India.</b>                      Department of General Pathology, <b>Christian Medical College, Vellore, India.</b> Electronic <b>Address:</b> thomaskodi@cmcvellore.ac.in.                      Department of Hepatopancreatobiliary Surgery, <b>Christian Medical College, Vellore, India.</b></p> <p>Intracholecystic papillary-tubular neoplasms (ICPNs) account for &lt;0.5% of all cholecystectomies. There is a lack of significant published data from the Indian subcontinent on ICPN to the best of our knowledge. The objective of the current study was to describe the clinicopathological features of ICPN of gallbladder from the departmental archives during a 5.5-year period. We also aimed to classify them into various histological subtypes and to correlate the clinicopathological parameters of ICPN with invasive adenocarcinoma. This study included 36 cases diagnosed over a period of 5.5years (2013-2018). Clinical, radiological and histopathological data were analyzed in detail. The incidence of ICPN was 0.8%. The mean age of patients was 45.7years with a female to male ratio of 1.3:1. Biliary phenotype was associated with invasion (<math>p \leq 0.001</math>). Papillary pattern was present in 15 cases (41.6%) and was associated with invasion (<math>p \leq 0.001</math>). High grade dysplasia was seen in 34 cases (94.4%), of which invasion was seen in 18 cases (50%). One case in our study also had synchronous common bile duct carcinoma. Majority (92%) of the patients were alive and well at the end of available follow-up (mean of 7months and 25days). ICPNs are mass forming neoplasms of the gallbladder with a slight female predominance. Biliary phenotype has an aggressive course, often associated with an invasive adenocarcinoma component. Papillary configuration of the lesion is significantly associated with an invasive component. Diligent follow-up of these lesions is warranted as they can be associated with other malignancies of the biliary system.</p>	INT	JAN TO JUN	General Pathology, Hepatopancreatobiliary Surgery.	<p><b>PMID:31077876</b>  <b>PMC</b>  <b>Impact Factor: 1.633</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 49</b></p>
296.	<p>Kitai, I., Rea, E. and Rose, W.                      Analysis and Reporting of Tests for Tuberculosis Infection in Childhood Contacts of Infectious Source Cases</p>	INT	JUL TO DEC	Child Health	<p><b>PMID: 31261357</b>  <b>Impact Factor: 2.317</b>  <b>(BIOXBIO - 2018)</b></p>



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Pediatr Infect Dis J; 2019, 38 (8): e191 <b>Address:</b> Division of Infectious Diseases, The Hospital for Sick Children, Department Of Pediatrics, University of Toronto, Toronto, Ontario, Canada Toronto Public Health, Dalla Lana School of Public Health, Toronto, Ontario, Canada Department of Child Health, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>				<b>H-Index: 133</b>
297.	Konay, A. S., Williams, A., Chacko, A. G. and Singh, G. A Prospective Randomized Trial Comparing Topical Intranasal Lidocaine and Levobupivacaine in Patients Undergoing Endoscopic Binostril Transnasal Transsphenoidal Resection of Pituitary Tumors J Neurosurg Anesthesiol; 2019, <b>Address:</b> Department of Anesthesiology. Department of Neurosurgery, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> INTRODUCTION: Local anesthetic intranasal packing is used in transnasal surgery to reduce hemodynamic fluctuations. We hypothesized that the long acting local anesthetic levobupivacaine would provide superior hemodynamic stability and postoperative analgesia compared with lidocaine in endoscopic transnasal transsphenoidal (TNTS) surgery. MATERIALS AND METHODS: In this prospective, randomized, double-blind trial, 48 patients undergoing TNTS surgery were allocated to the 2 groups to receive preoperative intranasal packing with 15 mL of 1.5% lidocaine or 0.5% levobupivacaine each mixed with 60 mg ephedrine. Heart rate and mean arterial blood pressure were recorded immediately before induction of anesthesia, at various time points throughout surgery, and at tracheal extubation. Bleeding in the surgical field, time to extubation, and postoperative pain were also assessed. RESULTS: There was no significant difference in heart rate between the lidocaine and levobupivacaine groups at any point. Mean arterial pressure was also similar between the 2 groups during surgery, whereas at extubation blood pressure was lower in the lidocaine compared with levobupivacaine group (85+/-10 vs. 96+/-16 mm Hg; P=0.0010). There were no differences between the 2 groups in the other outcome variables. CONCLUSIONS: Preoperative intranasal packing with 1.5% lidocaine or 0.5% levobupivacaine provide similar hemodynamic stability throughout TNTS. Lidocaine packing may be more advantageous for hemodynamic stability during extubation.	INT	JUL TO DEC	Neurosurgery	<b>PMID:</b> 31259755 <b>Impact Factor:</b> 2.957 <b>(BIOXBIO - 2018)</b> <b>H-Index: 57</b>
298.	Korula, A., Devasia, A. J., Fouzia, N. A., Nisham, P. N., Kulkarni, U., Lakshmi, K. M., Abraham, A., Srivastava, A., Mathews, V. and George, B. Outcomes Following Allogeneic Stem Cell Transplantation Using	NAT	JAN TO JUN	Haematology	<b>PMID:</b> 30828147 <b>PMC ID:</b> 6369069 <b>Impact Factor: 0.26</b> <b>(RG-2018)</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Non-sibling Family Donors Indian J Hematol Blood Transfus; 2019, 35 (1): 43-49</p> <p><b>Address:</b> Department of Haematology, <b>Christian Medical College and Hospital, Vellore,</b> 632004 India.0000 0004 1767 8969grid.11586.3b</p> <p>For patients requiring allogeneic stem cell transplant, in the absence of a HLA-matched sibling, an extended donor search within the family may yield a suitable donor especially in societies with a high prevalence of consanguinity. We describe outcomes in transplants with non-sibling family donors, and compare outcomes with controls having a sibling donor transplant. Retrospective analysis of all matched related (non-sibling) donor transplants between 1995 and 2015. For comparison, appropriate age, sex and disease-matched patients were chosen from the sibling transplants (MSD) performed during the same time period (+/- 2 years). Comparison between the fully matched non-sibling donor cohort and age, sex and disease-matched sibling donor transplants showed a significant increase in complications in the family donor group (viral infections, acute GVHD and rejection). Event-free survival and overall survival were significantly lower in the non-sibling donor cohort, and HLA disparity (1-2 antigen) further worsened the adverse impact. Though there was a significantly lower event-free and overall survival at 3 years in the family donor cohort, this did not retain significance in the multivariate analysis. This data on allogeneic transplants using family donors showed higher complication rates and poorer outcomes. However in situations where financial constraints prevent access to matched unrelated donor sources, extended family searches may be fruitful in yielding a donor, and modifications in conditioning regimens and improvement in supportive care may help in improving the outcomes in family donor transplants.</p>				<b>H-Index: 12</b>
299.	<p>Korula, A., Devasia, A. J., Kulkarni, U., Abubacker, F. N., Lakshmi, K. M., Abraham, A., Srivastava, A., George, B. and Mathews, V. Impact of imaging modality on clinical outcome in Hodgkin lymphoma in a resource constraint setting Br J Haematol; 2019, <b>Address:</b> Department of Haematology, <b>Christian Medical College, Vellore, India.</b></p> <p>Treatment of Hodgkin lymphoma (HL) has evolved with risk-stratified therapy based on PET-CT scan at multiple timepoints. In a resource constraint setting even a single PET-CT scan (\$400) is inaccessible to many patients, who are re-assessed with only clinical examination, abdominal ultrasonogram and/or x-ray (C/U/X) (\$10).</p>	INT	JUL TO DEC	Haematology	<b>PMID:31811734 PMC 35270</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>To compare clinical outcomes in patients with HL who have had suboptimal imaging after completion of chemotherapy for HL, with those who had a CT or PET-CT, 283 patients were treated for HL from 2011 to 2015, and 268 patients completed six cycles of ABVD therapy with response assessment modality by CT/PET in 185 patients and by C/U/X in 83. There was no difference in the number of patients with advanced (64.1% vs. 61.1%; P = 0.650) or bulk disease (8.1% vs. 7.2%). A significantly higher number of patients in the CT/PET group received IFRT (25.4% vs. 7.7%; P = 0.0005). The three-year overall survival and progression-free survival of all treated patients (n = 283) was 83.5 +/- 2.3% and 76.7 +/- 2.6% respectively [median follow-up 36 months (range 2-93)]. At three years, the overall relapse-free survival (RFS) was 80.1 +/- 2.5%, with RFS of 77 +/- 3.2% vs. 85 +/- 4.0% in the CT/PET group and C/U/X groups respectively (P = 0.349). There was no difference in RFS between the two groups either in early-stage disease (88.1 +/- 4.6% vs. 91.8 +/- 5.6%; P = 0.671) or late-stage disease (73.9 +/- 4.8% vs. 81.3 +/- 6.0%; P = 0.747). The only significant factor adversely affecting RFS was advanced disease (P = 0.004). Factors not affecting RFS were age (P = 0.763), sex (P = 0.925), bulk disease (P = 0.889) and imaging modality (P = 0.352). There was no difference in relapse rates between patients who had suboptimal imaging compared to those who had a PET/CT. It is possible to use these basic imaging modalities when resources are a constraint, with acceptable outcomes.</p>				
300.	<p>Korula, P. J., Nayyar, V., Stachowski, E., Karuppusami, R. and Peter, J. V.            An observational study on the practice of noninvasive ventilation at a tertiary level Australian intensive care unit            Aust Crit Care; 2019,  <b>Address:</b> Intensive Care Unit, Westmead Hospital, Westmead, NSW 2145, Australia. Electronic <b>Address:</b> pritishkorula@gmail.com.            University of Sydney, Intensive Care Unit, Westmead, Australia.            Intensive Care Unit, Westmead Hospital, Australia.            Dept of Biostatistics, <b>Christian Medical College and Hospital, Vellore, India.</b>            Division of Critical Care, <b>Christian Medical College, Vellore, India.</b></p> <p>BACKGROUND: Failure of Non-Invasive Ventilation (NIV) is associated with increased morbidity and mortality among critically ill patients. Although there is evidence of association between disease</p>	INT	JAN TO JUN	Biostatistics, Critical Care	<p><b>PMID:30670345</b>  <b>PMC</b>  <b>Impact Factor: 1.930</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 31</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	related factors and NIV failure, it is unclear whether factors related to NIV application contribute to NIV failure. OBJECTIVES: To evaluate NIV failure rate and factors associated with NIV failure. DESIGN, SETTINGS AND OUTCOMES: Prospective, observational, pilot study conducted in a 23-bed, tertiary care Intensive Care Unit (ICU). NIV failure was defined as application of NIV resulting in intubation or death in ICU. RESULTS: Amongst 238 patients admitted with respiratory failure, NIV was administered to 60 patients (34 males, 26 females) for a total of 70 application episodes. The etiology of respiratory failure included acute pulmonary edema (28.6%), acute lung injury (22.9%) and pneumonia (15.7%). The mean (SD) age was 62 (17.6) years, BMI 32.0 (8.5) kg/m(2) and median APACHE-II score 17.5 (14.0-23.8). NIV failure occurred in 22 out of 70 applications (31.4% [95%CI 20.0-43.0]). NIV failure assessed by simple logistic regression analysis, was associated with admission diagnosis (OR 6.0, 95%CI: 1.3-28.7, p = 0.03), use of bi-level NIV-PS (OR 5.00, 95%CI: 1.04-24.1, p = 0.04), presence of nasogastric tube (OR 6.20, 95%CI: 1.9-19.8, p < 0.01) and with short NIV breaks in the 2nd 24-hours (OR 0.96, 95%CI: 0.91-0.99, p = 0.04). CONCLUSION: NIV failure was observed in 31.4%. Factors associated with NIV failure were etiology of respiratory illness, type of NIV support and short NIV breaks, presumably reflecting illness severity or progress of disease. The presence of a nasogastric tube during application of NIV may adversely impact NIV application.				
301.	Korula, Sophy, Paul, Praveen George, Chapla, Aaron, Mathai, Sarah and Simon, Anna Clinical profile and follow-up analysis of Neonatal Diabetes Mellitus-single centre experience Hormone Research in Paediatrics; 2019, 91 396-396	INT	JUL TO DEC	Pediatrics, Endocrinology Pediatric	<b>PMID:</b> WOS:000485922404054 <b>Impact Factor:</b> 2.324 <b>(BIOXBIO - 2018)</b> <b>H-Index: 82</b>
302.	Koshy, M., Sadanshiv, P. and Sathyendra, S. Genitourinary melioidosis: a descriptive study Trop Doct; 2019, 49 (2): 104-107 <b>Address:</b> 1 Assistant Professor, Department of Medicine, <b>Christian Medical College, Vellore, India.</b> 2 Post graduate registrar, Department of Medicine, <b>Christian Medical College, Vellore, India.</b> 3 Professor, Department of Medicine, <b>Christian Medical College, Vellore, India.</b> Melioidosis is the disease caused by the soil and water bacterium, Burkholderia pseudomallei. Our study aimed to delineate its genitourinary manifestations. Over a 10-year period (2006-2016), 20 adults with culture-confirmed genitourinary melioidosis were identified. The patients were all men with a mean age of 45.3 +/-	INT	JUL TO DEC	Medicine	<b>PMID:</b> 30558480 <b>Impact Factor: 0.591</b> <b>(BIOXBIO - 2018/2019)</b> <b>H-Index: 31</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	12.3 years. The common risk factors were diabetes mellitus (65%) and alcoholism (25%); a majority of patients (90%) had chronic melioidosis. Most had disseminated disease (n = 17) and 55% were bacteraemic. The prostate was the organ most frequently involved (60%, n = 12), followed by the kidney, bladder and seminal vesicles. Diagnosis was established by blood and urine cultures and imaging. Patients were successfully treated with ceftazidime intensive therapy followed by eradication therapy, with surgical debridement and guided aspiration, when deemed necessary. There was one case fatality and no relapses. Melioidosis is an important differential to be considered in chronic genitourinary infections in the appropriate setting.				
303.	<p>Koshy, Maria, Jagannati, Manjeera, Ralph, Ravikar, Victor, Punitha, David, Thambu, Sathyendra, Sowmya, Veeraraghavan, Balaji and Varghese, George M.</p> <p>Clinical Manifestations, Antimicrobial Drug Susceptibility Patterns, and Outcomes in Melioidosis Cases, India</p> <p>Emerging Infectious Diseases; 2019, 25 (2): 316-320</p> <p>We studied the clinical manifestations and outcomes of 114 patients with culture-confirmed melioidosis treated at a tertiary hospital in southern India. Diabetes mellitus is the main risk factor, and chronic melioidosis mimicking tuberculosis was more common than acute disease. Septicemia and respiratory involvement were associated with poor outcomes.</p>	INT	JUL TO DEC	Infectious Diseases, Medicine, Clinical Microbiology	<p><b>PMID:</b> WOS:000456134000016</p> <p><b>Impact Factor:</b> 7.185</p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index:</b> 202</p>
304.	<p>Koti, K. A., Backianathan, S., Sebastian, P., Matthew, L. G., Raam, M. and Masih, D.</p> <p>A Rare Case of Gastric Metastasis in Ewing's Sarcoma of the Femur</p> <p>Case Rep Oncol Med; 2019, 2019 2870302</p> <p><b>Address:</b> Department of Radiation Oncology, <b>Christian Medical College, Vellore, India.</b></p> <p>Department of Child Health, <b>Christian Medical College, Vellore, India.</b></p> <p>Department of General Surgery, <b>Christian Medical College, Vellore, India.</b></p> <p>Department of Pathology, <b>Christian Medical College, Vellore, India.</b></p> <p>The stomach is a very unusual site of metastasis. Published reports on metastatic lesion in the stomach is generally limited to single case reports and case series. Gastric metastasis in an Ewing's sarcoma is extremely rare and has been reported in English literature but once to our knowledge. We present a case report of Ewing's sarcoma of</p>	INT	JAN TO JUN	Radiation Oncology, General Surgery, Child Health, Pathology	<p><b>PMID:31218087</b></p> <p><b>PMC ID:6537017</b></p> <p><b>Impact Factor: 0.41</b></p> <p><b>(RG-2018)</b></p> <p><b>H-Index: 5</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	the right proximal femur metastasizing to the stomach. A young female treated for Ewing's sarcoma of the femur in 2012 presented with gastric metastasis after four years of disease-free interval. She was treated with irinotecan-based chemotherapy followed by total gastrectomy with esophagojejunal anastomosis and radiation therapy. At one-year follow-up, she was disease free.				
305.	<p>Krabbe, Simon, Eshed, Iris, Gandjbakhch, Frederique, Pedersen, Susanne J., Bird, Paul, Mathew, Ashish J., Lambert, Robert G., Maksymowych, Walter P., Glinatsi, Daniel, Stoenoiu, Maria S., Poggenborg, Rene, Jans, Lennart, Jaremko, Jacob L., Herregods, Nele, Foltz, Violaine, Conaghan, Philip G., Althoff, Christian E., Paschke, Joel, Peterfy, Charles, Hermann, Kay-Geert A., Ostergaard, Mikkel and Grp, Omeract Mri Arthrit Working</p> <p>Development and Validation of an OMERACT MRI Whole-Body Score for Inflammation in Peripheral Joints and Entheses in Inflammatory Arthritis (MRI-WIPE)</p> <p>Journal of Rheumatology; 2019, 46 (9): 1215-1221</p> <p><b>Author Information</b></p> <p><b>Reprint Address:</b> Krabbe, S (reprint author)</p> <p>[1] Rigshosp, Ctr Rheumatol &amp; Spine Dis, Copenhagen Ctr Arthrit Res, Valdemar Hansens Vej 17, DK-2600 Copenhagen, Denmark.</p> <p><b>Addresses:</b></p> <p>[1] Univ Copenhagen, Rigshosp, Ctr Rheumatol &amp; Spine Dis, Copenhagen Ctr Arthrit Res, Copenhagen, Denmark</p> <p>[2] Univ Copenhagen, Dept Clin Med, Fac Hlth &amp; Med Sci, Copenhagen, Denmark</p> <p>[3] Tel Aviv Univ, Sackler Sch Med, Sheba Med Ctr, Dept Diagnost Imaging, Tel Aviv, Israel</p> <p>[4] Univ Pierre &amp; Marie Curie Paris 6, Sorbonne Univ, GRC 08 EEMOIS, Paris, France</p> <p>[5] Pitie Salpetriere Univ Hosp, AP HP, Rheumatol Dept, Paris, France</p> <p>[6] Univ New South Wales, Div Med, Sydney, NSW, Australia</p> <p>[7] <b>Christian Med Coll &amp; Hosp, Dept Clin Immunol &amp; Rheumatol, Vellore, Tamil Nadu, India</b></p> <p>[8] Univ Alberta, Dept Radiol &amp; Diagnost Imaging, Edmonton, AB, Canada</p> <p>[9] Univ Alberta, Dept Med, Edmonton, AB, Canada</p> <p>[10] CaRE Arthrit, Edmonton, AB, Canada</p> <p>[11] Catholic Univ Louvain, IREC, Clin Univ St Luc, Dept Rheumatol, Brussels, Belgium</p>	INT	JUL TO DEC	Rheumatology	<p><b>PMID:</b>WOS:000484027700027</p> <p><b>Impact Factor: 3.634 (BIOXBIO - 2018)</b></p> <p><b>H-Index: 165</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>[12] Ghent Univ Hosp, Dept Radiol, Ghent, Belgium                      [13] Univ Leeds, Leeds Inst Rheumat &amp; Musculoskeletal Med, Leeds, W Yorkshire, England                      [14] Leeds Teaching Hosp Natl Hlth Serv NHS, Leeds Biomed Res Ctr, NIHR, Leeds, W Yorkshire, England                      [15] Univ Hosp Charite, Arthrit Imaging Res Grp, Dept Radiol, Berlin, Germany                      [16] Spire Sci Inc, Boca Raton, FL USA                      [17] Rigshosp, Ctr Rheumatol &amp; Spine Dis, Copenhagen Ctr Arthrit Res, Valdemar Hansens Vej 17, DK-2600 Copenhagen, Denmark                      [18] Catholic Univ Louvain, IREC, Clin Univ St Luc, Dept Rheumatol, Louvain, Belgium</p> <p><b>E-mail Addresses:</b><a href="mailto:simonkrabbe@gmail.com">simonkrabbe@gmail.com</a></p> <p>Objective. To develop a whole-body magnetic resonance imaging (MRI) scoring system for peripheral arthritis and enthesitis. Methods. After consensus on definitions/locations of MRI pathologies, 4 multireader exercises were performed. Eighty-three joints were scored 0-3 separately for synovitis and osteitis, and 33 entheses 0-3 separately for soft tissue inflammation and osteitis. Results. In the last exercise, reliability was moderate-good for musculoskeletal radiologists and rheumatologists with previously demonstrated good scoring proficiency. Median pairwise single-measure / average-measure ICC were 0.67/0.80 for status scores and 0.69/0.82 for change scores; kappa ranged 0.35-0.77. Conclusion. Whole-body MRI scoring of peripheral arthritis and enthesitis is reliable, which encourages further testing and refinement in clinical trials.</p>				
306.	<p>Krishnamoorthy Y(1), Eliyas SK(1), Nair NP(2), Sakthivel M(1), Sarveswaran G(1), Chinnakali P(1).                      Impact and cost effectiveness of pneumococcal conjugate vaccine in India.                      Vaccine. 2019 Jan 21;37(4):623-630. doi: 10.1016/j.vaccine.2018.12.004. Epub 2018 Dec 23.</p> <p><b>Author information:</b>                      (1)Department of Preventive and Social Medicine, Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Puducherry 605008, India.                      (2)Wellcome Trust Research Laboratory, <b>Christian Medical College, Vellore, India.</b> Electronic address: <a href="mailto:nayanapnair.chinnu@gmail.com">nayanapnair.chinnu@gmail.com</a></p>	INT	JUL TO DEC	Wellcome Trust Research Laboratory	<p><b>PMID:</b> 30587430  <b>PMC Article</b>  <b>35348</b>  <b>Impact Factor:</b> 3.269  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 164</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>BACKGROUND: World Health Organization has recommended the introduction of pneumococcal conjugate vaccine (PCV) in the childhood immunisation programme of all the countries in the world. In lieu of its introduction in India, there is a need to generate evidence on cost-effectiveness of this vaccine. The current study looks into the impact and cost-effectiveness of PCV vaccine in India. METHODS: We evaluated the cost effectiveness of implementation of PCV 13 vaccination program at national level by comparing with no vaccination program for a period of 10 birth cohorts from 2018 to 2027. UNIVAC, a deterministic static cohort model is developed by giving the conservative estimates of vaccine program related to mortality, disease event rates, vaccine efficacy and coverage projections, system and health care costs for the first five years of life. Cost effectiveness is reported as Incremental Cost Effectiveness Ratio (ICER). Further scenario and sensitivity analysis were done. Probability of PCV intervention to be cost effective at a willingness to pay (WTP) threshold equal to per capita gross domestic product (GDP) is calculated using the government perspective. RESULTS: We found that the introduction of PCV vaccination program can cost an additional \$467 (INR 31,666) for averting per DALY which is less than one time GDP per capita of India. Even with the most unfavourable scenario for PCV vaccine, cost per DALY averted is found to be \$2323 (INR 1,57,520) which is still a cost effective intervention in India. Probabilistic sensitivity analysis found the ICER for PCV to be \$649 (INR 44,008) with 95% CI: \$374-\$1161. CONCLUSION: This study shows that the PCV program is a highly cost effective intervention and justifies the introduction of PCV into routine immunisation schedule in some of the states and recommends introducing it throughout the country to reduce morbidity and mortality among the under-five children. Copyright © 2018 Elsevier Ltd. All rights reserved. DOI: 10.1016/j.vaccine.2018.12.004</p>				
307.	<p>Krupa, M., Boominathan, P., Sebastian, S. and Venkat Ramanan, P. Child-directed communication behaviours during mother-child interaction in children with autism spectrum disorder and typically developing children in south India Research in Autism Spectrum Disorders; 2019, 67</p> <p><b>Address:</b> Sri Ramachandra Institute of Higher Education and Research, Chennai, India <b>Christian Medical College, Vellore, India</b></p>	INT	JUL TO DEC	Speech and Language Pathology	<p><b>PMC Article</b> <b>35383</b> <b>Impact Factor: 1.799</b> <b>(BIOXBIO – 2018 – 2019)</b> <b>H-Index: 59</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Child-directed verbal and non-verbal behaviours play a crucial role in the development of communication skills in young children. This study compared child-directed utterances and pragmatic acts used by mothers of 2-4 year old children with autism spectrum disorder (ASD) (n =50) with that of two groups of typically developing (TD) children: one matched for chronological age (TD-CA; n = 50) and other for language level (TD-LL; n=50). Forty minutes mother-child interaction during free play at home was analysed. Results indicated that the the number of utterances used by mothers in the three groups were similar. However, the type of sentences used by each group varied distinctly. Mothers in the ASD (49.1%) and TD-LL group (35.47%) predominantly used imperatives, while mothers in TD-CA group used more of interrogatives (50.12 %). Among the three groups, declarative and exclamatory sentences were more in TD-LL group; and negative sentences were more in mothers of ASD children. Analysis of pragmatic acts indicated that mothers in ASD group initiated more and took a dominant role during the interaction, while mothers of TD children were engaged predominantly in responding to their children. The study concluded that, in addition to children's language profiling, a comprehensive assessment of child-directed speech would provide directions for child-oriented assessment and management. Considering the era of globalisation and migration, this language and culture specific findings may be of interest to several practitioners catering to Tamil population.</p>				
308.	<p>Kshatriya, R. M., Khara, N. V., Ganjiwale, J., Lote, S. D., Patel, S. N. and Paliwal, R. P.                      Lessons learnt from the Indian H1N1 (swine flu) epidemic: Predictors of outcome based on epidemiological and clinical profile                      J Family Med Prim Care; 2018, 7 (6): 1506-1509</p> <p><b>Address:</b> Department of Respiratory Medicine, Pramukhswami Medical College, Karamsad, Anand, Gujarat, India.                      Department of Community Medicine, Pramukhswami Medical College, Karamsad, Anand, Gujarat, India.                      Interventional Pulmonology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>Introduction: Influenza A (H1N1) virus has caused serious respiratory illness (swine flu) and death over the years. The first confirmed case of swine flu H1N1 in India was documented in May 2009, but huge numbers of cases were reported thereafter. In 2015, swine flu outbreak in India had led to significant morbidity and mortality. Objective: to study details of swine flu patients admitted in</p>	NAT	JAN TO JUN	Pulmonary Medicine	<p><b>PMID:30613550</b>  <b>PMC ID:6293944</b>  <b>Impact Factor: 0.21</b>  <b>(RG-2018)</b>  <b>H-Index: NA</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>a rural tertiary care center in western India in 2015 and to identify predictors of mortality. Methodology: Retrospective data of swine flu cases admitted at a tertiary care teaching hospital in 2015 and their outcome as either cured or expired was recorded. Result: Out of 65 confirmed cases of severe swine flu that required hospitalization, 40(61%) were male. 55 of 65 (84.61%) patients [mean (SD) age: 50(15)] were cured while 10 patients [mean (SD) age 51(15)] expired. Overall mean (SD) age was 50.23(15) years with average (SD) days of hospitalization were 6.32(3.3) days. The commonest symptoms were cough (100%) followed by throat pain (96.9%), common-cold, fever (93.8%), and breathlessness (83.1%). 40% of patients needed non invasive ventilator support while 16.9% patient required invasive ventilator. Mean temperature on presentation was (99.96°F), RR (25.89/min), SpO2 on room air was 82.06%. Average White Blood Cells were 8274/mm(3) with neutrophils were 79.58%. Mean procalcitonin was 0.83 ng/ml. It was found through univariate analysis that sputum production (P = 0.013), chest pain (P = 0.04), Respiratory Rate (P = 0.013), SpO2 on presentation at room air (P = 0.001), Days of non invasive ventilator (P = 0.001), intubation and invasive ventilator (P = 0.001) were statistically significantly associated with outcome but through multivariate analysis it was revealed that only requirement of intubation (invasive ventilator) was significantly predicting mortality(Odds ratio=234) (P = 0.0001). Conclusion: Requirement of intubation was associated with poor outcome.</p>				
309.	<p>Kulkarni, N., Rosario, D. P., David, L. S., Vijayaselvi, R. and Beck, M. M. Decoding stillbirths using the Relevant Condition at Death classification: Study from the developing world J Turk Ger Gynecol Assoc; 2019, 20 (2): 106-116 <b>Address:</b> Department of Obstetrics and Gynecology, <b>Christian Medical College, Vellore, India</b> Head of Obstetrics and Gynecology, <b>Christian Medical College, Vellore, India</b> Objective: To determine the stillbirth rate in 2017 at <b>Christian Medical College</b>, a tertiary care perinatal center in South India, and to identify causes for the various stillbirths that occurred using the Relevant Condition at Death (ReCoDe) classification. Material and Methods: Medical records of the women with stillbirths between January 1(st), to December 31(st), 2017, were retrieved and analyzed using the SPSS software (IBM, version 23). The study was approved by the institutional review board (minute no: 11273, retro dated: 28/3/2018). Results: Of the total 14696 deliveries between</p>	INT	JUL TO DEC	Obstetrics and Gynecology	<p><b>PMID:</b> 30362339 <b>Impact Factor:</b> 0.51 <b>(RG - 2018)</b> <b>H-Index: 11</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>January 1(st), 2017, to December 31(st), 2017, there were 247 stillbirths, a rate of 16.8 per 1000 births. Maternal factors: 156 (64.2%) women were booked and the rest were un-booked. Hypertensive disorders of pregnancy were detected in 27.5% (n=67). A greater number of un-booked women had gestational hypertension as compared with booked women (41% vs 24%, p=0.005). Fetal characteristics: still births secondary to lethal congenital anomalies were seen in 18.2% (n=45). Lethal congenital anomalies were diagnosed 10 times more in the booked patients than un-booked ones (24.7% vs 2.3%, p=0.001). Obstetric factors: one or two previous miscarriages were seen in 29.5% cases. Seventeen women (6.9%) had a prior stillbirth. ReCoDe Classification: we were able to successfully classify 84.2% of the stillbirths, leaving 15.78% unclassified. Fetal growth restriction secondary to uteroplacental insufficiency was found in 25.9% cases. Of the placental causes, abruption accounted for 10.9% of cases. Medical co-morbidities were seen in 46.5% pregnancies. Conclusion: The ReCoDe method of classifying stillbirths is useful in the developing world. It helped to elucidate the cause for stillbirths in 84.2% of cases. The majority of cases in our set were due to fetal growth restriction, hypertensive disorders of pregnancy, and uteroplacental insufficiency. Stillbirths can be prevented by a comprehensive antenatal care system, early recognition, and close monitoring of high-risk pregnancies.</p>				
310.	<p>Kulkarni, U. and George, B. Access to hematopoietic stem-cell transplantation in India J Postgrad Med; 2019, 65 (1): 1-4</p> <p><b>Address:</b> Department of Haematology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p>	INT	JAN TO JUN	Haematology	<p><b>PMID:30693869</b> <b>PMC ID:6380131</b> <b>Impact Factor: 0.60</b> <b>(RG-2018)</b> <b>H-Index: 49</b></p>
311.	<p>Kulkarni, U., Devasia, A. J., Korula, A., Fouzia, N. A., Nisham, P. N., Samoon, Y. J., Lakshmi, K. M., Abraham, A., Srivastava, A., Mathews, V. and George, B. Clinical Outcomes in Multiple Myeloma Post-Autologous Transplantation-A Single Centre Experience Indian J Hematol Blood Transfus; 2019, 35 (2): 215-222</p> <p><b>Address:</b> Department of Haematology, <b>Christian Medical College, Vellore,</b> 632004 India.0000 0004 1767 8969grid.11586.3b</p> <p>There is paucity of data from developing countries on the clinical outcomes in myeloma post-autologous transplantation. In this</p>	NAT	JAN TO JUN	Haematology	<p><b>PMID:30988555</b> <b>PMC ID:6438994</b> <b>Impact Factor: 0.26</b> <b>(RG-2018)</b> <b>H-Index: 12</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	retrospective study, we used hospital records to retrieve data of patients with multiple myeloma undergoing autologous stem cell transplantation (ASCT) from January 1995 to December 2014 at our centre. During the study period, 245 patients underwent ASCT for myeloma. Of these, 19%, 37% and 37% were in complete response, very good partial response and partial response respectively at the time of ASCT. Only in 14 (5.7%) patients, the stem cells were cryopreserved. The transplant related mortality was 2.86%. The median follow up was 40.7 months (range 0-237.4 months). The 5-year overall survival (OS) and progression-free survival (PFS) for the entire cohort was 61.6% +/- 3.8% and 37.2% +/- 3.9% respectively. Independent predictors of OS included mononuclear cell dose infused, pre- and post-transplant response; and the use of maintenance therapy. Independent predictors of PFS included age at diagnosis, pre- and post-transplant response; and the use of maintenance therapy. In a resource limited setting, ASCT for myeloma is associated with low transplant related mortality. Pre- and post-transplant response and maintenance therapy are predictors of survival.				
312.	Kulkarni, Uday, Venkatraman, Arvind, Korula, Anu, Devasia, Anup, Abubacker, Fouzia, Lionel, Sharon, Srivastava, Alok, Abraham, Aby, Balasubramanian, Poonkuzhali, George, Biju and Mathews, Vikram Clinical Profile and Symptom Burden Among Patients with Primary Myelofibrosis Presenting to a Tertiary Care Center in India Clinical Lymphoma Myeloma & Leukemia; 2019, 19 S353-S353	INT	JUL TO DEC	Clinical Haematology	<b>PMID:</b> WOS:000483480700401 <b>Impact Factor: 2.274</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 46</b>
313.	Kumar S(1), Paul A(1), Chacko R(1), Deepika S(1). Time required for haemostasis under pressure from dental extraction socket. Indian J Dent Res. 2019 Nov-Dec;30(6):894-898. doi: 10.4103/ijdr.IJDR_93_18.  <b>Author information:</b> (1)Department of Dental and Oral Surgery, <b>Christian Medical College and Hospital, Vellore</b> , Tamil Nadu, India.  Introduction: It is generally expected that the time required for a clot to form in an extraction socket must be similar to that of the average physiological bleeding time (2-9 minutes). However, in dental practice does hemostasis require the full clot to form or does it occur earlier? Conventionally there is no accepted average time range for socket hemostasis with estimates ranging from 20 minutes to 40 minutes. This study is an attempt to quantify the average time period required for hemostasis to occur in an extraction socket.	NAT	JUL TO DEC	Dental and Oral Surgery	<b>PMID:</b> 31939367 <b>Impact Factor: 0.37</b> <b>(RG - 2018)</b> <b>H-Index: 33</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Methodology: 1205 consecutive patients attending the dental clinic and requiring dental extractions were evaluated for the average duration of hemostasis after extraction. Exclusion criteria were children (&lt;15 years), pregnant mothers and patients who had a systemic bleeding disorder or were on anticoagulants. The socket was inspected first after five minutes after an extraction and later at 10 minutes and 15 minutes if bleeding continued. Results: Bleeding from an extraction socket settled in less than five minutes in about 83% of individuals and in 10 minutes in 96.5% of cases. Hence it is expected that in an otherwise normal healthy individual socket compression by biting over gauze for around 10 minutes will produce adequate haemostasis. Prolonged bleeding beyond 10 minutes was rare and was controlled with suturing and pressure applied with a gauze pack in healthy individuals. Conclusion: Checking for hemostasis after placing a pressure pack for 5-10 minutes over an extraction socket is a useful act of risk management before discharge of the patient from the clinic to rule out any hemorrhagic tendency. DOI: 10.4103/ijdr.IJDR_93_18; Conflict of interest statement: None</p>				
<b>314.</b>	<p>Kumar, A., Dangi, A. D., Mukha, R. P., Panda, A., Jeychandraberry, C., Kumar, S., Devasia, A. and Kekre, N. S. Can kidneys be saved in patients with urinary tuberculosis? A study in the era of modern chemotherapy and surgical armamentarium Int J Urol; 2019, 26 (5): 551-557</p> <p><b>Address:</b> Department of Urology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</p> <p>OBJECTIVE: To assess renal unit survival and factors affecting renal salvageability in a cohort of patients receiving modern medical and surgical therapy for urinary tuberculosis. METHODS: This was a retrospective single-center study including all patients diagnosed and treated as urinary tuberculosis between 2005 and 2015 at <b>Christian Medical College, Vellore, Tamil Nadu</b>, India. The primary outcome was time to renal unit non-salvageability (estimated glomerular filtration rate of &lt;15 mL/min). RESULTS: A total of 128 patients were included in the study. The mean age was 37.7 +/- 11.3 years, 33% had microbiological and 73% had histopathological confirmation in addition to radiological diagnosis. The estimated median survival of the involved renal units (n = 187) on Kaplan-Meier estimate was 75 months (95% CI 39-99). On multivariate analysis, renal units with initial split function &gt;15 mL/min had fivefold the survival estimate as compared with those</p>	<b>INT</b>	<b>JAN TO JUN</b>	Urology	<p><b>PMID:30803052</b> <b>PMC</b> <b>Impact Factor: 1.941</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 61</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	</=15 mL/min (P < 0.001); the presence of one, two and three infundibular strictures had a 2.2-, 2.9- and fivefold higher hazard of renal unit loss respectively, and lower ureteric strictures had fivefold longer estimated survival (P = 0.015) after treatment. Renal units in the reconstruction group had 5.44-fold (95% CI 2.71-10.88, P < 0.001) longer survival than the permanent diversion group, with a mean change in split function of +0.76 (+/-16.11) mL/min, versus -5.61 (+/-10.87) mL/min respectively. CONCLUSIONS: Loss of renal units is a function of time despite modern treatment. Baseline renal unit function, site of ureteric involvement and extent of infundibular involvement on imaging are helpful in predicting the duration of renal salvageability. When feasible, reconstruction is better at renal function preservation.				
315.	<p>Kumar, M., Santhanam, S., Thomas, N. and Jana, A. K.                      A prospective observational study comparing cardiac function of small for gestational age with appropriate for gestational age babies using serial echocardiographic studies                      J Matern Fetal Neonatal Med; 2019, 32 (13): 2194-2199  <b>Address:</b> a Department of Neonatology ,<b>Christian Medical College , Vellore , India.</b>                      BACKGROUND: Approximately 30% of babies born in India are low birth weight (LBW) and about 70% of LBW babies are small for gestational age (SGA). Though there are several trials that have evaluated cardiac function of intrauterine growth restricted (IUGR) babies in utero, there is limited data about postnatal cardiac function in SGA babies during early neonatal period. This study was conducted to evaluate the cardiac functions of SGA babies by serial echocardiographic measurements and compare this with appropriate for gestational age (AGA) babies during the early postnatal period.                      MATERIAL AND METHODS: Seventy babies were enrolled in this prospective observational study with 35 each in the SGA and AGA groups. Echocardiography was performed for all babies on days 1, 2, and 3 of life. Myocardial performance index (MPI) was used as the primary measure to compare cardiac function. MPI was calculated for both ventricles using pulse wave Doppler and tissue Doppler.                      RESULTS: MPI of the left ventricle was significantly higher in the SGA group as compared to AGA babies during all the three measurement periods with SGA babies having significantly higher MPI of right ventricle on day 1 and day 2 but not on day 3. Left ventricular internal diameter index during diastole and systole (LVIDD index and LVIDS index), left atrium: aortic root ratio (LA:AO ratio) were significantly increased in SGA babies on all the occasions. Fractional shortening, ejection fraction, and area shortening were similar in two</p>	INT	JUL TO DEC	Neonatology	<p><b>PMID:</b> 29338497                      WOS:000462848000012  <b>Impact Factor:</b> 1.569  <b>(BIOXBIO - 2018)</b>  <b>H-Index:</b> 69</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	groups. CONCLUSIONS: Myocardial performance index of left and right ventricle, which evaluates both systolic and diastolic function of ventricles, was significantly increased in SGA babies in comparison to AGA babies during the first 3 days of life except MPI of the right ventricle on day 3. Thus, SGA babies have compromised cardiac function through all phases of the cardiac cycle with the performance improving spontaneously over time.				
316.	Kumar, S. Round up Indian J Urol; 2019, 35 (2): 92-93  <b>Address:</b> Department of Urology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>	NAT	JAN TO JUN	Urology	<b>PMID:31000912</b> <b>PMC ID:6458801</b> <b>Impact Factor: 0.82 (RG-2018)</b> <b>H-Index: 26</b>
317.	Kumar, Santhosh E., Barpha, Amit Singh, Gandhi, Prashanth, Sharma, Anand, Thomas, Lovely, Subramani, K., Jacob, Shibu, Nair, Sukesh, Mammen, Joy, Zachariah, Uday, Goel, Ashish, Vijayalekshmi, B., Balasubramanian, K. A., Elias, Elwyn and Eapen, C. E. Plasma exchange - a promising treatment modality in very severe alcoholic hepatitis patients Journal of Gastroenterology and Hepatology; 2019, 34 330-330	INT	JUL TO DEC	Gastroenterology, Hepatology	<b>PMID:</b> WOS:000495492602114 <b>Impact Factor: 3.632 (BIOXBIO - 2018)</b> <b>H-Index: 117</b>
318.	Kumar, Santhosh E., Varunmai, N. L., Sharma, Anand, Thomas, Lovely, Subramani, K., Jacob, Shibu, Nair, Sukesh, Mammen, Joy, Zachariah, Uday, Goel, Ashish, Vijayalekshmi, B., Balasubramaniyam, K. A., Abhilash, K. P. P., Elias, Elwyn and Eapen, C. E. Plasma exchange (PLEX) a novel rescue treatment modality in liver failure syndromes: Our experience with first 100 patients Journal of Gastroenterology and Hepatology; 2019, 34 353-353	INT	JUL TO DEC	Gastroenterology, Hepatology	<b>PMID:</b> WOS:000495492602159 <b>Impact Factor: 3.632 (BIOXBIO - 2018)</b> <b>H-Index: 117</b>
319.	Kumar, Santhosh, Jacob, Shibu, Thomas, Lovely, Kandasamy, Subramani, Sharma, Anand, Goel, Ashish, Zachariah, Uday and Eapen, C. E. Plasma exchange: a potential treatment option in idiosyncratic drug induced liver failure Journal of Gastroenterology and Hepatology; 2019, 34 473-473	INT	JUL TO DEC	Gastroenterology, Hepatology	<b>PMID:</b> WOS:000495492603198 <b>Impact Factor: 3.632 (BIOXBIO - 2018)</b> <b>H-Index: 117</b>
320.	Kumar, U., Jain, A., Guleria, A., R, V. K., Misra, D. P., Goel, R., Danda, D., Misra, R. and Kumar, D. Circulatory Glutamine/Glucose ratio for evaluating disease activity in Takayasu arteritis: A NMR based serum metabolomics study J Pharm Biomed Anal; 2019, 180 113080 <b>Address:</b> Centre of Biomedical Research, Lucknow-226014, Uttar Pradesh, India; Department of Zoology, BBAU, Lucknow-226025, India.	INT	JUL TO DEC	Rheumatology	<b>PMID:31896520</b> <b>PMC 35271</b> <b>Impact Factor: 2.983 (BIOXBIO - 2018 - 2019)</b> <b>H-Index: 114</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Clinical Immunology, SGPGIMS, Raibareli Road, Lucknow-226014, India.                      Centre of Biomedical Research, Lucknow-226014, Uttar Pradesh, India.                      Department of Zoology, BBAU, Lucknow-226025, India.  <b>Christian Medical College, Vellore, India.</b>                      Department of Clinical Immunology, SGPGIMS, Raibareli Road, Lucknow-226014, India. Electronic <b>Address:</b> rnmisra2000@gmail.com.                      Centre of Biomedical Research, Lucknow-226014, Uttar Pradesh, India. Electronic <b>Address:</b> dineshcbmr@gmail.com.</p> <p>Quantitative assessment of disease activity is important for effective care of patients with Takayasu arteritis (TA). Activated glutaminolysis and reduced glycolytic flux is the hallmark of active inflammation. Based on this, we hypothesize that the circulatory Glutamine/Glucose ratio (QGR) can serve as an indicant of active inflammation in TA. To probe this hypothesis, the serum samples were collected from 45 active and 53 inactive TA patients fulfilling American College of Rheumatology (ACR) criteria and assessed for disease activity according to Indian Takayasu Clinical Activity Score (ITAS) using acute phase reactant-erythrocyte sedimentation rate [ITAS-A (ESR)]. The quantitative profiles of circulatory metabolites implicated in glutaminolysis (Glutamine and Glutamate) and those which estimate glycolytic flux (i.e. glucose and lactate) were measured using high field (800MHz) NMR spectroscopy. The recorded spectra were analyzed using CHENOMX NMR Suite and the estimated concentration profiles were compared and evaluated for their diagnostic potential using Metaboanalyst. Compared to inactive-TA patients, the sera of active-TA patients were characterized by significantly decreased serum levels of glutamine and lactate suggesting that these patients exhibit activated glutaminolysis and reduced glycolytic activity. This is further supported by significantly decreased QGR and lactate to glucose ratio (LGR) levels in active compared to inactive TA patients. The receiver operating characteristic (ROC) curve analysis revealed satisfactory accuracy, sensitivity and specificity for QGR [with area under ROC curve (AUROC)=0.76 and 95% confidence interval (CI)=0.66-0.84) compared to that for LGR (with AUROC=0.67 and CI=0.561-0.77). Therefore, we believe that the circulatory QGR has the potential to serve as surrogate marker for the assessment of disease activity in TA patients. However, the use of this ratio in clinical settings will require future studies on large patient cohorts and procedural optimization as well to improve accuracy.</p>				



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
321.	<p>Kumari, P., Preethi, R. N., Abraham, A., Rathore, S., Benjamin, S., Gowri, M. and Mathews, J. E.                      A prospective observational study of the follow-up of medical management of early pregnancy failure                      J Family Med Prim Care; 2019, 8 (12): 3998-4002  <b>Address:</b> Department of Obstetrics and Gynaecology Unit - 3, <b>Christian Medical College</b>, Ida Scudder Road, Vellore, Tamil Nadu, India.                      Department of Obstetrics and Gynaecology Unit - 5, <b>Christian Medical College</b>, Ida Scudder Road, Vellore, Tamil Nadu, India.                      Department of Biostatistics, <b>Christian Medical College</b>, Ida Scudder Road, Vellore, Tamil Nadu, India.                      Background: Medical termination for missed miscarriage with the use of 800 mug of vaginal misoprostol as a single agent is recommended as a cheap option before 14 weeks of gestation in developing countries. A few studies have looked at its efficacy. Methods: A prospective, observational study was done on women having medical termination with up to three doses of 800 mug vaginal misoprostol at 12 hourly intervals. The number of women who needed check curettage was collected. Ultrasound findings if done were collated. Follow-up was done telephonically at the end of first week, fourth week and sixth week. Results: The cohort comprised 145 women. The primary outcome was the need for curettage after expulsion of products following medical management and this was 49/145 (37.8%) of women. The induction expulsion interval was 36 hours. The mean endometrial thickness of the 113/145 women who had an ultrasound was 11 mm. The mean endometrial thickness in women who had check curettage was 18 mm. Persistent spotting was the only significant symptom at follow-up. Resumption of cycle at the end of the sixth week was seen in 105/132 (80.15%) of women who were followed up. Conclusion: Findings of our study showed the check curettage rate of 37.8%. However, the regime which we used, that is, 800 mug vaginal misoprostol at 12 hourly intervals had a long induction to expulsion interval of 36 hours. In all, 80% of women resumed normal cycles at the end of the sixth week. No significant complications were noted on follow-up.</p>	NAT	JUL TO DEC	Obstetrics and Gynaecology Unit III & Unit V	<p><b>PMID:31879649</b>  <b>PMC ID:6924238</b>  <b>35272</b>  <b>Impact Factor: 0.21</b>  <b>(RG-2018)</b>  <b>H-Index: NA</b></p>
322.	<p>Kuriakose CK(1), Chandiraseharan VK(1), John AO(1), Bal D(1), Jeyaseelan V(2), Sudarsanam TD(1).                      End-of-life decisions: A retrospective study in a tertiary care teaching hospital in India.                       Indian J Med Res. 2019 Dec;150(6):598-605.                      doi: 10.4103/ijmr.IJMR_1409_17.</p>	NAT	JUL TO DEC	Medicine, Biostatistics	<p><b>PMCID: PMC7038812</b>  <b>PMID: 32048623</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Author information:</b>                      (1)Department of Medicine, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamil Nadu, India.                      (2)Department of Biostatistics, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Background &amp; objectives: In developing countries like India, there is a lack of clarity regarding the factors that influence decisions pertaining to life supports at the end-of-life (EOL). The objectives of this study were to assess the factors associated with EOL-care decisions in the Indian context and to raise awareness in this area of healthcare. Methods: This retrospectively study included all patients admitted to the medical unit of a tertiary care hospital in southern India, over one year and died. The baseline demographics, economic, physiological, sociological, prognostic and medical treatment-related factors were retrieved from the patient's medical records and analysed. Results: Of the 122 decedents included in the study whose characteristics were analyzed, 41 (33.6%) received full life support and 81 (66.4%) had withdrawal or withholding of some life support measure. Amongst those who had withdrawal or withholding of life support, 62 (76.5%) had some support withheld and in 19 (23.5%), it was withdrawn. The documentation of the disease process, prognosis and the mention of imminent death in the medical records was the single most important factor that was associated with the EOL decision (odds ratio - 0.08;95% confidence interval, 0.01-0.74; P=0.03). Interpretation &amp; conclusions: The documentation of poor prognosis was the only factor found to be associated with EOL care decisions in our study. Prospective, multicentric studies need to be done to evaluate the influence of various other factors on the EOL care. DOI: 10.4103/ijmr.IJMR_1409_17 Conflict of interest statement: None</p>				
323.	<p>Kuriakose, T., Jasper, S. and Thomas, S.                      Response to comment on: Pars-plana fluid aspiration for positive vitreous cavity pressure in anterior segment surgeries                      Indian J Ophthalmol; 2019, 67 (1): 175  <b>Address:</b> Department of Ophthalmology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Fellow in Vitreoretinal Surgery, Narayana Netralaya, Rajaji Nagar, Bangalore, Karnataka, India.</p>	NAT	JUL TO DEC	Ophthalmology	<p><b>PMID:</b> 30574941  <b>Impact Factor: 0.961</b>  <b>(BIOXBIO - 2018)</b>  <b>H-Index:43</b></p>
324.	<p>Kurian, Deepthi E., Peter, Jayanthi and Solomon, Satheesh                      CoSMid: Conjunctival splitting in the middle for fornix deepening as a technique of socket rehabilitation                      Clinical and Experimental Ophthalmology; 2019, 47 129-130</p>	INT	JUL TO DEC	Ophthalmology	<p><b>PMID:</b>                      WOS:000493279000224  <b>Impact Factor: 3.411</b>  <b>(BIOXBIO - 2018)</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
325.	<p>Kurian, J. J., Jacob, T. J. K. and Mathai, J. Encouraging Results of Bowel and Bladder Management in Spina Bifida Aperta in South India with Quality of Life Scores in a Tertiary Care Institution in South India J Indian Assoc Pediatr Surg; 2019, 24 (1): 21-26 <b>Address:</b> Department of Paediatric Surgery, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Context: It is often a challenge to counsel parents with children operated for spina bifida aperta in developing countries. Data regarding the efficacy of simple measures and preventive are scarce. Aims: The aim of this study is to study such children for the incidence, prevalence of bowel bladder dysfunction, and the quality of life (QOL) in children who are involved with a multidisciplinary team in India. Materials and Methods: All children with spina bifida occulta were followed - QOL questionnaires (PIN Q, modified Barthels activities of daily living , and the visual analog score [VAS]) were used. Interventions, such as clean intermittent catheterization (CIC), bowel enemas, and surgical procedures, were studied. Results: A total of 68 children were assessed. Twenty-nine of these children over five were evaluated with QOL scores. The prevalence of incontinence of bowel and bladder was studied. The primary outcomes included the QOL scores, and the various surgical options help bowel and bladder management. Hydronephrosis in 17.95% of children &lt;5 years and 65.5% of children over 5 years was noted. Nineteen children were socially independent for their bowel management. The Barthel index and PIN-Q showed a poor QOL in 27.6% and the VAS in 34.5% had the same. This translated to an acceptable QOL for over two-thirds of the children. Conclusions: Simple procedures and training for bowel management translate to a significant number of children being able to independently manage bowel care. About 30% of children develop hydronephrosis by 5 years; the decision to teach CIC must be made by then. We believe that positive counseling is given to the parents of children with spina bifida aperta as the children are capable of a reasonable QOL.</p>	NAT	JAN TO JUN	Paediatric Surgery	<p><b>H-Index: 67</b> <b>PMID:30686883</b> <b>PMC ID:6322176</b> <b>Impact Factor: 0.23 (RG-2018)</b> <b>H-Index: 14</b></p>
326.	<p>Kurien, R., Rupa, V. and Thomas, M. Varied presentation of sinonasal phosphaturic mesenchymal tumour: report of a case series with follow-up Eur Arch Otorhinolaryngol; 2019, 276 (6): 1677-1684 <b>Address:</b> Department of ENT, <b>Christian Medical College and Hospital, Vellore, Tamil Nadu, 632004, India.</b></p>	INT	JAN TO JUN	ENT, Pathology	<p><b>PMID:30879192</b> <b>PMC</b> <b>Impact Factor: 1.546 (BIOXBIO-2018)</b> <b>H-Index: NA</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>regikurien@cmcvellore.ac.in.                      Department of ENT, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, 632004, India.                      Department of Pathology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>PURPOSE: Phosphaturic mesenchymal tumour (PMT) of the paranasal sinuses is a rare tumour that is associated with oncogenous osteomalacia causing predominant musculoskeletal symptoms. We present a series of eight patients diagnosed to have PMT of the paranasal sinuses with varied presentation and highlight the appropriate evaluation required to arrive at the diagnosis.                      METHODS: Retrospective review of eight patients diagnosed to have PMT-causing tumour-induced osteomalacia with follow-up data.                      RESULTS: Eight patients, 4 males and 4 females, aged 36-67 years (mean = 44 years) presented with vague musculoskeletal symptoms (6 patients) or epistaxis (3 patients). Six patients were found to have hypophosphatemia, phosphaturia and raised FGF-23 levels preoperatively. All eight patients were found to have a tumour in the nose and/ paranasal sinuses with one patient having intracranial extension. All patients were treated with endoscopic excision of these tumours which resulted in resolution of symptoms and normalisation of biochemical abnormalities. In addition, one patient required a craniofacial resection. Histopathological features were consistent with PMT mixed connective tissue variant. Two atypical patients were seen. The longest follow-up was for 5 years and there was no evidence of recurrence during the follow-up period in any patient.                      CONCLUSION: Diagnosis of PMT of the paranasal sinuses causing oncogenous osteomalacia requires a high index of suspicion when there are no ENT symptoms. Appropriate biochemical tests and histopathology lead to the correct diagnosis. Total endoscopic surgical excision leads to a good outcome.</p>				
327.	<p>Kurien, R., Thomas, L., Varghese, L. and Nair, B. R.                      Frontal sinus cholesteatoma: a masquerading diagnosis                      BMJ Case Reports Nov 2019, 12 (11) e231495;                      DOI: 10.1136/bcr-2019-231495</p> <p><b>Address:</b> Department of Otorhinolaryngology, <b>Christian Medical College, Vellore, India</b> rkg233@gmail.com.                      Department of Otorhinolaryngology, <b>Christian Medical College, Vellore, India.</b>                      Department of Neurosurgery, <b>Christian Medical College, Vellore, India.</b></p>	INT	JUL TO DEC	Otorhinolaryngology, Neurosurgery	<p><b>PMID:</b> 31748359  <b>Impact Factor:</b> 0.22  <b>(RG-2018)</b>  <b>H-Index:</b> 20</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Cholesteatoma of the paranasal sinus is a very rare condition. As in the tympanomastoid region where cholesteatomas are a common entity, the paranasal sinus cholesteatomas also tend to erode the surrounding bony structures. Because of the extensive bony erosion, this condition often masquerades as a chronic granulomatous or a malignant lesion. Clinical presentation can be quite varied like facial deformities, visual and neurological deficits. Radiological findings are also non-specific making a preoperative diagnosis challenging. Histopathological examination is the only confirmatory investigation. We present a patient with frontal cholesteatoma who presented with forehead swelling of 1 month duration. Since the diagnosis could be obtained only intraoperatively, the patient required multiple surgeries. Frontal sinus cholesteatomas often require a combined endoscopic and external approach to ensure complete disease clearance. Periodic follow-up is essential to rule out recurrence.</p>				
328.	<p>Kuruville, S. E., Welch, S. and Ng, Y. Microcornea and bilateral ectopia lentis in an infant: unusual severe ocular presentation of neonatal Marfan syndrome J AAPOS; 2019, 23 (2): 107-108 <b>Address:</b> Department of Ophthalmology, <b>Christian Medical College Hospital, Vellore, India.</b> <b>Electronic Address:</b> shilpaethomas@gmail.com. Department of Ophthalmology, University of Auckland, Auckland, New Zealand. We present an unusual case of microcornea, bilateral spontaneous dislocation of lenses, and anomalous optic disks in a 7-week-old girl in whom a systemic diagnosis of Marfan syndrome had not yet been confirmed at presentation. The causes and differential diagnoses of this condition are discussed, and the literature on ocular manifestations of neonatal Marfan syndrome is reviewed.</p>	INT	JUL TO DEC	Ophthalmology	<p><b>PMID:</b> 30447425 <b>Impact Factor:</b> 1.056 <b>(BIOXBIO - 2018)</b> <b>H-Index: 59</b></p>
329.	<p>L, G. S. and Madhuri, V. Radiology of Acquired Constriction Band Syndrome: An Unusual Cast Complication: A Case Report JBJS Case Connect; 2019, 9 (4): e0181 <b>Address:</b> Paediatric Orthopaedics Unit, Christian Medical College Hospital, Vellore, India. CASE: A severe acquired constriction band in the proximal calf in an infant treated with a below-knee cast, which was protected with a waterproof sheet secured with a rubber band, is described. The radiological and computed tomography features of an elastic band causing the acquired constriction are presented for their novelty and uniqueness in the complication of cast treatment. CONCLUSIONS: The waterproof covering of plaster casts in children secured with a</p>	INT	JUL TO DEC	Paediatric Orthopaedics,	<p><b>PMID:31850955</b> <b>PMC 35274</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	rubber band to prevent soiling can cause an acquired constriction band, which mimics osteomyelitis. The imaging modalities showed the elastic band shadow cutting through the bone and soft tissues as demonstrated in this case. We recommend that the complication can be prevented by avoiding the use of elastic bands to hold the waterproofing covers for the cast.				
330.	Lahiri, A., Srinath, S. C. and Roshan, J. Radiofrequency ablation of recurrent, drug refractory, left posterior fascicular ventricular tachycardia in a pregnant lady without the use of fluoroscopy Indian Pacing Electrophysiol J; 2019, 19 (3): 119-124  <b>Address:</b> Department of Cardiac Electrophysiology and Pacing, <b>Christian Medical College and Hospital, Vellore</b> , India. Electronic <b>Address:</b> anandaroop_lahiri@yahoo.com. Department of Cardiac Electrophysiology and Pacing, <b>Christian Medical College and Hospital, Vellore</b> , India.	NAT	JAN TO JUN	Cardiology	<b>PMID:30776410</b> <b>PMC ID:6531641</b> <b>Impact Factor: 0.934</b> <b>(BIOXBIO – 2018-2019)</b> <b>H-Index: 22</b>
331.	Lai, B. K. M., Chan, B. H. K., Gudar, K., De La Rosette, J. J. M. C. H., Naito, S., Mansour, A. M., Balci, M., Popov, S. V., Deniz, B., Venkatramani, V., Ng, C. F., Chan, E. S. Y. and Teoh, J. Y. C. A systematic review and meta-analysis on the safety and efficacy of monopolar vs bipolar transurethral resection of bladder tumour International Journal of Urology; 2019, 26 44-44  <b>Author Information</b> <b>Addresses:</b> [ 1 ] Chinese Univ Hong Kong, Prince Wales Hosp, Dept Surg, Div Urol, Hong Kong, Peoples R China [ 2 ] Univ Amsterdam, Acad Med Ctr, Amsterdam, Netherlands [ 3 ] Harasanshin Hosp, Dept Urol, Fukuoka, Fukuoka, Japan [ 4 ] Urol & Nephrol Ctr, Mansoura, Egypt [ 5 ] Ankara Numune Training & Res Hosp, Minist Hlth, Dept Urol 3, Ankara, Turkey [ 6 ] Nizhny Novgorod Railway Stn JSC RZD, Clin Hosp, Nizhnii Novgorod, Russia [ 7 ] Bozyaka Training & Res Hosp, Dept Urol, Izmir, Turkey [ 8 ] <b>Christian Med Coll &amp; Hosp</b> , Dept Urol, Vellore, Tamil Nadu, India	INT	JUL TO DEC	Urology	<b>PMID:</b> WOS:000479045500107 <b>Impact Factor: 2.107</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 61</b>
332.	Lal, A., Tharyan, A. and Tharyan, P. The prevalence, determinants and the role of empathy and religious or spiritual beliefs on job stress, job satisfaction, coping, burnout, and mental health in medical and surgical faculty of a teaching hospital: A cross-sectional survey	INT	JUL TO DEC	Psychiatry	PMC Article 35534 <b>Impact Factor:0.810</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 34</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Revue De Medecine Interne; 2020, <b>Address:</b> Division of Pulmonary and Critical Care Medicine, Mayo Clinic, Rochester, MN 55902, United States Department of Psychiatry, <b>Christian Medical College, Vellore, Tamil Nadu 632002, India</b>				
333.	Lal, B., Vijayakumar, S., Anandan, S. and Veeraraghavan, B. Specimen Collection, Processing, Culture, and Biochemical Identification of Acinetobacter spp Methods Mol Biol; 2019, 1946 1-15  <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> vbalaji@cmcvellore.ac.in.  Specimen collection and processing is an important aspect of clinical microbiology laboratory. The reports are dependent on the quality of the specimen and the time between the collection and processing. Appropriate methodology needs to be followed for the collection, amount, type, labeling, transportation, and processing of the specimens especially for organism like Acinetobacter species. Various biochemical tests are used for identification of various organisms. Such identification depends on the ability of organisms to produce certain enzymes or to utilize certain compound to be identified by biochemical tests.	INT	JAN TO JUN	Clinical Microbiology	<b>PMID:30798539</b> <b>PMC</b> <b>Impact Factor: 0.38</b> <b>(RG-2018)</b> <b>H-Index: 126</b>
334.	Lee, So, Cavanaugh, Beth Anne, Kirton, Adam, Mackay, Mark, Leffert, Lisa, Fink, Matthew, Hernandez-Chavez, Marta, Majersik, Jennifer, Christudass, Christhunesa S., Aaron, Sanjith, Grefe, Annette, Ostrander, Betsy and Bushnell, Cheryl D. Sex-Related Differences in Neonatal Stroke: International Maternal Newborn Stroke Registry Stroke; 2019, 50	INT	JUL TO DEC	Neurological Sciences	<b>PMID:</b> WOS:000478733401242 <b>Impact Factor: 6.046</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 292</b>
335.	Lewnard, J. A., Lopman, B. A., Parashar, U. D., Bennett, A., Bar-Zeev, N., Cunliffe, N. A., Samuel, P., Guerrero, M. L., Ruiz-Palacios, G., Kang, G. and Pitzer, V. E. Heterogeneous susceptibility to rotavirus infection and gastroenteritis in two birth cohort studies: Parameter estimation and epidemiological implications Plos Computational Biology; 2019, 15 (7): <b>Address:</b> Division of Epidemiology and Biostatistics, School of Public Health, University of California, Berkeley, Berkeley, CA, United States Department of Epidemiology, Rollins School of Public Health, Emory University, Atlanta, GA, United States	INT	JUL TO DEC	Gastrointestinal Sciences,	<b>PMC Article</b> <b>35399</b> <b>Impact Factor: 4.428</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 148</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Division of Viral Diseases, Centers for Disease Control and Prevention, Atlanta, GA, United States</p> <p>Malawi-Liverpool-Wellcome Trust Clinical Research Programme, College of Medicine, University of Malawi, Blantyre, Malawi</p> <p>Center for Global Vaccine Research, Institute of Infection and Global Health, University of Liverpool, University of Liverpool, Liverpool, United Kingdom</p> <p>International Vaccine Access Center, Department of International Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, United States</p> <p>Department of Gastrointestinal Sciences, <b>Christian Medical College, Vellore, Tamil Nadu, India</b></p> <p>Instituto Nacional de Ciencias Médicas y Nutrición Salvador Zubirán, Mexico City, Mexico</p> <p>Department of Epidemiology of Microbial Diseases, Yale School of Public Health, New Haven, CT, United States</p>				
336.	<p>Lijesh, K. U., Senthilraja, M., Cherian, K. E., Kapoor, N. and Paul, T. V.</p> <p>Visual Vignette</p> <p>Endocr Pract; 2019, 25 (10): 1083</p> <p><b>Address:</b> From the Department of Endocrinology, <b>Christian Medical College, Vellore, India.</b></p>	INT	JUL TO DEC	Endocrinology	<p><b>PMID:</b> 31613159</p> <p><b>Impact Factor:</b> 4.149</p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 77</b></p>
337.	<p>Lijesh, Kanakkankotil Unnikrishnan, Senthilraja, Manickavasagam, Cherian, Kripa Elizabeth, Kapoor, Nitin and Paul, Thomas V.</p> <p>What is the diagnosis? Melorheostosis</p> <p>Endocrine Practice; 2019, 25 (10): 1083-1083</p>	INT	JUL TO DEC	Endocrinology	<p><b>PMID:</b></p> <p>WOS:000490278900017</p> <p><b>Impact Factor:</b> 4.149</p> <p><b>(BIOXBIO-2018)</b></p> <p><b>H-Index: 77</b></p>
338.	<p>Lionel, Sharon, Korula, Anu, Devasia, Anup, Kulkarni, Uday, Fouzia, N. A., Abraham, Aby, George, Biju, Mathews, Vikram, Srivastava, Alok, Balasubramanian, Poonkuzhali, Janet, Nancy Beryl, Mani, Thenmozhi, Jeyaseelan, N. and Balaji, V.</p> <p>Degree and Duration of Neutropenia and its Impact on Infections in APL and AML Induction: A Retrospective Case Control Study</p> <p>Clinical Lymphoma Myeloma &amp; Leukemia; 2019, 19 S236-S236</p>	INT	JUL TO DEC	Clinical Hematology	<p><b>PMID:</b></p> <p>WOS:000483480700166</p> <p><b>Impact Factor:</b> 2.274</p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 46</b></p>
339.	<p>Lissitchkov, T., Madan, B., Djambas Khayat, C., Zozulya, N., Ross, C., Karimi, M., Kavakli, K., De Angulo, G. R., Almomen, A., Subramanian, K., D'souza, F., Viswabandya, A., Hoorfar, H., Schwartz, B. A., Solomon, C., Knaub, S. and Peyvandi, F.</p> <p>Fibrinogen concentrate for treatment of bleeding and surgical prophylaxis in congenital fibrinogen deficiency patients</p> <p>J Thromb Haemost; 2019,</p> <p><b>Address:</b> Department of Hemorrhagic Diathesis and Anemia, Specialized Hospital for Active Treatment (SHAT), Joan Pavel", Sofia,</p>	INT	JUL TO DEC	Clinical Haematology	<p><b>PMID:31885190</b></p> <p><b>PMC 35276</b></p> <p><b>Impact Factor: 4.662</b></p> <p><b>(BIOXBIO – 2018 – 2019)</b></p> <p><b>H-Index: 154</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Bulgaria.            Centre for Haemostasis &amp; Thrombosis, Guy's &amp; St Thomas', NHS Foundation Trust, London, UK.            Hotel Dieu De France, Beirut, Lebanon.            Federal State-Funded Institution "National Research Center for Hematology" of the Ministry of Healthcare of the Russian Federation, Moscow, Russia.            Department of Hematology, St. John's Medical College &amp; Hospital, Bangalore, India.            Dastgheib Hospital, Shiraz, Iran.            Ege University, Children's Hospital, Izmir, Turkey.            Miami Children's Hospital, Miami, Florida, USA.            Centre of Excellence in Thrombosis &amp; Hemostasis, College of Medicine and King, Khalid University Hospital, King Saud University, Riyadh, Saudi Arabia.            Sahyadri Specialty Hospital, Pune, India.  <b>Christian Medical College, Vellore, India.</b>            Seyed Al Shohada Hospital, Isfahan, Iran.            Clinical Research &amp; Development, Octapharma, Hoboken, New Jersey, USA.            Research &amp; Development Department, Octapharma, Lachen, Switzerland.            Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Angelo Bianchi Bonomi Hemophilia and Thrombosis Center, Milan, Italy.            Universita degli Studi di Milano, Department of Pathophysiology and Transplantation, Milan, Italy.</p> <p>BACKGROUND: Congenital fibrinogen deficiency is an ultra-rare disorder where patients can experience severe and/or frequent bleeding episodes (BEs). Here, we present the largest prospective study to date on the treatment of this disorder. METHODS: Hemostatic efficacy of human fibrinogen concentrate (HFC; FIBRYGA((R)) , Octapharma AG) for treatment of bleeding or surgical prophylaxis was assessed by investigators and adjudicated by an independent data monitoring and endpoint adjudication committee (IDMEAC) according to a 4-point scale, using objective criteria. Thromboelastometry maximum clot firmness (MCF) was also determined. RESULTS: Twenty-five afibrinogenemia patients were treated with HFC: 24 for on-demand treatment of 89 BEs, and nine as prophylaxis for 12 surgeries. For BEs, treatment success (rating of excellent or good) evaluated by investigators was 96.6% (90% confidence interval [CI], 0.92-0.99; two missing ratings, classified as failures) and by the IDMEAC was 98.9% (90% CI, 0.95-0.999). Mean</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	+/- standard deviation (SD) increase in MCF was 5.8+/-2.5 mm one hour after the first HFC infusion (mean +/- SD dose, 61.88+/-11.73 mg/kg). For the 12 surgeries (median [range] HFC dose/surgery, 85.80 mg/kg [34.09-225.36]), intraoperative and postoperative treatment success were both rated 100% (90% CI, 0.82-1.00) by investigators and the IDMEAC. Three adverse events were possibly treatment-related, including a moderate case of thrombosis. There were no deaths, no severe allergic or hypersensitivity reactions and no clinical evidence of neutralizing anti-fibrinogen antibodies. CONCLUSIONS: HFC was efficacious for on-demand treatment of bleeding and as surgical prophylaxis, with a favorable safety profile, in patients with congenital afibrinogenemia.				
340.	<p>Loganathan, A. K. and Bal, H. S.                      Intramural duodenal haematoma with mucosal prolapse causing intestinal obstruction                      BMJ Case Rep; 2019, 12 (4):  <b>Address:</b> Department of Paediatric Surgery, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Intramural small bowel haematoma is a rare cause of intestinal obstruction in children. Coagulation disorders or anticoagulant therapy are the most common cause followed by blunt trauma. A one and half-year-old boy, with known case of gastro-oesophageal reflux disease had undergone upper gastrointestinal endoscopy and biopsy. Four days later, he presented to us with clinical features of small bowel obstruction. CT of the abdomen showed features suggestive of haemorrhagic duplication cyst. Explorative laparotomy revealed 15-20 cm of bowel from the third part of the duodenum to proximal jejunum filled with clotted blood and thinned out serosa. There was no evidence of intraluminal blood in the distal bowel loops. Resection of the involved bowel with primary anastomoses was done. Histopathological examination of bowel revealed intramural haematoma associated with prolapse of the mucosa. There was no evidence of duplication cyst or vascular malformations. Postoperative period was uneventful.</p>	INT	JAN TO JUN	Paediatric Surgery	<b>PMID:30948400</b> <b>PMC</b> <b>Impact Factor: 0.22</b> <b>(RG-2018)</b> <b>H-Index: 20</b>
341.	<p>Loganathan, A. K. and Bal, H. S.                      Crossed fused renal ectopia in children: a review of clinical profile, surgical challenges, and outcome                      J Pediatr Urol; 2019, 15 (4): 315-321  <b>Address:</b> Department of Pediatric Surgery, <b>Christian Medical College, Vellore, India</b>.                      Department of Pediatric Surgery, <b>Christian Medical College,</b></p>	INT	JUL TO DEC	Pediatric Surgery	<b>PMID: 31331806</b> <b>Impact Factor: 1.736</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 37</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Vellore, India.</b> Electronic <b>Address:</b> balharsh@gmail.com.  <b>INTRODUCTION:</b> Crossed fused renal ectopia is a rare congenital malformation, wherein both kidneys are present unilaterally, with the ureter of the crossed kidney opening into the bladder on the contralateral side. It has varied presentation from incidental detection to renal impairment. In this largest series of crossed fused renal ectopia, the authors assessed the clinical profile of these children and also attempted to shed light on the challenges in the surgical management. <b>METHODS:</b> It is a retrospective study conducted from January 2009 to July 2018, among patients evaluated for crossed fused ectopia, in the Department of Pediatric Surgery, <b>Christian Medical College, Vellore.</b> Electronic medical records of 36 children were reviewed. Imaging modalities and operative interventions were recorded. Results were analyzed. <b>RESULTS:</b> A total of 36 children were found to have crossed fused ectopia, with male preponderance. Most children presented within one year of age with urinary tract infection being the commonest cause. The most common associated anomaly was anorectal malformation. Ultrasound abdomen and pelvis, micturating cystourethrogram, and radionuclide scans were the imaging modalities preferred for diagnosis and follow-up. Left-to-right ectopia was more common with inferior ectopic variant being the most common. The predominant urological problems include pelviureteric junction obstruction, vesicoureteric junction obstruction, and vesicoureteric reflux. Ureteric re-implant was the most common surgery performed followed by pyeloplasty. Pelvi-pelviostomy, uretero-ureterostomy, bladder augment with Mitrofanoff, and other procedures were performed for select cases. <b>CONCLUSION:</b> Crossed fused renal ectopia is a challenging entity which requires individualized management plans based on the predominant urological anomaly and the functional status. Surgical options are diverse and are guided toward the symptomatic urological problem with focus on preserving the renal function. The long-term prognosis is good in these children.</p>				
342.	<p>Lukka, V. K., Kurien, R., Varghese, L. and Rupa, V.                      Endoscopic Submucosal Resection Versus Endoscopic Submucosal Diathermy for Inferior Turbinate Hypertrophy                      Indian J Otolaryngol Head Neck Surg; 2019, 71 (Suppl 3): 1885-1894  <b>Address:</b> Department of Otorhinolaryngology, <b>Christian Medical College, Vellore,</b> 632004 India.grid.11586.3b0000 0004 1767 8969                      Endoscopic submucous resection and endoscopic submucous</p>	NAT	JUL TO DEC	Otorhinolaryngology	<b>PMID:</b> 31763264 <b>Impact Factor: 0.11 (RG - 2018)</b> <b>H-Index:16</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>diathermy of the inferior turbinate are two different surgical methods of reducing size in turbinate hypertrophy. We aimed to compare the efficacy of both methods in reducing the nasal symptoms and improving nasal airway. This is a prospective randomized controlled trial conducted in a tertiary hospital, involving fifty patients with inferior turbinate hypertrophy not relieved by medications. After preoperative airway grading using a subjective symptom score, objective airway score and endoscopic score, patients were randomized to undergo either endoscopic submucous diathermy or endoscopic submucous resection. The primary outcome was postoperative improvement of airway and reduction of nasal symptoms. Secondary outcomes were postoperative bleeding and pain. All 24 patients who underwent endoscopic submucous diathermy and 26 who underwent endoscopic submucous resection showed statistically significant reduction in nasal symptoms both in the immediate and late postoperative periods. Patients who underwent endoscopic submucous resection showed greater improvement of airway at 1 week than those who had endoscopic submucous diathermy (p = 0.001). This difference however equalized at the 3-6 months postoperative period. Postoperative bleeding (p = 0.02) and pain (p = 0.04) were significantly more in patients who underwent endoscopic submucous resection. Both endoscopic submucous diathermy and endoscopic submucous resection are equally effective in improving airway in inferior turbinate hypertrophy with a slight advantage of endoscopic submucous resection in the early postoperative period. Reduced postoperative bleeding and pain may make endoscopic submucous diathermy a more attractive option overall.</p>				
343.	<p>Maddali, M. and Balasubramanian, P. Applications of Next Generation Sequencing in Haematological Disorders-Indian Status: Updates from ISHBT 2018 Indian J Hematol Blood Transfus; 2019, 35 (1): 17-21</p> <p><b>Address:</b> Department of Haematology, <b>Christian Medical College and Hospital, Vellore</b>, 632004 India.0000 0004 1767 8969grid.11586.3b</p> <p>Research in India based on next generation sequencing (NGS) has been plentiful over the past few years. Significant progress in research both in benign and malignant haematology can be attributed to this technique. It has now progressed to both diagnostic and a theranostic modality in many areas of not only haematology but also other medical specialities. Papers presented at the annual</p>	NAT	JAN TO JUN	Haematology	<p><b>PMID:30828142</b> <b>PMC ID:6369091</b> WOS:000458245100004 <b>Impact Factor:0.474</b> (BIOXBIO-2018) <b>H-Index: 12</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	conference of the Indian Society of Haematology and Blood Transfusion, ISHBT (Haematocon 2018) highlighted a snapshot of the research activities using NGS that are ongoing in various academic and other centres. This review summarizes the salient findings of the original research abstracts presented. The papers are divided into two broad subsections of non-malignant and malignant haematology.				
344.	<p>Mahabal, G. D., George, L., Peter, D., Bindra, M., Thomas, M., Srivastava, A., Mathews, V., George, B. and Pulimood, S. A. Utility of tissue elafin as an immunohistochemical marker for diagnosis of acute skin graft-versus-host disease: a pilot study Clin Exp Dermatol; 2019, 44 (2): 161-168</p> <p><b>Address:</b> Department of Dermatology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Department of Pathology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Department of Haematology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p><b>BACKGROUND:</b> The skin is the most common organ involved in acute graft-versus-host disease (GvHD). Because histopathology has limited utility in ruling out clinical mimics of acute skin GvHD, more accurate diagnostic techniques are required. <b>AIM:</b> To evaluate the utility of elafin expression in skin by immunohistochemistry (IHC) for accurate diagnosis of acute skin GvHD. <b>METHODS:</b> Consecutive allogeneic haematopoietic stem cell transplant (HSCT) recipients during a 6-month period who developed rash within the first 100 days post-transplant were recruited. Skin biopsies were taken on the day the rash developed. IHC for epidermal elafin was performed and interpreted by a pathologist blinded to the histopathological diagnosis. Staining of <math>\geq 50\%</math> of epidermis was considered positive. Final diagnosis of the rash was assigned using clinical features supported by histopathology. The accuracy of elafin IHC in predicting the final diagnosis of acute GvHD was evaluated. <b>RESULTS:</b> In total, 23 patients (20 male, 3 female; median age 16 years, range 3-53 years) with 27 episodes of skin rash were recruited. Skin rash post-HSCT occurred at a median of 20 days (range 5-45 days). A diagnosis of GvHD was made in 16 episodes (59.26%) while the remaining 11 episodes (40.74%) were judged to be non-GvHD rash. Elafin IHC was positive in all patients with GvHD. Of the 11 episodes of non-GvHD rash, elafin was negative in 8. Thus, the sensitivity and specificity of elafin IHC for predicting acute skin GvHD was 100% and 75%, respectively. <b>CONCLUSION:</b> Tissue elafin is a useful immunohistochemical marker for acute skin GvHD.</p>	INT	JUL TO DEC	Dermatology, Pathology, Haematology	<p><b>PMID:</b> 29882232  <b>Impact Factor:</b> 1.771  <b>(BIOXBIO - 2018)</b>  <b>H-Index:</b> 71</p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	However, larger studies are needed to validate these results.				
345.	<p>Mahalingam, H. V., Mani, S. E., Patel, B., Prabhu, K., Alexander, M., Fatterpekar, G. M. and Chacko, G.                      Imaging Spectrum of Cavernous Sinus Lesions with Histopathologic Correlation                      Radiographics; 2019, 39 (3): 795-819</p> <p><b>Address:</b> From the Departments of Radiology (H.V.M., S.E.M.), Pathology (B.P., G.C.), Neurosurgery (K.P.), and Neurology (M.A.), <b>Christian Medical College</b>, Ida Scudder Road, Vellore, Tamil Nadu 632004, India; and the Department of Radiology, NYU Langone Medical Center, New York, NY (G.M.F.).</p> <p>Cavernous sinuses are paired interconnected venous plexuses situated in the floor of the middle cranial fossa on either side of the sella turcica and sphenoid sinus. They are lined by dura mater and consist of multiple venous channels within. The cavernous sinuses are intimately related to the internal carotid artery and its associated sympathetic plexus, the oculomotor nerve, the trochlear nerve, the abducens nerve, and the ophthalmic nerve. Cavernous sinuses are connected to the orbit, the pterygopalatine fossa, the infratemporal fossa, the nasopharynx, and the posterior cranial fossa by various foramina, fissures, and canals in the skull base. A multitude of structures in close relation to the cavernous sinus give rise to a myriad of possible pathologic conditions that can be broadly classified into (a) neoplastic, (b) vascular, (c) infective or inflammatory, or (d) miscellaneous lesions. These pathologic conditions can have overlapping clinical manifestations. Hence, imaging plays a crucial role in identifying the disease, assessing its extent, providing a pertinent differential diagnosis to guide further management, and suggesting a site or route for biopsy. MRI is the modality of choice to depict the cavernous sinuses, with CT and digital subtraction angiography playing supplementary roles in certain situations. In this article, the cavernous sinus lesions encountered in our institution during a 10-year period are reviewed. The purpose of the article is to (a) describe the anatomy of the cavernous sinus; (b) demonstrate the multimodality imaging spectrum of a wide variety of pathologic conditions involving the cavernous sinus, correlating with the histopathologic findings; (c) highlight important imaging clues for differential diagnosis; and (d) help the reader overcome potential pitfalls in interpretation. Online supplemental material is available for this article. ((c))RSNA, 2019.</p>	INT	JAN TO JUN	Neurology, Neurosurgery, Radiology	<p><b>PMID:30978149</b>  <b>Impact Factor: 3.249</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 151</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
346.	<p>Mahalingam, H., Chacko, B. R., Irodi, A., Joseph, E., Vimala, L. R. and Thomson, V. S. Myocardial nulling pattern in cardiac amyloidosis on time of inversion scout magnetic resonance imaging sequence - A new observation of temporal variability Indian J Radiol Imaging; 2018, 28 (4): 427-432</p> <p><b>Address:</b> Department of Radiology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India. Department of Cardiology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>Context: The pattern of myocardial nulling in the inversion scout sequence [time of inversion scout (TIS)] of cardiac magnetic resonance imaging (MRI) is an accurate tool to detect cardiac amyloidosis. The pattern of nulling of myocardium and blood at varying times post gadolinium injection and its relationship with left ventricular mass (LVM) in amyloidosis have not been described previously. Aims: The aim is to study the nulling pattern of myocardium and blood at varying times in TIS and assess its relationship with LVM and late gadolinium enhancement (LGE) in amyloidosis. Materials and Methods: This was a retrospective study of 109 patients with clinical suspicion of cardiac amyloidosis who underwent MRI. Of these, 30 had MRI features of amyloidosis. The nulling pattern was assessed at 5 (TIS5min) and 10 (TIS10min) minutes (min) post contrast injection. Nulling pattern was also assessed at 3min (TIS3min) in four patients and 7min (TIS7min) in five patients. Myocardial mass index was calculated. Mann-Whitney U test was done to assess statistical difference in the myocardial mass index between patients with and without reversed nulling pattern (RNP) at TIS5min. Results: RNP was observed in 58% at TIS5min and 89.6% at TIS10min. Myocardial mass index was significantly higher in patients with RNP at TIS5min[mean = 94.87 g/m(2); standard deviation (SD) =17.63] when compared with patients with normal pattern (mean = 77.61 g/m(2); SD = 17.21) (U = 18; P = 0.0351). Conclusion: In cardiac amyloidosis, TIS sequence shows temporal variability in nulling pattern. Earlier onset of reverse nulling pattern shows a trend toward more LVM and possibly more severe amyloid load.</p>	NAT	JAN TO JUN	Radiology, Cardiology	<p><b>PMID:30662203</b> <b>PMC ID:6319092</b> <b>Impact Factor: 0.33</b> <b>(RG-2018)</b> <b>H-Index: 21</b></p>
347.	<p>Mahata, Koyeli Mary, Sidhar, Gibikote and Mathai, John Comparison of Voiding Cystourethrogram with Cystoscopy in the Prediction of Presence of Posterior Urethral Valve Journal of Clinical &amp; Diagnostic Research; 2019, 13 (1): 10-14</p>	NAT	JAN TO JUN	Radiology, Surgery Paediatric	<p><b>PMID:134212690</b> <b>PMC Article</b> <b>Impact Factor: 0.41</b> <b>(RG - 2018)</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>(TC10-TC14)</p> <p><b>Author Affiliations:</b></p> <ol style="list-style-type: none"> <li>1. Assistant Professor, Department of Radiology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India</li> <li>2. Professor, Department of Radiology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India</li> <li>3. Professor, Department of Paediatric Surgery, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India</li> </ol> <p>Introduction: Posterior Urethral Valves (PUVs) are a major cause of short and long term morbidity in male children. They cause recurrent urinary tract infections and lead to chronic renal failure in a significant proportion of boys. The diagnosis of posterior urethral valves has historically been based off voiding cystourethrograms (VCUGs) and confirmed and treated by cystoscopy, which is the gold standard. To the best of our knowledge the literature is sparse on the role of definitive diagnosis of PUV based on VCUG and no data on the urethral ratios in the normal population. Aim: To determine the ratio of posterior to anterior urethral diameter as an objective means to predict presence of Posterior Urethral Valves (PUV) using cystoscopy as the gold standard and to determine normal urethral ratios in paediatric age groups. Materials and Methods: The study was conducted prospectively in 493 male children over 18 months. Urethral diameters were measured on VCUG and Posterior Urethra/Anterior Urethra (PU/AU) ratios derived. Cystoscopy was the reference standard. Diagnostic accuracy of ratios was calculated using Receiver Operating Characteristic (ROC) curves, best threshold values determined with corresponding estimates of sensitivity and specificity to decide optimal significant ratios. Age stratified normative ratios were calculated. Results: MCU has 97.96% sensitivity, 86.27% specificity, 87.27% positive predictive value (PPV) and 97.78% negative predictive value (NPV) value when compared with cystoscopy which is the current gold standard in the diagnosis of PUV. The Posterior Urethra/Anterior Urethra (PU/AU) ratio was found to be a valid indicator of the presence of PUV. The diagnostic ability of PU/average AU is the best of the three ratios (AUC 0.9055) in predicting the presence of a PUV on cystoscopy. PU/average AU value =2.11 suggests that the patient most likely has a PUV with an 83% sensitivity and 91% specificity, within 95% Confidence Interval of 0.8458-0.96527. With regard to calculation of the normal PU/AU ratio for each age group, we found a general trend of decreasing ratios with increasing patient age. Conclusion: VCUG is useful in predicting presence of PUV. Age group specific standard</p>				<p><b>H-Index: 28</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	reference ratios can be used for identifying PUVs.				
348.	<p>Mahesh, K. M., John, D., Rose, A. and Paul, P. Prevalence of ocular morbidity among tribal children in Jawadhi hills, southern India: A cross-sectional study Indian J Ophthalmol; 2019, 67 (3): 386-390</p> <p><b>Address:</b> Department of Ophthalmology, Schell Eye Hospital, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Community Medicine, CHAD Hospital, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Purpose: Childhood blindness is second to cataract in terms of blind person years; population-based prevalence of ocular morbidity among tribal children has not been studied. We conducted this study to determine the prevalence of ocular morbidity in tribal children age 15 years or younger in Jawadhi hills, southern India. Methods: A population-based cross-sectional study was conducted in four tribal villages where all children below 15 years of age were invited to participate in the study. After appropriate consent/assent, an optometrist assessed uncorrected vision refraction and best-corrected visual acuity using suitable techniques. A comprehensive ophthalmic examination was also done by an ophthalmologist to determine the presence of ocular morbidity. Children requiring cycloplegic refraction or further treatment were referred to the base hospital. Results: Among 260 children examined, the prevalence of ocular morbidity was 10.8% [95% confidence interval (CI): 6.3-13.7]. Vitamin A deficiency (VAD) was the foremost morbidity: 4.6% (95% CI 1.6-6.3) followed by refractive error (2.7%). Three (10.7%) children had more than one ocular morbidity. Nearly 1 in 10 tribal children suffer from ocular morbidity and 1 in 57 had low vision. Conclusion: VAD is a public health problem in this tribal region which requires immediate intervention with prophylaxis and treatment. Uncorrected refractive errors in school-age children also need to be attended.</p>	NAT	JAN TO JUN	Ophthalmology, Community Medicine	<p><b>PMID:30777958</b> <b>PMC ID:6407384</b> <b>Impact Factor: 0.961</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 43</b></p>
349.	<p>Malik, P., Muthusamy, K., C, M., Danda, S. and Sudhakar, S. V. Teaching NeuroImages: Wishbone pattern of iron accumulation: A characteristic imaging sign in GM1 gangliosidosis Neurology; 2019, 92 (18): e2176-e2177</p> <p><b>Address:</b> From the Departments of Radiology (P.M., S.V.S.), Neurology (K.M.), Neurochemistry (M.C.), and Medical Genetics (S.D.), <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> From the Departments of Radiology (P.M., S.V.S.), Neurology (K.M.),</p>	INT	JAN TO JUN	Medical Genetics	<p><b>PMID:31036581</b> <b>WOS:000480763000012</b> <b>Impact Factor: 8.689</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 331</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Neurochemistry (M.C.), and Medical Genetics (S.D.), <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> <a href="mailto:sniya.sudhakar@gmail.com">sniya.sudhakar@gmail.com</a> .				
350.	Manda, P., Srinivasa Rao, P. V. L. N., Bitla, A. R., Vinapamula, K. S., Jeyaseelan, L., Rajasekhar, D. and Vishnubhotla, S. Study of contrast-induced oxidative stress in nondiabetic patients undergoing coronary angiography Saudi journal of kidney diseases and transplantation : an official publication of the Saudi Center for Organ Transplantation, Saudi Arabia; 2019, 30 (1): 45-52 <b>Address:</b> Department of Biochemistry, Sri Venkateswara Institute of Medical Sciences, Tirupati, Andhra Pradesh, India Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu, India</b> Department of Cardiology, Sri Venkateswara Institute of Medical Sciences, Tirupati, Andhra Pradesh, India Department of Nephrology, Sri Venkateswara Institute of Medical Sciences, Tirupati, Andhra Pradesh, India	INT	JUL TO DEC	Biostatistics	<b>PMC Article 35381</b> <b>Impact Factor:0.26 (RG – 2018)</b> <b>H-Index: 24</b>
351.	Manesh, A., Barnabas, R., Mani, S., Karthik, R., Abraham, O. C., Chacko, G., Kannangai, R. and Varghese, G. M. Symptomatic HIV CNS viral escape among patients on effective cART Int J Infect Dis; 2019, 84 39-43  <b>Address:</b> Department of Infectious Diseases, <b>Christian Medical College, Vellore, India.</b> Department of Medicine, <b>Christian Medical College, Vellore, India.</b> Department of Radiology, <b>Christian Medical College, Vellore, India.</b> Department of Pathology, <b>Christian Medical College, Vellore, India.</b> Department of Clinical Virology, <b>Christian Medical College, Vellore, India.</b> Department of Infectious Diseases, <b>Christian Medical College, Vellore, India.</b> Electronic <b>Address:</b> georgemvarghese@hotmail.com.  OBJECTIVE: The clinical syndrome in symptomatic HIV associated CNS viral escape is poorly defined. We attempted to describe the clinical syndrome, laboratory profile, radiological features and outcomes of HIV infected patients with symptomatic central nervous system (CNS) viral escape in our study. METHODS: This is a retrospective study were adult patients with HIV infection on cART	INT	JAN TO JUN	Infectious Diseases, Radiology, Pathology, Clinical Virology, Infectious Diseases	<b>PMID:30951880</b> <b>Impact Factor: 3.538 (BIOXBIO: 2018 -2019)</b> <b>H-Index: 73</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	admitted with a diagnosis of CD8 encephalitis or CNS viral escape in a large teaching hospital in South India was identified. RESULTS: The mean age of the eleven patients included in the study was 37.5 years. Most patients had received almost a decade of antiretroviral treatment at diagnosis (mean: 11.18 years). All patients presented with global cerebral syndrome. Cognitive decline, tremors, and headaches were common manifestations. All patients had lymphocytic pleocytosis (mean cell count: 44.63 cells/ml; lymphocyte percentage: 94.81%) with elevated protein (mean: 125.36 mg/dl). All patients were on boosted protease inhibitors (81.8% on Atazanavir and 18.18% Lopinavir). All except one patient was on Tenofovir and lamivudine combination therapy. White matter changes and deep brain nuclei involvement were common. Most patients required a change of cART to regimens with better CNS penetration and suppression of the resistant virus in the plasma and improved. CONCLUSION: CNS viral escape should be considered as a differential among patients on Atazanavir presenting with non-focal cerebral syndrome and CSF lymphocytic pleocytosis.				
352.	<p>Manesh, A., Rupali, P., Sullivan, M. O., Mohanraj, P., Rupa, V., George, B. and Michael, J. S. Mucormycosis-A clinicoepidemiological review of cases over 10 years Mycoses; 2019, 62 (4): 391-398</p> <p><b>Address:Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>BACKGROUND: Limited data exist for epidemiology and outcomes of various agents causing mucormycosis in various clinical settings from developing countries like India. OBJECTIVES: To study the epidemiology and outcomes of various agents causing mucormycosis in different clinical settings in a tertiary care hospital from South India. PATIENTS AND METHODS: We reviewed details of 184 consecutive patients with culture-proven mucormycosis with consistent clinical syndrome and supporting features from September 2005 to September 2015. RESULTS: The mean age of patients was 50.42 years; 70.97% were male. Unlike developed countries, R microsporus (29/184; 15.7%) and Apophysomyces elegans (20/184; 10.8%) also evolved as important pathogens in addition to R arrhizus in our setting. Paranasal sinuses (136/184; 73.9%) followed by musculoskeletal system (28/184; 15.2%) were the common areas of involvement. Apophysomyces elegans typically produced skin and musculoskeletal disease in immune-competent individuals with trauma (12/20; 60%) and caused significantly lower mortality (P = 0.03). R microsporus was more common in patients</p>	INT	JAN TO JUN	Infectious Diseases, Medicine, Otorhinolaryngology, Microbiology	<p><b>PMID:30685896</b>  <b>PMCImpact Factor: 2.793</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 62</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	with haematological conditions (25% vs 15.7%) and was less frequently a cause for sinusitis than R arrhizus (27.58% vs 10.9%). The overall mortality was 30.97%. Combination therapy with surgery and antifungals offered the best chance for cure. CONCLUSIONS: Agents causing mucormycosis may have unique clinical and epidemiological characteristics.				
353.	Mani, S., Das, S., Thomas, R. and Michael, R. C. Metastasizing Pleomorphic Adenoma - Case reports and review of literature South Asian J Cancer; 2019, 8 (2): 126  <b>Address:</b> Department of Head and Neck Surgery, <b>Christian Medical College Hospital, Vellore</b> , Tamil Nadu, India. Department of ENT, <b>Christian Medical College Hospital, Vellore</b> , Tamil Nadu, India.	INT	JAN TO JUN	Neck Surgery, ENT	<b>PMID:31069196</b> <b>PMC ID:6498715</b>  <b>Impact Factor: 0.58 (RG-2018)</b> <b>H-Index: 11</b>
354.	Mani, S., Mathew, J., Thomas, R. and Michael, R. C.  Cureus; 2019, 11 (2): e4003  <b>Address:</b> Otolaryngology, <b>Christian Medical College Hospital, Vellore</b> , IND.  Tumors of the accessory parotid gland are very rare. Surgical removal of an accessory parotid tumor is usually accomplished by superficial parotidectomy through an external neck incision. However, this procedure inevitably results in a neck scar. In this case, we performed complete excision of a parotid tumor via an endoscopic-assisted transoral approach. Resection of such benign tumors can be achieved with less morbidity by endoscope-assisted surgery with a nerve monitoring system. The field of transoral surgery will continue to expand with technological advancements.	INT	JAN TO JUN	Otolaryngology	<b>PMID:30989012</b> <b>PMC ID:6447140</b> <b>Impact Factor:</b> <b>H-Index: NA</b>
355.	Mani, Suresh, Thomas, Regi, Mathew, John and Michael, Rajiv Langerhan's Cell Histiocytosis of Sphenoid Sinus causing Vision Loss: A Case Report Journal of Nepal Medical Association; 2019, 57 (218): 281-284 Langerhan's cell histiocytosis is an uncontrolled proliferation of dendritic cells. The involvement of skull base is rare. Variable clinical presentation and multi organ involvement often warrant a multidisciplinary approach for a successful diagnosis. We are reporting a case of 16-year-old male with sphenoid sinus Langerhan's cell histiocytosis which presented as a sudden and painless loss of vision. It is a rare entity in the diagnosis of blindness. Delayed diagnosis and treatment can result in serious complications.	INT	JUL TO DEC	Otorhinolaryngology	<b>PMID:</b> WOS:000484062200017 <b>Impact Factor: 0.212 (BIOXBIO - 2018)</b> <b>H-Index: 16</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	The radiological features and management options are discussed with a review of the pertinent literature.				
356.	<p>Manjunath, K., Cherian, A. G., Abraham, V., Minz, S., George, K. and Helan, J. Trends of HIV prevalence in rural South India J Family Med Prim Care; 2019, 8 (2): 669-672</p> <p><b>Address:</b> Department of Community Health, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Background: India, with its large number of migrant workers, had a large number of people affected by HIV. This included antenatal women who are a vulnerable population. The Government of India along with nongovernmental organizations worked on a large number of programs to screen and decrease mother-to-child transmission. This in turn has brought down the prevalence of HIV. Materials and Methods: Retrospective analysis of data from the block being provided with healthcare was carried out over a period of 14 years from January 2002 to December 2016. Results: The observed HIV prevalence was 5.9 per 1000 in 2002 and showed a declining trend to 1.2 per 1000 in 2016. Conclusion: Consistent work at health education and preventive methods has helped bring down the prevalence of HIV over the years.</p>	NAT	JAN TO JUN	Community Medicine	<p><b>PMID:30984692</b> <b>PMC ID:6436254</b> <b>Impact Factor: 0.21</b> <b>(RG-2018)</b> <b>H-Index: NA</b></p>
357.	<p>Manohar, N., Thakkar, K., Balasubramaniam, A. and Palan, A. Globus pallidus internum targeted deep brain stimulation placement using optic tract stimulated visual evoked potentials and corticospinal tract stimulation in a case of severe dystonia Neurol India; 2019, 67 (2): 600-601</p> <p><b>Address:</b> Department of Neurosurgery, Yashoda Hospitals, Secunderabad, Telangana, India. Department of Anaesthesiology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p>	NAT	JAN TO JUN	Anaesthesiology	<p><b>PMID:31085892</b> <b>Impact Factor: 0.45</b> <b>(RG-2018)</b> <b>H-Index: 43</b></p>
358.	<p>Manoharan, A. and Jayaraman, R. Pneumococcal vaccines Indian J Med Microbiol; 2018, 36 (4): 465-474</p> <p><b>Address:</b> The CHILDS Trust Medical Research Foundation, Chennai, Tamil Nadu, India. Department of Clinical Microbiology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Streptococcus pneumoniae continues to take a heavy toll on</p>	NAT	JAN TO JUN	Clinical Microbiology	<p><b>PMID:30880692</b> <b>Impact Factor: 1.157</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 41</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>childhood mortality and morbidity across the developing world. An estimated 10.6 million invasive pneumococcal diseases (IPDs) occur every year, with nearly 1 million deaths in children under 5 years of age. Introduction of vaccines in the childhood immunisation programme in developed world has brought down the incidence of the disease considerably. However, childhood immunocompromising illnesses including HIV have increased the risk of IPD several folds. There is also a growing concern on the increasing antibiotic resistance among these invasive strains to penicillin, other beta-lactams and macrolides, making treatment difficult and expensive. It is estimated that about 62% of IPD worldwide is caused by the 10 most common serotypes. Although the ranking of individual pneumococcal serotypes causing serious disease varies among nations, the 7-13 serotypes included in pneumococcal conjugate vaccines (PCVs) may prevent 50%-80% of all paediatric pneumococcal diseases globally. The World Health Organization has recommended the use of PCV-10/13 in the national immunisation programmes (NIPs) of developing countries. Four doses of PCV-13 have been recommended by the US Association of Pediatrics and Centers for Disease Control and Prevention, at intervals of each 2 months for the first 6 months and by the 12(th) to 15(th) months after birth. This is expected to reduce the morbidity and mortality associated with IPD and simultaneously decrease colonisation with circulating antibiotic-resistant strains in immunized communities. Nevertheless, continued surveillance of antimicrobial resistance in non-vaccine serotypes is necessary to prevent the resurgence of resistance. Other virulence factors which are not serotype specific also need to be studied to overcome the drawbacks of serotype-specific pneumococcal vaccines. PCV-13 was launched during May 2017 under the NIP of five Indian states with the highest pneumococcal diseases in the country and is expected to be rolled out in the other parts of the country in the coming days.</p>				
359.	<p>Mansi Agrawal, Rajinikanth Janakiraman, Amit Tirkey, Vidya Konduru            ABS-011: Impact of Neo-Adjuvant Chemotherapy in Locally Advanced Oral Cavity Cancers            Journal of Head &amp; Neck Physicians and Surgeons; 2019, 7 (3):S6-S7            Department of Head and Neck Oncosurgery and Reconstruction,  <b>CMC, Vellore</b>, Tamil Nadu, India. E-mail: <a href="mailto:mansiady17@gmail.com">mansiady17@gmail.com</a></p> <p>Background: Oral cavity cancers require definitive surgical resection as the primary treatment, but with advanced T stage, complete resection with pathologically negative margins might be difficult to</p>	NAT	JUL TO DEC	Head and Neck Surgery	<b>Impact Factor: 0.472</b> <b>H-Index: NA</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>achieve. Neoadjuvant chemotherapy helps achieve the [Abstract Journal of Head &amp; Neck Physicians and Surgeons   October 2019   Volume 7   Supplement 1 S7 balance between resection and morbidity in locally advanced technically unresectable tumors. Methods: A retrospective analysis of patients with borderline resectable, locally advanced oral cavity cancers who were given neoadjuvant chemotherapy between February 2017 and May 2019 was conducted. Data regarding clinical and pathological characteristics, neoadjuvant chemotherapy, surgery, adjuvant therapy and recurrences was analyzed. Results: Of the 34 patients in the study, 65% had tongue cancer, rest were gingivobuccal complex cancers. 65% received a three-drug NACT. All tumors were resected based on the post-NACT tumor volume. 80% of the tongue cancers required a lesser resection than anticipated. 28% had complete pathological response in primary tumor and 18% had complete pathological response in nodal status. All patients received adjuvant therapy. 32% recurred on follow-up, all recurring within one year, and two recurring despite complete pathological response. Discussion: We analyzed the impact of neoadjuvant chemotherapy on locally advanced, technically unresectable oral cavity cancers for a period of 2 years. Although the follow-up period in this study was short, recurrence rates were comparable to tumors with similar pathological staging. Further studies are required to demonstrate an impact on overall survival. Conclusion: Neoadjuvant chemotherapy offers a chance of achieving adequate surgical resection while reducing morbidity and improving functional and cosmetic outcomes for patients with technically unresectable oral cavity cancers.</p>				
360.	<p>Mathen, P. G., Ghosh, G. C. and Thomson, V. S. Peculiar mechanical complication of myocardial infarction Heart Asia; 2019, 11 (1): e011156</p> <p><b>Address:</b> Department of Cardiology, <b>Christian Medical College and Hospital Vellore</b>, Vellore, Tamil Nadu, India.</p> <p>A 58-year-old man presented to the chest pain unit with crescendo angina over 24 hours and worsening dyspnoea of 10 hours duration. He was a known diabetic and hypertensive on regular treatment for 10 years and a habitual smoker with over 15 pack-years smoking duration. Examination revealed a profusely diaphoretic and dyspnoeic (respiratory rate of 45/min) individual with a blood pressure of 100/60 mm Hg and heart rate of 124 beats/min. He was hypoxic and his oxygen saturation in the ambient air was 64%. His jugular venous pressure was elevated with a prominent V wave.</p>	INT	JAN TO JUN	Cardiology	<p><b>PMID:31031835</b> <b>PMC ID:6454320</b> <b>Impact Factor: 0.82</b> <b>(RG-2018)</b> <b>H-Index: 07</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Cardiovascular examination revealed a harsh grade IV/VI systolic murmur over the lower left parasternal border. There were bilateral extensive crepitations heard over the lung fields. ECG on admission revealed presence of Q wave and ST elevation in leads II and III, aVF with ST depression in I and aVL. X-ray chest showed normal cardiac shadow and features of grade III pulmonary venous hypertension. Transthoracic echocardiography is shown in figure 1. Figure 1 Transthoracic echocardiogram short axis view at mid cavity level, 2D (A) and colour Doppler (B) image. Question: What is the most likely diagnosis? A. Left ventricular (LV) true aneurysm B. LV pseudoaneurysm C. LV pseudo-pseudoaneurysm D. Ventricular septal rupture (VSR) E. LV free wall rupture.				
361.	<p>Mathew, A. E., Kumar, Y., Angeline, R. P., Christopher, P., Rehman, S. P. and Venkatesan, S. Workplace-based assessment of family medicine competencies using "field note tool" - A pilot study J Family Med Prim Care; 2018, 7 (6): 1458-1463</p> <p><b>Address:</b> Department of Family Medicine, Community Health and Development, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Family Medicine, Low Cost Effective Care Unit, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Family Medicine, Shalom Family Medicine Clinic, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Background: Department of Family Medicine in a medical college in South India introduced "field note" (FN) as a tool for Work-Place Based Assessment in postgraduate training. FN collects "open-ended" feedback from both resident and faculty and helps them to arrive at an action plan. This study describes our experience of implementing FN and perceptions of learners and faculty. Methods: While precepting the residents in Family Medicine service areas, faculty documented their observations of the resident's clinical work using FN and provided an action plan. Faculty and residents described their experience and provided feedback. Focus group discussions were conducted for faculty and residents. Data were coded and grouped into themes. Results: Four residents and seven faculties participated in the study during 12 weeks period using 17 consultations. Clinical expert (13/17) and communicator (6/17) are the most commonly assessed competencies followed by professionalism (2/17) and collaborator (2/17). Faculty and residents agreed that "FN" was a useful tool and it helped the faculty</p>	NAT	JAN TO JUN	Family Medicine	<p><b>PMID:30613542</b> <b>PMC ID:6293892</b> <b>Impact Factor:0.21</b> <b>(RG-2018)</b> <b>H-Index: NA</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	to give feedback and guide the learner. Residents and faculty arrived at an action plan in 70% of the consultations. Three of four residents perceived the change in their behaviour positively after the use of FN. Both resident and faculty found the rating of the learner using Dreyfus scale as a barrier. Conclusion: FN could be one of the important tools in our "Toolbox of Assessment Methods" for family medicine specialty. There is a need for sensitizing the learners to feedback process and training the faculty in assessment and feedback.				
362.	Mathew, A. J., Nundy, M., Chandrashekar, N. and Oommen, V. Wrestle while you learn: EMG as a teaching tool for undergraduate skeletal muscle physiology teaching Adv Physiol Educ; 2019, 43 (4): 467-471 <b>Address:</b> Department of Physiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>	INT	JUL TO DEC	Physiology	<b>PMID:</b> 31460776 <b>Impact Factor:</b> 2.287 <b>(BIOXBIO - 2018)</b> <b>H-Index: 50</b>
363.	Mathew, Ashish J., Krabbe, Simon, Eshed, Iris, Gandjbakhch, Frederique, Bird, Paul, Pedersen, Susanne J., Stoenoiu, Maria S., Foltz, Violaine, Glinatsi, Daniel, Lambert, Robert G., Hermann, Kay Geert A., Maksymowych, Walter P., Haugen, Ida K., Jaremko, Jacob L., Poggenborg, Rene P., Paschke, Joel, Laredo, Jean-Denis, Carron, Philippe, Conaghan, Philip G. and Ostergaard, Mikkel The OMERACT MRI in Enthesitis Initiative: Definitions of Key Pathologies, Suggested MRI Sequences, and a Novel Heel Enthesitis Scoring System Journal of Rheumatology; 2019, 46 (9): 1232-1238 <b>Author Information</b> Reprint Address: Ostergaard, M (reprint author) Rigshosp, COPECARE Ctr Rheumatol & Spine Dis, Nordre Ringvej 57, DK-2600 Glostrup, Denmark. <b>Addresses:</b> [1] <b>Christian Med Coll &amp; Hosp, Dept Clin Immunol &amp; Rheumatol, Vellore, Tamil Nadu, India</b> [2] Univ Copenhagen, Fac Hlth & Med Sci, Dept Clin Med, Copenhagen, Denmark [3] Rigshosp, Ctr Rheumatol & Spine Dis, Copenhagen Ctr Arthrit Res, Glostrup, Denmark [4] Tel Aviv Univ, Sackler Sch Med, Sheba Med Ctr, Dept Diagnost Imaging, Tel Aviv, Israel [5] Hop Univ Pitie Salpetriere, Paris, France [6] Paris 6 Univ, GRC UPMC 08, Pierre Louis Inst Epidemiol & Publ Hlth, Paris, France [7] Hop Lariboisiere, AP HP, Serv Radiol, Paris, France	INT	JUL TO DEC	Clinical Immunology & Rheumatology	<b>PMID:</b> WOS:000484027700030 <b>Impact Factor:</b> 3.634 <b>(BIOXBIO - 2018)</b> <b>H-Index: 165</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>[8] Univ Paris Diderot, Paris, France</p> <p>[9] Univ New South Wales, Div Med, Sydney, NSW, Australia</p> <p>[10] Catholic Univ Louvain, IREC, Clin Univ St Luc, Brussels, Belgium</p> <p>[11] Ghent Univ Hosp, Dept Rheumatol, Ghent, Belgium</p> <p>[12] Univ Alberta, CaRE Canadian Res Educ Arthrit, Edmonton, AB, Canada</p> <p>[13] Univ Alberta, Dept Med, Edmonton, AB, Canada</p> <p>[14] Univ Hosp Charite, Arthrit Imaging Res Grp, Dept Radiol, Berlin, Germany</p> <p>[15] Diakonhjemmet Hosp, Dept Rheumatol, Oslo, Norway</p> <p>[16] Univ Leeds, Fac Med &amp; Hlth, Leeds, W Yorkshire, England</p> <p>[17] Univ Copenhagen, Rigshosp Glostrup, Ctr Rheumatol &amp; Spine Dis, COPECARE, Fac Hlth &amp; Med Sci, Dept Clin Med, Copenhagen, Denmark</p> <p>[18] Paris 6 Univ, Hop Univ Pitie Salpetriere, GRC UPMC 08, Pierre Louis Inst Epidemiol &amp; Publ Hlth, Paris, France</p> <p>[19] Univ New South Wales, Sydney, NSW, Australia</p> <p>[20] Univ Alberta, Dept Radiol &amp; Diagnost Imaging, Edmonton, AB, Canada</p> <p>[21] Univ Alberta, Div Rheumatol, Fac Med &amp; Dent, Edmonton, AB, Canada</p> <p>[22] Univ Alberta, Dept Radiol, Edmonton, AB, Canada</p> <p>[23] CaRE Canadian Res Educ Arthrit, Edmonton, AB, Canada</p> <p>[24] Hop Lariboisiere, AP HP, Serv Radiol, CaRE, Paris, France</p> <p>[25] Univ Leeds, Leeds Inst Rheumat &amp; Musculoskeletal Med, Musculoskeletal Med, Leeds, W Yorkshire, England</p> <p>[26] Leeds Teaching Hosp Natl Hlth Serv Trust, Leeds Biomed Res Ctr, NIHR, Leeds, W Yorkshire, England</p> <p><b>E-mail Addresses:</b> mo@dadlnet.dk</p> <p>Objective. To develop and validate an enthesitis magnetic resonance imaging (MRI) scoring system for spondyloarthritis/psoriatic arthritis, using the heel as model. Methods. Consensus definitions of key pathologies and 3 heel enthesitis multireader scoring exercises were done, separated by discussion, training, and calibration. Results. Definitions for bone and soft tissue pathologies were agreed. In the final exercise, median pairwise single-measures intraclass correlation coefficients (ICC; patient-level) for enthesial inflammation status/change scores were 0.83/0.82 for all readers. For radiologists and selected rheumatologists, ICC were 0.91/0.84</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	and quadratic-weighted kappa (lesion-level) 0.57-0.91/0.45-0.81. Conclusion. The proposed definitions and Heel Enthesitis Scoring System (HEMRIS) are reliable among trained readers and promising for clinical trials.				
364.	<p>Mathew, Ashish J., Krabbe, Simon, Kirubakaran, Richard, Barr, Andrew J., Conaghan, Philip G., Bird, Paul and Ostergaard, Mikkel                      Utility of Magnetic Resonance Imaging in Diagnosis and Monitoring Enthesitis in Patients with Spondyloarthritis: An OMERACT Systematic Literature Review                      Journal of Rheumatology; 2019, 46 (9): 1207-1214  <b>Author Information</b>  <b>Reprint Address:</b> Mathew, AJ (reprint author)</p> <p>Christian Med Coll &amp; Hosp, Dept Clin Immunol &amp; Rheumatol, Vellore 632004, Tamil Nadu, India.  <b>Addresses:</b></p> <p>[1] Christian Med Coll &amp; Hosp, Dept Clin Immunol &amp; Rheumatol, Vellore 632004, Tamil Nadu, India                      [2] Christian Med Coll &amp; Hosp, Cochrane South Asia, Vellore, Tamil Nadu, India                      [3] Univ Copenhagen, Fac Hlth &amp; Med Sci, Dept Clin Med, Copenhagen, Denmark                      [4] Copenhagen Ctr Arthrit Res COPECARE, Copenhagen, Denmark                      [5] Rigshosp Glostrup, Ctr Rheumatol &amp; Spine Dis, Glostrup, Denmark                      [6] Leeds Teaching Hosp Natl Hlth Serv NHS Trust, Leeds Biomed Res Ctr BRC, UK Natl Inst Hlth Res NIHR, Leeds, W Yorkshire, England                      [7] Univ Leeds, Leeds Inst Rheumat &amp; Musculoskeletal Med, Leeds, W Yorkshire, England                      [8] Univ New South Wales, Div Med, Sydney, NSW, Australia                      [9] Rigshosp Glostrup, Ctr Rheumatol &amp; Spine Dis, COPECARE, Glostrup, Denmark                      [10] Leeds Teaching Hosp NHS Trust, NIHR Leeds BRC, Leeds, W Yorkshire, England                      [11] Univ Leeds, Leeds Inst Rheumat &amp; Musculoskeletal Med, Musculoskeletal Med, Leeds, W Yorkshire, England                      [12] NIHR Leeds BRC, Leeds, W Yorkshire, England  <b>E-mail Addresses:</b><a href="mailto:ashishjacobmathew@gmail.com">ashishjacobmathew@gmail.com</a></p> <p>Objective. A systematic literature review was performed to</p>	INT	JUL TO DEC	Clinical Immunology & Rheumatology	<p><b>PMID:</b>WOS:000484027700026  <b>Impact Factor: 3.634 (BIOXBIO - 2018)</b>  <b>H-Index: 165</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	document published magnetic resonance imaging (MRI) lesion definitions and scoring systems for enthesitis in spondyloarthritis (SpA). Methods. PubMed, Embase, and Cochrane Library databases were searched for original publications involving adult patients with SpA undergoing MRI of axial/peripheral joints. Selected articles were assessed for quality using a standardized assessment tool and metric indices. Results. Considering the heterogeneous design, quality, and outcome measures of studies, statistical data pooling was considered inappropriate. A qualitative narrative of results was undertaken based on study designs. Conclusion. Lack of a comprehensive, validated score warrants additional research to develop an MRI enthesitis scoring system.				
365.	<p>Mathew, G., Arumugam, V., Murugesan, S., Duhli, N. and Agarwal, I. Renal Mucormycosis: A Rare Cause of Urinary Tract Infection Leading to End-stage Renal Disease (ESRD) J Trop Pediatr; 2019, 65 (4): 405-408</p> <p><b>Address:</b> Senior Resident, Division of Pediatric Nephrology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Fellowship Pediatric Nephrology, Assistant Professor, Division of Pediatric Nephrology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Fellow in Pediatric Nephrology, Division of Pediatric Nephrology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Assistant Professor, Department of Pathology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Professor and Head, Division of Pediatric Nephrology and Pediatrics Unit II, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Mucormycosis is a rare fungal infection often seen in immunocompromised hosts. Isolated renal mucormycosis may however present in immunocompetent children as renal failure and has a uniformly poor prognosis if not detected and treated early into the course of illness. We present a 3-year-old boy with unrelenting pyelonephritis in whom serial urine cultures done were negative. A final diagnosis of isolated renal mucormycosis was made by magnetic resonance imaging and renal biopsy.</p>	INT	JUL TO DEC	Pediatric Pathology Nephrology,	<p><b>PMID:</b> 30252109 <b>Impact Factor: 1.187 (BIOXBIO - 2018)</b> <b>H-Index: 47</b></p>
366.	<p>Mathew, J. K., Nithyananth, M. and Kumar Govindaraju, S. Safe Zone for Anterior Retractor Placement in Total Hip Arthroplasty: A Cadaveric Study Techniques in Orthopaedics; 2019,</p> <p><b>Address:</b> Department of Anatomy, <b>Christian Medical College, Vellore, Tamil Nadu, India</b> Orthopaedics and Accident Surgery Unit I, <b>Christian Medical</b></p>	INT	JUL TO DEC	Anatomy, Orthopaedics, Accident Surgery	<p><b>PMC Article 35372</b> <b>Impact Factor: 0.33 (RG - 2018)</b> <b>H-Index: 19</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<b>College, Vellore, Tamil Nadu, India</b>				
<b>367.</b>	Mathew, Leni, Robert, Magdalenal and John, Rikki Comparison of Blood Stream Infections in Paediatric Hem-Oncology and General Paediatric Patients Pediatric Blood & Cancer; 2019, 66	<b>INT</b>	<b>JUL TO DEC</b>	Dermatology	<b>PMID:</b> WOS:000490282100317 <b>Impact Factor: 2.486</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 93</b>
<b>368.</b>	Mathews, N. S., Masih, D., Mittal, R., Perakath, B., Sakthi, D., Rebekah, G., Pai, R. and Pulimood, A. B. Microsatellite instability in young patients with mucinous colorectal cancers - characterization using molecular testing, immunohistochemistry, and histological features Indian J Cancer; 2019, 56 (4): 309-314 <b>Address:</b> Department of General Pathology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Colorectal Surgery, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> CONTEXT: The incidence of colorectal cancers (CRCs) in young Indian patients is higher than the international average. CRCs in young patients are commonly of mucinous type and show microsatellite instability (MSI). AIMS: To ascertain the MSI status of mucinous CRCs in patients <=40 years of age by molecular testing and to correlate this with immunohistochemical (IHC) analysis and tumor histology. SUBJECTS AND METHODS: Archived formalin-fixed paraffin embedded tissue blocks of 30 young mucinous CRC patients were retrieved. MSI testing was done using two mononucleotide markers - BAT26 and NR24. IHC analysis was done using MLH1, MSH2, and MSH6. Histological features of all cases were studied. Data were analyzed using the SPSS software and the Pearson's chi-square test and Fisher's exact test. RESULTS: Eight out of 30 cases (26.7%) showed MSI by molecular testing. IHC identified seven of these cases. Histological features showing a statistically significant association with MSI were the presence of a well-differentiated adenocarcinoma component (P = 0.003), peritumoral lymphocytes (P = 0.002) and tumor budding (P = 0.021). CONCLUSION: The detection of defective mismatch repair (MMR) proteins using IHC for MLH1, MSH2, and MSH6 and molecular testing using BAT26 and NR24 appears to be a good protocol to detect CRCs with MSI. Histology could be useful in identifying cases that require screening for presence of MMR protein defects.	<b>NAT</b>	<b>JUL TO DEC</b>	General Pathology, Surgery, Biostatistics	<b>PMID:</b> 31607698 <b>Impact Factor: 0.429</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 32</b>
<b>369.</b>	Mathias, K., Jacob, K. S. and Shukla, A.	<b>NAT</b>	<b>JUL TO DEC</b>	Psychiatry	<b>PMID:</b> 31540888

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>We sold the buffalo to pay for a brain scan; a qualitative study of rural experiences with private mental healthcare providers in Uttar Pradesh, India                      Indian J Med Ethics; 2019, - (-): 1-6  <b>Address:</b> Programme Manager, Mental Health, Emmanuel Hospital Association, Landour Community Hospital, Mussoorie 248 179 INDIA.                      Professor of Psychiatry (Retd), <b>Christian Medical College, Ida Scudder Road, Vellore</b> 632 004 INDIA.                      Senior Programme Coordinator, SATHI, Dahanukar Colony, Kothrud, Pune 411 029, INDIA.</p> <p>The majority of persons with mental distress (PWMD) in India do not have access to care, and even those who seek care are pushed to attend private providers, given the weak and largely absent public mental health services framework. The aim of this study was to examine the experiences in help-seeking and with unethical health service provision among persons with mental distress in the Saharanpur and Bijnor districts of Uttar Pradesh. In-depth interviews were conducted with twenty persons with mental distress and their caregivers. Thematic analysis yielded four key findings about help-seeking: first, that it was syncretic and persistent; second, that expenditure for private care was high and often catastrophic; third, that investigations and care provided were pharmacological and predominantly irrational and excessive; and lastly, that help-seeking was abandoned. This study demonstrates that PWMD are particularly vulnerable to exploitation by private providers with illnesses that are stigmatising, poorly understood, chronic, relapsing, and disabling and that often require complex management. Responding to mental distress requires multiple empowering and interacting policy and programme initiatives that must include regulation of private and public providers, resources, and actions to strengthen public and primary mental healthcare and promotion of mental health competence in communities.</p>				<p><b>Impact Factor: 0.17 (RG - 2018)</b>  <b>H-Index: 14</b></p>
370.	<p>Mathur, P., Khurana, S., De Man, T. J. B., Rastogi, N., Katoch, O., Veeraraghavan, B., Neeravi, A. R., Venkatesan, M., Kumar, S., Sagar, S., Gupta, A., Aggarwal, R., Soni, K. D., Malhotra, R., Velayudhan, A., Siromany, V., Malpiedi, P., Lutgring, J., Laserson, K., Gupta, N., Srikantiah, P. and Sharma, A.                      Multiple importations and transmission of colistin-resistant Klebsiella pneumoniae in a hospital in northern India                      Infection Control and Hospital Epidemiology; 2019, 40 (12): 1387-1393  <b>Address:</b> Jai Prakash Narayan Apex Trauma Centre, All India</p>	INT	JUL TO DEC	Clinical Microbiology	PMID: 31625832

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Institute of Medical Sciences, New Delhi, India                      US Centers for Disease Control and Prevention, Atlanta, GA, United States  <b>Christian Medical College, Vellore, India</b>                      Emory University, Atlanta, GA, United States</p> <p>Objective: Resistance to colistin, a last resort antibiotic, has emerged in India. We investigated colistin-resistant Klebsiella pneumoniae(CoLR-KP) in a hospital in India to describe infections, characterize resistance of isolates, compare concordance of detection methods, and identify transmission events.Design: Retrospective observational study.Methods: Case-patients were defined as individuals from whom CoLR-KP was isolated from a clinical specimen between January 2016 and October 2017. Isolates resistant to colistin by Vitek 2 were confirmed by broth microdilution (BMD). Isolates underwent colistin susceptibility testing by disk diffusion and whole-genome sequencing. Medical records were reviewed.Results: Of 846 K. pneumoniae isolates, 34 (4%) were colistin resistant. In total, 22 case-patients were identified. Most (90%) were male; their median age was 33 years. Half were transferred from another hospital; 45% died. Case-patients were admitted for a median of 14 days before detection of CoLR-KP. Also, 7 case-patients (32%) received colistin before detection of CoLR-KP. All isolates were resistant to carbapenems and susceptible to tigecycline. Isolates resistant to colistin by Vitek 2 were also resistant by BMD; 2 CoLR-KP isolates were resistant by disk diffusion. Moreover, 8 multilocus sequence types were identified. Isolates were negative for mobile colistin resistance (mcr) genes. Based on sequencing analysis, in-hospital transmission may have occurred with 8 case-patients (38%).Conclusions: Multiple infections caused by highly resistant, mcr-negative CoLR-KP with substantial mortality were identified. Disk diffusion correlated poorly with Vitek 2 and BMD for detection of CoLR-KP. Sequencing indicated multiple importation and in-hospital transmission events. Enhanced detection for CoLR-KP may be warranted in India. © 2019 by The Society for Healthcare Epidemiology of America. All rights reserved.                      DOI: 10.1017/ice.2019.252</p>				
<b>371.</b>	<p>Matthai, S. M., Jacob, S., Bindra, M. S., David, V. G. and Varughese, S.                      Nephropathic cystinosis presenting with uveitis: Report of a "Can't See, Can't Pee" situation                      Indian J Pathol Microbiol; 2019, 62 (3): 457-460  <b>Address:</b> Central Electron Microscopy Facility, Wellcome Trust</p>	<b>NAT</b>	<b>JUL TO DEC</b>	Wellcome Trust Research Laboratory, Nephrology, General Pathology	<p><b>PMID:</b> 31361240  <b>Impact Factor:</b> 0.521  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 28</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Research Laboratory, Vellore, Tamil Nadu, India.                      Department of Nephrology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Department of General Pathology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>Nephropathic cystinosis is a rare autosomal recessive lysosomal disease characterized by accumulation of pathognomonic cystine crystals in renal and other tissues of the body. Cystinosis is caused by mutant cystinosis, the cystine transport protein located in lysosomal membranes, leading to systemic deposits of cystine and resultant end organ damage. Cystinosis is rarer in Asians than Caucasians with only a handful of cases reported from India to date. Due to its extreme rarity and clinically insidious presentation in contrast to the infantile form, the diagnosis of juvenile nephropathic cystinosis is frequently delayed or overlooked. Moreover, routine processing and sectioning of paraffin embedded tissues dissolves cystine crystals, making it difficult to diagnose this condition on light microscopic examination alone, mandating electron microscopic (EM) analysis of renal biopsies for an accurate diagnosis of this condition. We describe a case of juvenile nephropathic cystinosis presenting with uveitis and photophobia in a 17-year-old Indian male, diagnosed after EM examination of the patient's renal biopsy for evaluation of nephrotic syndrome. While highlighting the diagnostic utility of EM, we describe a few histopathologic clues which can prompt inclusion of EM analysis of renal biopsies in this setting.</p>				
<b>372.</b>	<p>Matthewj, Sundaresan VR, Thomas R.                      IgG4 induced tumours of the nose and paranasal sinuses.                      Orissa journal of otolaryngology and head &amp; neck surgery. 2019 june; 13(1): 29-34.                      doi:10.21176/ojohns. 2019.13.1.7</p> <p>Affiliations                      1,2,4. Department of ENT, Unit-1(Head &amp; Neck-Skull Base surgery)                      3. Department of Pathology, <b>Christian Medical College, Vellore</b>, India</p> <p>Corresponding author:                      Dr. Rajan Sundaresan V, Associate Professor,                      Department of ENT, Unit-1 (Head &amp; Neck-Skull Base)                      Christian Medical College, Vellore-632004, Fax: 0416-2232305;  <a href="mailto:drrajans@cmcvellore.ac.in">drrajans@cmcvellore.ac.in</a>, <a href="mailto:drrajans381@gmail.com">drrajans381@gmail.com</a></p> <p>IgG4-related disease is an autoimmune condition characterized by increased serum IgG4 levels and infiltration of IgG4 plasma cells into</p>	<b>NAT</b>	<b>JAN TO JUN</b>	ENT, Pathology	<b>Impact Factor: 4.555 (Cosmos:2019) H-Index: NA</b>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	the tissues(1,2). IgG4 is a subtype of IgG and comprises approximately 3-6% of total IgG. Increase in serum IgG4 levels has been associated with various conditions like autoimmune pancreatitis, sclerosing cholangitis, Mikulicz disease, and retroperitoneal fibrosis(3). The organs predominantly involved are pancreas and biliary tract. The salivary and lacrimal glands along with nose and paranasal sinuses can also be involved in head and neck region(4,5). IgG4 sclerosing disease involving the nose and paranasal sinuses has been rarely described in literature (6). We report our experience of managing patients with diagnostic challenge when presenting as nasal mass involving paranasal sinuses and also discuss the their outcomes.				
373.	<p>Misale, P., Lepcha, A., Chandrasekharan, R. and Manusrut, M. Labyrinthine Fistulae in Squamosal Type of Chronic Otitis Media: Therapeutic Outcome Iran J Otorhinolaryngol; 2019, 31 (104): 167-172</p> <p><b>Address:</b> Department of Otorhinolaryngology, Unit-4(Audio Vestibular Diseases/Neurotology),<b>Christian Medical College, Vellore- 632004, India.</b></p> <p>Department of Otorhinolaryngology, Badr Al Samaa Hospital Salalah, Sultanate of Oman (Previously-Dept of ENT-4, <b>Christian Medical College, Vellore, India</b>).</p> <p>Department of Otorhinolaryngology, District Hospital, Hyderabad, India (Previously-Dept of ENT-4, <b>Christian Medical College, Vellore, India</b>).</p> <p>Introduction: Labyrinthine fistulae (LF) are the common complications of chronic otitis media (COM) of squamosal variety. The final therapeutic outcome of this condition is to preserve the cochlear and vestibular functions. Herein, we present the data of the cases managed at our institute with respect to their presenting complaints, adopted therapeutic approaches and outcomes.</p> <p>Materials and Methods: A retrospective chart review was conducted on all cases with COM squamosal type in adult patients. A total of 275 patients were reviewed, out of whom 30 cases had LF. The results were mainly studied with respect to the postoperative improvement of hearing and vertigo. Results: The incidence rate of LF in the present study was obtained at 10.9%. Only 50% of the cases had the symptoms of vertigo. Furthermore, positive fistula test was elicited in 3.3% of the cases. All cases undergoing preoperative imaging were diagnosed successfully. In addition, 42.85% of the cases had profound hearing loss preoperatively, which sustained after the operation. However, 47.61% of the cases showed an improvement of at least <math>\geq 10</math> dB in the air-bone gap. Out of the 15 LF cases with</p>	INT	JUL TO DEC	Otorhinolaryngology, ENT 4, Audiology	<p><b>PMID:</b> 31223596</p> <p><b>Impact Factor:</b> 0.58</p> <p><b>(RG - 2018)</b></p> <p><b>H-Index:</b> 9</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	vertigo as the main complaint, only 11 cases referred for follow-up. In this regard, 63.63% of the cases had no postoperative vertigo symptoms. Conclusion: Patients with LF may not have complaints of vertigo and a positive fistula sign upon admission. Pre-operative imaging facilitates the diagnosis of this condition. The removal of the matrix under constant irrigation, followed by repair with bone wax and/or autologous tissue, is sufficient to preserve the cochlear and vestibular symptoms postoperatively.				
374.	Mishra, A. K. and Iyadurai, R. Prehospital and hospital delays for stroke patients treated with thrombolysis: access to health care facility - still a bottle neck in stroke care in developing nation Australas Emerg Care; 2019, 22 (4): 227-228 <b>Address:</b> Department of Internal Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India. Electronic <b>Address:</b> <a href="mailto:ajaybalasore@gmail.com">ajaybalasore@gmail.com</a> Professor and Head of Department of Internal Medicine UnitV, Department of Internal Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India. Electronic <b>Address:</b> <a href="mailto:iramy77@gmail.com">iramy77@gmail.com</a> .	INT	JUL TO DEC	Internal Medicine	<b>PMID:</b> 31431390 <b>Impact Factor: NA (BIOXBIO - 2018)</b> <b>H-Index: 1</b>
375.	Mishra, A. K., George, A. A. and Abhilash, K. P. P. The relationship between skin rash and outcome in dengue J Vector Borne Dis; 2018, 55 (4): 310-314 <b>Address:</b> Department of General Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India. Department of Dermatology, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India.  Background & objectives: Dengue fever (DF) is a common cause of acute febrile illness. Skin involvement is seen in more than half of the patients. This study was aimed to compare the clinical profile and outcome in DF patients with or without skin involvement. Methods: This study included all the patients with DF from the acute febrile illness database of a tertiary care health centre in south India. These patients were further subgrouped into SP and SN (skin involvement positive and negative) based on the presence and absence of skin rash. Differences in clinical presentation, laboratory parameters, disease course, morbidity and outcome among patients with DF with or without skin rash were recorded and analysed statistically. Results: In total 387 patients (>16 yr) with DF were enrolled into the study. Among these 55 patients had evidence of skin rash. Presence of history of overt bleeding (OR = 4.96, p = 0.027) including gum	INT	JAN TO JUN	General Dermatology Medicine,	<b>PMID:30997892</b> <b>PMC</b>  <b>Impact Factor: 1.04 (RG-2018)</b> <b>H-Index: 34</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	bleeding (OR = 1.17, p = 0.23), epistaxis (OR = 5.52, p = 0.04), and haematuria (OR = 6.41, p = 0.01) were more among patients with SP as compared to SN. The SP patients were found to have lower levels of platelets during the disease course. Patients with SP had a higher percentage of platelet transfusion which was statistically significant. There was no difference in organ dysfunction and mortality among both the groups. Interpretation & conclusion: Cutaneous involvement, though common, is not pathognomonic and can help in dengue diagnosis. Adult patients with skin rash can develop worsening thrombocytopenia requiring platelet transfusion. However, there are limited data to suggest that such patients have a worse outcome and higher mortality.				
376.	Mishra, A. K., George, A. A. and Sahu, K. K. A Case-Control Study of the Lymphatic Phenotype of Yellow Nail Syndrome: Comment Lymphat Res Biol; 2019, <b>Address:</b> Postgraduate in Internal Medicine, Saint Vincent Hospital, Worcester, Massachusetts. <b>Christian Medical College, Vellore, India.</b>	INT	JUL TO DEC	Internal Medicine	<b>PMID:</b> 31517570 <b>Impact Factor:</b> 1.493 <b>(BIOXBIO - 2018)</b> <b>H-Index:</b> 40
377.	Mishra, A. K., George, A. A., Sahu, K. K., Lal, A. and Kuriakose, C. K. Letter to Editor on "Lacunar Stroke in Cryptococcal Meningitis: Clinical and Radiographic Features" J Stroke Cerebrovasc Dis; 2019, 28 (6): 1783-1784  <b>Address:</b> Department of Internal Medicine, Saint Vincent Hospital, Worcester, Massachusetts. Electronic <b>Address:</b> Ajay.Mishra@stvincenthospital.com. Department of Dermatology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Internal Medicine, Saint Vincent Hospital, Worcester, Massachusetts. Department of Internal Medicine and Endocrinology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>	INT	JAN TO JUN	Dermatology, Internal Medicine	<b>PMID:30885460</b> <b>PMC</b> <b>Impact Factor: 1.598</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 50</b>
378.	Mishra, A. K., Lal, A. and George, A. A. Letter by Mishra et al Regarding Article, "Infection as a Stroke Trigger: Associations Between Different Organ System Infection Admissions and Stroke Subtypes" Stroke; 2019, 50 (11): e328 <b>Address:</b> Department of Internal Medicine, St Vincent Hospital, Worcester, MA. Division of Pulmonary Medicine and Critical Care Medicine, Mayo Clinic, Rochester, MN. Independent Researcher and Clinician, <b>CMC Vellore, India.</b>	INT	JUL TO DEC	Neurosurgery	<b>PMID:</b> 31554499 <b>Impact Factor:</b> 6.046 <b>(BIOXBIO - 2018)</b> <b>H-Index:</b> 292
379.	Mogili, K., Kamath, M., Aleyamma, T., Karuppusami, R., Thomas, S.	INT	JUL TO DEC	Reproduction Medicine Unit	<b>PMID:</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	and Chandy, A. Perinatal outcomes using ejaculate versus surgical sperm retrieval in patients undergoing intra cytoplasmic sperm injection for male infertility - A retrospective analysis of 628 patients Human Reproduction; 2019, 34 171-172				WOS:000484057200336 <b>Impact Factor: 5.506 (BIOXBIO – 2018/2019)</b> <b>H-Index: 209</b>
380.	Mohamad, G., Amritanand, R., David, K. S., Krishnan, V. and Arockiaraj, J. Treatment Strategy and Outcomes in Patients with Hematogenous Culture-Negative Pyogenic Vertebral Osteomyelitis Asian Spine J; 2019, 13 (1): 61-67 <b>Address:</b> Spinal Disorders Surgery Unit, Department of Orthopaedics, <b>Christian Medical College, Vellore, India.</b> STUDY DESIGN: Retrospective case series. PURPOSE: The aim of this study was to analyze functional and radiological outcomes in patients with culture-negative pyogenic vertebral osteomyelitis (PVO). OVERVIEW OF LITERATURE: There were only few literature available for these group of patients. METHODS: Patients with biopsy-positive but culture-negative PVO were included. We analyzed records for data on demography, comorbidities, coexisting infections, neurological status, prior antibiotic therapy, pre- and postoperative erythrocyte sedimentation rate, C-reactive protein levels, and Oswestry Disability Index, and Japanese Orthopedics Association scores. RESULTS: Sixty-one patients were included, of which data of 45 patients were available for follow-up. The patients were predominantly males (71%), with a mean age of 53.2 years. Seventy-seven percent patients had comorbidities. Echocardiography, blood culture, and urine culture were performed on 8%, 24%, and 18% of patients, respectively. Thirty-one percent patients had neurological deficits. Computed tomography-guided biopsy was performed on 67% patients. Fifty-two percent patients were treated surgically, and 48% were treated non-surgically. Nineteen percent patients were treated according to the results of cultures from other foci, and the rest were treated empirically. For the initial 2 weeks, all patients were treated with intravenous antibiotics empirically or based on culture from other foci. This treatment was followed by 10 weeks of oral cloxacillin/cephalexin for gram-positive organisms or ciprofloxacin for gram-negative organisms. The mean follow-up time was 18 months (range, 12-120 months). All patients had improvement in Japanese Orthopedics Association, Oswestry Disability Index, and Visual Analog Scale scores (p<0.001). CONCLUSIONS: Treatment with empirical antibiotics for 12 weeks with watchful clinical and radiological follow-up yields good resolution of the disease. Further multicenter	INT	JUL TO DEC	Orthopaedics, Spinal Disorders Surgery Unit	PMID: 30326685 <b>Impact Factor: 0.82 (RG - 2018)</b> <b>H-Index: 20</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	clinical research needs to be performed for obtaining an algorithmic treatment plan for these patients.				
381.	<p>Mohan S(1), Danda S(1), Mathai S(2), Simon A(2).                      Novel mutation in the nuclear receptor subfamily 0, group B, member 1 (NROB1) gene associated with intrafamilial heterogeneity in three boys with X-linked adrenal hypoplasia congenita and hypogonadotropic hypogonadism from India.                      Natl Med J India. 2019 May-Jun;32(3):141-143.                      doi: 10.4103/0970-258X.278692.</p> <p><b>Author information:</b>                      (1)Department of Medical Genetics, <b>Christian Medical College and Hospital, Vellore</b> 632004, Tamil Nadu, India.                      (2)Department of Child Health, <b>Christian Medical College and Hospital, Vellore</b> 632004, Tamil Nadu, India.</p> <p>Background.: Nuclear receptor subfamily 0, group B, member 1 (NROB1) gene previously known as DAX1 is a transcription factor that plays a key role in the development of hypothalamo-pituitary-gonadal and adrenal axis. Primary adrenal failure may result from metabolic, infection, autoimmune or developmental causes resulting in a life-threatening condition needing immediate intervention. This study aimed to analyse NROB1 (DAX1) gene mutation resulting in adrenal hypoplasia congenita (AHC) in three brothers presenting with hypogonadotropic hypogonadism and primary adrenal failure either in infancy or in early childhood. Methods.: We studied three boys with primary adrenal failure and hypogonadotropic hypogonadism presenting at different ages at the Paediatric Endocrinology Clinic. Mutational analysis of NROB1 gene was carried out by bidirectional sequencing. Results.: All the three boys had deletion of G in exon 1 at position 189 (c.189_189delG) of the gene resulting in frame shift mutation (Y64Tfs*21). Conclusion.: Novel mutation in NROB1 detected by this study explained the cause of hypogonadotropic hypogonadism with primary adrenal failure in this Indian family. Intrafamilial variability was seen in this family. Early diagnosis by genetic testing, genetic counselling and family screening can help to manage this life-threatening condition. DOI: 10.4103/0970-258X.278692                      Conflict of interest statement: None</p>	NAT	JUL TO DEC	Medical Genetics, Child Health	<p><b>PMID: 32129306</b>  <b>Impact Factor: 0.786</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 38</b></p>
382.	<p>Mohanraj, R., Kumar, S., Jayakumar, S., Agarwal, M., Dhingra, B., Jeyaseelan, V. and Suresh, S.                      Where do mothers take their children for pneumonia care? Findings from three Indian states</p>	INT	JUL TO DEC	Biostatistics	<p><b>PMC Article 35395</b>  <b>Impact Factor:2.776</b>  <b>(BIOXBIO – 2018 - 2019)</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>PLoS One; 2019, 14 (4): <b>Address:</b> Samarth, Chennai, Tamilnadu, India                      Statshub, Chennai, Tamilnadu, India                      Department of Community Medicine and Public Health, King George's Medical University, Lucknow, Uttar Pradesh, India                      Department of Pediatrics, All India Institute of Medical Sciences, Bhopal, Madhya Pradesh, India                      Department of Biostatistics, <b>Christian Medical College, Vellore</b>, Tamilnadu, India</p>				<b>H-Index: 268</b>
<b>383.</b>	<p>Moideen, S. P., Mytheenkunju, R., Govindan Nair, A., Mogarnad, M. and Afroze, M. K. H.                      Role of Adenoid-Nasopharyngeal Ratio in Assessing Adenoid Hypertrophy                      Indian J Otolaryngol Head Neck Surg; 2019, 71 (Suppl 1): 469-473  <b>Address:</b>                      1.Department of Pediatric ENT, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamilnadu 632004 India.grid.11586.3b0000 0004 1767 8969                      2.Department of Pediatrics, Academy of Medical Sciences, Pariyaram, Kannur, Kerala India.grid.448741.a0000 0004 1781 1790                      3.Department of Otorhinolaryngology, Padmavathy Medical Foundation, Kollam, Kerala India.                      4.Department of Otorhinolaryngology, Sri Siddhartha Medical College, Tumakuru, Karnataka India.grid.416286.f0000 0004 1793 9129                      5.Department of Anatomy, Sri Siddhartha Medical College, Tumakuru, Karnataka India.grid.416286.f0000 0004 1793 9129</p> <p>Most of the time, pediatrician is the first to see children with adenotonsillar hypertrophy (AH) and they mostly rely on clinical assessment with or without some investigation to refer these children to otorhinolaryngologist. Numerous methods have been described for evaluation of AH, but many of these methods are not possible to follow in busy pediatric outpatient unit either because of lack of cooperation from child or due to limited availability of test or due to cost constraints. This study has been conducted to determine the diagnostic accuracy of lateral neck X-ray (LNX) for assessing AH and to assess the correlation between adenoid size in LNX and clinical symptoms in a pediatric unit. Prospective study conducted in Department of ENT, Pathmavathy Medical Foundation, Kollam, Kerala, India from January 2015 to March 2016. 60 consecutive</p>	<b>NAT</b>	<b>JUL TO DEC</b>	Pediatric ENT	<b>PMID:</b> 31742005 <b>Impact Factor: 0.11 (RG - 2018)</b> <b>H-Index: 16</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	children of both genders, between the age group of 5 to 14 years, attending Department of Pediatrics with a provisional diagnosis of AH were included in the study. The symptom scores, radiographic ratio of adenoid to nasopharynx and endoscopic scorings were calculated. Lateral neck X-ray with calculation of adenoid-to-nasopharynx ratio is found to have significant correlation with patient reported symptoms and findings in nasal endoscopic examination (NE). LNX can be considered as a useful objective tool in evaluation of children with adenoid hypertrophy. Primary care physicians or pediatricians can confidently use lateral neck X-ray for making clinical decisions and can consider nasopharyngoscopy when clinical picture remains unclear or more evaluation is needed.				
384.	<p>Mukherjee, A., Gopalakrishnan, R., Thangadurai, P., Kuruvilla, A. and Jacob, K. S.</p> <p>Knowledge and Attitudes toward Sexual Health and Common Sexual Practices among College Students - A Survey from Vellore, Tamil Nadu, India</p> <p>Indian J Psychol Med; 2019, 41 (4): 348-356</p> <p><b>Address:</b> Department of Psychiatry, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Background: Indian society is considered to have conservative attitudes regarding sex and is ambivalent about the concept of sex education. Previous reports suggest that a considerable proportion of Indian youth have inadequate sexual knowledge and hold a variety of sexual misconceptions. Methodological flaws limit the generalizability of some earlier studies. Aims: This study assessed knowledge and attitude toward sexual health and common sexual practices among college students in Tamil Nadu. Methodology: A total of 952 students from seven randomly selected colleges in Vellore district of Tamil Nadu participated in the survey. The survey questionnaire contained 51 questions on knowledge and attitude toward sexual health and common sexual practices and incorporated items from standardized questionnaires and additional questions suggested by a multidisciplinary group who work in the field. Results: Two hundred seventy-five students among those who completed the survey were women. Higher knowledge scores were associated with older age, male gender, being from a rural background, pursuing non-science streams, and being in postgraduate courses. Nonconservative attitudes were associated with older age, male gender, enrollment in non-science disciplines, discomfort with the family environment, and a religious family background. Conclusions: Sexual knowledge is inadequate and sexual misconceptions were widely prevalent in the population studied. School-based</p>	NAT	JUL TO DEC	Psychiatry	<p><b>PMID:</b> 31391668</p> <p><b>Impact Factor:</b> 0.64</p> <p><b>(RG - 2018)</b></p> <p><b>H-Index:</b> 17</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	comprehensive sex education programs, which have been demonstrated to be effective in improving sexual health, could be used to deal with these lacunae in sexual health knowledge and attitudes.				
385.	<p>Mukherjee, P., Chaudhary, K., Yadav, B. K., Kumar, S., Kekre, N. and Devasia, A. Attitude and perceived barriers towards the practice of evidence-based urology amongst urological trainees in India Indian J Urol; 2019, 35 (2): 116-119</p> <p><b>Address:</b> Department of Urology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India. Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>Introduction: Evidence-based medicine requires systematic access and appraisal of contemporary research findings, followed by their application in clinical practice. It assumes an even greater significance in the current era of aggressive, industry-driven marketing. Methods: A questionnaire was designed combining the McColl questionnaire and Barrier scale with relevant modifications and was administered to the urology trainees attending a continuing urological education program. Statistical analysis was performed using SPSS version 25. Results: The meeting was attended by 110 urological trainees from 55 urological training centers all over India. One hundred and three of them agreed to participate in the study. About 92% of the questionnaires were fully completed. Less than half of the participants (47%) had access to reliable urological literature at work. Only 11% of the respondents claimed to have been formally trained in evidence-based urology (EBU). The inability to understand statistical analysis was the most common (67.4%) perceived barrier to EBU. Conclusion: The urological trainees in India are positively inclined towards EBU. The lack of formal training in appraising the available literature and lack of protected time, and portals to access the literature at workplaces hinder them from improving their compliance to EBU.</p>	NAT	JAN TO JUN	Urology, Biostatistics	<p><b>PMID:31000915</b> <b>PMC ID:6458816</b> <b>Impact Factor: 0.82</b> <b>(RG-2018)</b> <b>H-Index: 26</b></p>
386.	<p>Mukherjee, P., George, A. J. P., Chandrasingh, J. and Devasia, A. AUTHOR REPLY Urology; 2019, 128 61 <b>Address:</b> Department of Urology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p>	INT	JAN TO JUN	Urology	<p><b>PMID: 31101309</b> <b>Impact Factor: 2.300</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 165</b></p>
387.	<p>Mukherjee, P., George, A. J. P., Yadav, B. K., Jeyaseelan, L., Kumar, R. M., Mukha, R. P., Chandrasingh, J., Kumar, S., Kekre, N. S. and</p>	INT	JAN TO JUN	Urology, Biostatistics, Pathology	<p><b>PMID:30822478</b> WOS:000467906600023</p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Devasia, A. The Impact of Narrow Band Imaging in the Detection and Resection of Bladder Tumor in Transitional Cell Carcinoma of the Bladder: A Prospective, Blinded, Sequential Intervention Randomized Controlled Trial Urology; 2019, 128 55-61 <b>Address:</b> Department of Urology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Urology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Electronic <b>Address:</b> arunjpg@gmail.com. Department of Biostatistics, <b>Christian Medical College, Vellore, India.</b> Department of Pathology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>OBJECTIVE: To determine the impact of Narrow Band Imaging (NBI) in detection and resection of tumors during transurethral resection of bladder cancer. MATERIALS AND METHODS: This was a single center randomized prospective interventional study with a sequential intervention design. Patients with bladder tumors were randomized into 2 arms where they were resected under white light (WL) first followed by NBI in arm A, or NBI followed by WL in arm B. The number of patients in whom additional lesions were detected by the second light source, in both arms, was analyzed. The feasibility of initial resection of tumor under NBI was also studied. RESULTS: A total of 110 patients were randomized. Of 54 patients in arm A (WL first) additional lesions were identified at the second look in 20 patients (37%). In contrast, of 56 patients in arm B (NBI first), additional lesions were identified in 5(9%) patients. This difference of 28% was statistically significant (P value &lt;.001). In arm B (NBI first), there were 7 breaches in protocol, and all these patients had high risk (more than or equal to 3 in number or 3 cm in size) tumors (P value &lt;.002). CONCLUSION: Narrowband imaging is superior to WL in the detection of tumors, thus allowing a more complete resection. However, initial resection under NBI is difficult due to poor visibility, especially for high-risk tumors.</p>				<p><b>Impact Factor: 2.300 (BIOXBIO-2018)</b> <b>H-Index: 165</b></p>
388.	<p>Mukherjee, Partho, George, Arun Jacob Philip, Chandrasingh, J. and Devasia, Antony The Impact of Narrow Band Imaging in the Detection and Resection of Bladder Tumor in Transitional Cell Carcinoma of the Bladder: A Prospective, Blinded, Sequential Intervention Randomized Controlled Trial REPLY Urology; 2019, 128 61-61</p>	INT	JUL TO DEC	Urology	<p><b>WOS:000467906600025</b> <b>Impact Factor: 1.861 (BIOXBIO - 2018)</b> <b>H-Index: 165</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
389.	<p>Muliyil, D. E., Rose, A., Senthamizh, S. V., Chatterjee, T., Helan, J., Kang, G. and Muliyil, J. Prevalence and Risk Factors of Vitamin A Deficiency in Children and Women of Childbearing Age in a Southern Indian Tribal Population: A Cross-Sectional Study Indian J Community Med; 2019, 44 (2): 162-165 <b>Address:</b> Department of Community Health, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Gastrointestinal Sciences, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Background: Night blindness and keratomalacia continue to be a problem among the tribal children and pregnant women residing in Jawadhi hills. Objectives: The objective of the study is to determine the prevalence and risk factors of Vitamin A deficiency (VAD) among children aged 1-8 years and women of reproductive age in a southern Indian tribal population. Materials and Methods: A cross-sectional study was done among children aged 1-8 years and women aged 15-45 years residing in Jawadhi hills. Participants were randomly selected by cluster sampling. Their sociodemographic characteristics and frequency of consumption of Vitamin A rich food were collected through a structured questionnaire. Anthropometric measures and serum retinol levels, using high-performance liquid chromatography, were estimated for all participants. Results: A total of 166 children and 211 women participated in this study. The prevalence of VAD among the children (1-8 years) was 10.2% (95% confidence interval [CI] 5.5%-14.9%) and among women of the reproductive age group was 3.8% (95% CI: 1.2%-6.4%). Dietary intake was not associated with serum retinol levels. Low educational status of the head of the household (adjusted odds ratio [aOR] = 8.9) and pregnancy (aOR = 11.6) was significantly associated with an increased risk of VAD among children and women, respectively. Conclusions: The prevalence of VAD among children is a moderate public health problem. Strategies must focus on pregnant women and children from families with more than four children.</p>	NAT	JUL TO DEC	Community Health, Gastrointestinal Sciences	<p><b>PMID:</b> 31333297 <b>Impact Factor:</b> 1.07 <b>(RG - 2018)</b> <b>H-Index:</b> 23</p>
390.	<p>Munday, D., Boyd, K., Jeba, J., Kimani, K., Moine, S., Grant, L. and Murray, S. Defining primary palliative care for universal health coverage The Lancet; 2019, 394 (10199): 621-622 <b>Address:</b> Primary Palliative Care Group, Usher Institute of Population Health Sciences and Informatics, University of Edinburgh, Edinburgh, EH8 9AG, United Kingdom <b>Christian Medical College Hospital, Vellore, India</b> Health Services Department, Kiambu County, Kiambu, Kenya</p>	INT	JUL TO DEC	Palliative Care Medicine	<p><b>PMID:</b> 31448727 <b>PMC Note</b> <b>35369</b> <b>Impact Factor:</b>59.102 <b>(BIOXBIO – 2018 - 2019)</b> <b>H-Index:</b> 700</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	DOI: 10.1016/S0140-6736(19)31830-6				
391.	<p>Muniswami, D. M. and Tharion, G. Therapeutic Effect of Cell Transplantation and Chondroitinase in Rat Spinal Cord Injury Int J Appl Basic Med Res; 2018, 8 (4): 220-226</p> <p><b>Address:</b> Department of Physical Medicine and Rehabilitation, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Background: Spinal cord injury (SCI) leads to permanent functional deficits because the central nervous system lacks the ability for spontaneous repair. Cell therapy strategies offered a hope in neurological repair. The clinical use of human embryonic stem cell transplantation is hampered by scientific and ethical controversies. Olfactory ensheathing cells (OECs)/bone marrow mesenchymal stem cell (MSC) is a promising cell source for autologous neurotransplantation devoid of ethical concerns. Aim: This study aimed to evaluate the combined therapeutic effect of OEC, MSC, and chondroitinase in SCI rat models. Materials and Methods: Adult female albino Wistar rats were divided into ten groups, n = 6 rats in each group and control (n = 11). T10 level laminectomy was done in anesthetized rats to create drop-weight SCI. Both OEC and MSC were transplanted on the 9(th) day following SCI as a combined therapy with different dosage of 2 x 10<sup>5</sup>, 5 x 10<sup>5</sup>, 10 x 10<sup>5</sup>, and &gt;10 x 10<sup>5</sup> at a ratio of 1:1 with/without chondroitinase (0.2 U). One group of SCI rats was treated with chondroitinase alone 0.2 U. Dulbecco's Modified Eagle medium was injected in control rats. The outcome of transplantation was assessed using Basso, Beattie, Bresnahan (BBB) scale and motor-evoked potential studies. Results: All the treated groups showed hindlimb motor recovery in BBB score except control group (P &lt; 0.05). All the three combinations showed better results than OEC + MSC groups in hindlimb motor recovery. In dose-response relationship, 5- and 10-lakh combinations elicited increased functional recovery than 2- and more than 10-lakh combinations. However, chondroitinase alone demonstrated a highest BBB score than any other groups. Conclusions: Chondroitinase/cell combinations have a therapeutic beneficial effect in SCI.</p>	INT	JAN TO JUN	Physical Medicine and Rehabilitation	<p><b>PMID:30598908</b> <b>PMC ID:6259289</b></p> <p><b>Impact Factor:</b> <b>H-Index: NA</b></p>
392.	<p>Muniswami, D. M., Kanthakumar, P., Kanakasabapathy, I. and Tharion, G. Motor Recovery after Transplantation of Bone Marrow Mesenchymal Stem Cells in Rat Models of Spinal Cord Injury Ann Neurosci; 2019, 25 (3): 126-140</p>	INT	JAN TO JUN	Physical Medicine and Rehabilitation, Physiology, Anatomy	<p><b>PMID:30814821</b> <b>PMC ID:6388433</b> <b>Impact Factor: 10.244</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 14</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> Department of Physical Medicine and Rehabilitation, <b>Christian Medical College, Vellore, India.</b>                      Department of Physiology, <b>Christian Medical College, Vellore, India.</b>                      Department of Anatomy, <b>Christian Medical College, Vellore, India.</b></p> <p>Background: Neuronal tissue has a limited potential to self-renew or get repaired after damage. Cell therapies using stem cells are promising approaches for the treatment of central nervous system (CNS) injuries. However, the clinical use of embryonic stem cells is limited by ethical concerns and other scientific consequences. Bone marrow mesenchymal stromal cells (BM-MSC) could represent an alternative source of stem cells for replacement therapy. Indeed, many studies have demonstrated that MSCs can give rise to neuronal cells as well as many tissue-specific cell phenotypes. Purpose: Motor recovery by transplantation of bone marrow MSCs in rat models of spinal cord injury (SCI). Methods: Bone marrow was collected from the femur of albino Wistar rats. MSCs were separated using the Ficoll-Paque density gradient method and cultured in Dulbecco's Modified Eagle Medium supplemented with 20% fetal bovine serum. Cultured MSC was characterized by immunohistochemistry and flow cytometry and neuronal-induced cells were further characterized for neural markers. Cultured MSCs were transplanted into the experimentally injured spinal cord of Wistar rats. Control (injured, but without cell transplantation) and transplanted rats were followed up to 8 weeks, analyzed using the Basso, Beattie, Bresnahan (BBB) scale and electromyography (EMG) for behavioral and physiological status of the injured spinal cord. Finally, the tissue was evaluated histologically. Results: Rat MSCs expressed positivity for a panel of MSC markers CD29, CD54, CD90, CD73, and CD105, and negativity for hematopoietic markers CD34, CD14, and CD45. In vitro neuronal transdifferentiated MSCs express positivity for beta III tubulin, MAP2, NF, NeuN, Nav1.1, oligodendrocyte (O4), and negativity for glial fibrillary acid protein. All the treated groups show promising hind-limb motor recovery BBB score, except the control group. There was increased EMG amplitude in treated groups as compared to the control group. Green fluorescent protein (GFP)-labeled MSC survived and differentiated into neurons in the injured spinal cord, which is responsible for functional recovery. Conclusion: Our results demonstrate that BM-MSC has the potential to repair the injured cord in rat models of SCI. Thus, BM-MSC appears to be a promising</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	candidate for cell-based therapy in CNS injury.				
<b>393.</b>	<p>Murailharan, Vetrivel, Nair, Bijesh Ravindran and Rajshekhar, Vedantam            Changing trends of presentation of central nervous system tuberculosis: Relative prevalence of cranial and spinal tuberculosis and drug resistance patterns            Neurology India; 2019, 67 (3): 792-796</p> <p><b>Author information:</b>            Department of Neurological Sciences, <b>Christian Medical College Hospital, Vellore</b>, Tamil Nadu, India.            Objective: Inappropriate use of antituberculosis drugs and a poor compliance has led to an increase in the prevalence of resistant Mycobacterium tuberculosis. The aim of this study was to document the changing trends in clinical presentation and drug resistance in patients with tuberculosis (TB) of the brain and the spine. Materials and Methods: The authors retrospectively analyzed data from 243 patients admitted in a neurosurgical unit for surgical management of TB of the brain and spine from 2000 to 2013. To establish changes in trends, the patient population was arbitrarily divided into two groups based on their years of admission: 2000-2006 (Group A; n = 121) and 2007-2013 (Group B; n = 122). Results: In the second era (Group B), there were 14.5% more patients with TB spine [from 42/121 (34.7%) in Group A to 60/122 (49.2%) in Group B; P = 0.02] with a corresponding reduction in the proportion of patients with TB brain. The number of cerebrospinal fluid (CSF) diversion procedures remained the same in both the groups, but there was significant reduction in other surgical procedures for patients with TB brain in Group B (P = 0.0004). In patients with TB brain, the culture yield was 10/50 (20%) from tissue and 8/72 (11%) from CSF and there was no significant difference between the groups. In patients with TB spine, the culture yield was higher in Group B patients but was not statistically significant [7/35 (20%) in Group A versus 18/57 (31.6%) in Group B (P = 0.27)]. In Group A, nine patients with TB brain grew Mycobacterium tuberculosis in culture and none was resistant to first-line antituberculosis therapy (ATT), while in Group B, nine patients grew the bacilli and five had resistance to first-line ATT (P= 0.03). Among patients with a positive culture of resistant TB, all had received prior ATT (100% secondary resistance). None of the seven patients with TB spine in Group A with a positive culture had resistant organisms, but in Group B, 5 of 18 (27.8%) with a positive culture had resistant organisms (P = 0.27). Of these, five patients with TB spine with resistance, three of five (60%) patients</p>	<b>NAT</b>	<b>JUL TO DEC</b>	Neurosurgery	<b>WOS:000480323200040</b> <b>Impact Factor: 0.45</b> <b>(RG - 2018)</b> <b>H-Index: 43</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	had secondary resistance, and two of five (40%) patients had primary resistance. Overall, 10 of 27 (37%) patients with a positive culture had resistant organisms in Group B, while none of 16 patients in Group A with a positive culture had resistant organisms (P = 0.007). Conclusion: The most significant finding of our study is an alarming increase in the number of patients with TB brain and spine who have resistant disease (from 0% to 37%) with most of the resistance being secondary in nature. There was an increase in the number of in-patients with spinal TB relative to those with TB brain, though the cause for this is unclear.				
394.	<p>Murray, Jillian, Soenarto, S. Yati, Mulyani, Nenny S., Wijesinghe, Pushpa S., Mpabalwani, Evans M., Simwaka, Julia C., Matapo, Belem, Mwenda, Jason M., Sahakyan, Gayane, Grigoryan, Svetlana, Vanyan, Artavazd, Khactatryan, Sergey, Sanwogou, Jennifer, De Oliveira, Lucia Helena, Rey-Benito, Gloria, Kang, Gagandeep, Serhan, Fatima, Tate, Jacqueline E., Aliabadi, Negar, Cohen, Adam L., Abeysinghe, Nihal, Liyanage, Jayantha, Sargsyan, Shushan, Asoyan, Ara, Gevorgyan, Zaruhi, Kocharyan, Karine, Daniels, Danni, Mathew, M. A., Mathew, Ann, Singh, T. S., Manohar, B., Kumar, S., Babji, S. and Global Rotavirus, Surveillance</p> <p>Multicountry Analysis of Spectrum of Clinical Manifestations in Children &lt; 5 Years of Age Hospitalized with Diarrhea</p> <p>Emerging Infectious Diseases; 2019, 25 (12): 2253-2256</p> <p>After introduction of rotavirus vaccine, other pathogens might become leading causes of hospitalizations for severe diarrhea among children &lt;5 years of age. Our study in 33 hospitals in 7 countries found acute gastroenteritis accounted for most (84%) reported hospitalizations of children with diarrhea. Bloody and persistent diarrhea each accounted for &lt;1%.</p>	INT	JUL TO DEC	Wellcome Research Unit, Clinical Microbiology	<p><b>WOS:000504030700011</b></p> <p><b>PMC 35438</b></p> <p><b>Impact Factor: 7.185</b></p> <p><b>(BIOXBIO – 2018 - 2019)</b></p> <p><b>H-Index: 202</b></p>
395.	<p>Muthuirulandi Sethuvel DP(1), Subramanian N(2), Pragasam AK(1), Inbanathan FY(3), Gupta P(4), Johnson J(5), Sharma NC(6), Hemvani N(7), Veeraraghavan B(1), Anandan S(1), Sangal L(3).</p> <p>Insights to the diphtheria toxin encoding prophages amongst clinical isolates of <i>Corynebacterium diphtheriae</i> from India.</p> <p>Indian J Med Microbiol. 2019 Jul-Sep; 37(3):423-425. doi:10.4103/ijmm.IJMM_19_469.</p> <p><b>Author information:</b> (1)Department of Clinical Microbiology, <b>Christian Medical College,</b></p>	NAT	JUL TO DEC	Clinical Microbiology, Pediatrics	<p><b>PMID: 32003344</b></p> <p><b>Impact Factor: 0.950</b></p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 41</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Vellore, India.</b>                      (2)Department of Paediatrics, <b>Christian Medical College, Vellore, India.</b>                      (3)World Health Organization Country Office, New Delhi, India.                      (4)King George's Medical University, Lucknow, Uttar Pradesh, India.                      (5)State Public Health Laboratory, Thiruvananthapuram, India.                      (6)Maharishi Valmiki Infectious Diseases Hospital, New Delhi, India.                      (7)Choithram Hospital and Research Centre, Indore, Madhya Pradesh, India.</p> <p>Diphtheria is a dreadful disease caused by Corynebacterium diphtheriae. Lysogenised bacteriophages carrying toxin gene in C. diphtheriae can make the strain toxigenic. However, such phage disseminates the toxin genes to other strains when it undergoes lytic phase. As little is known about the phage diversity in C. diphtheriae in India, the present study was undertaken to investigate the prophages integrated into the genome of 29 clinical isolates of C. diphtheriae using whole-genome shotgun sequencing. Amongst these isolates, 27 were toxigenic, while 2 were non-toxigenic strains. Of the 27 toxigenic strains, all harbored known phages carrying toxin gene and two other phages with unknown function. However, the two non-toxin strains did not harbour any of the phages in the genome. It is imperative to devise prevention strategies that hinder the dissemination of toxin by prophages, as it may increase the complications of diphtheria post-immunisation. DOI: 10.4103/ijmm.IJMM_19_469; Conflict of interest statement: None</p>				
396.	<p>Muthuirulandi Sethuvel, D. P., Devanga Ragupathi, N. K., Bakthavatchalam, Y. D., Vijayakumar, S., Varghese, R., Shankar, C., Jacob, J. J., Vasudevan, K., Elangovan, D. and Balaji, V.                      Current strategy for local- to global-level molecular epidemiological characterisation of global antimicrobial resistance surveillance system pathogens                      Indian J Med Microbiol; 2019, 37 (2): 147-162  <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      The prime goal of molecular epidemiology is to identify the origin and evolution of pathogens, which can potentially influence the public health worldwide. Traditional methods provide limited information which is not sufficient for outbreak investigation and studying transmission dynamics. The recent advancement of next-generation sequencing had a major impact on molecular epidemiological studies. Currently, whole-genome sequencing (WGS) has become the gold standard typing method, especially for clinically significant</p>	NAT	JUL TO DEC	Clinical Microbiology	<p><b>PMID:</b> 31745014  <b>Impact Factor:</b> 0.950  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 41</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>pathogens. Here, we aimed to describe the application of appropriate molecular typing methods for global antimicrobial resistance surveillance system pathogens based on the level of discrimination and epidemiological settings. This shows that sequence-based methods such as multi-locus sequence typing (MLST) are widely used due to cost-effectiveness and database accessibility. However, WGS is the only method of choice for studying <i>Escherichia coli</i> and <i>Shigella</i> spp. WGS is shown to have higher discrimination than other methods in typing <i>Klebsiella pneumoniae</i>, <i>Acinetobacter baumannii</i> and <i>Salmonella</i> spp. due to its changing accessory genome content. For Gram positives such as <i>Streptococcus pneumoniae</i>, WGS would be preferable to understand the evolution of the strains. Similarly, for <i>Staphylococcus aureus</i>, combination of MLST, staphylococcal protein A or SCCmec typing along with WGS could be the choice for epidemiological typing of hospital- and community-acquired strains. This review highlights that combinations of different typing methods should be used to get complete information since no one standalone method is sufficient to study the varying genome diversity.</p>				
397.	<p>Muthurulandi Sethuvel, D. P., Veeraraghavan, B., Vasudevan, K., Devanga Ragupathi, N. K., Murugan, D., Walia, K. and Anandan, S. Complete genome analysis of clinical <i>Shigella</i> strains reveals plasmid pSS1653 with resistance determinants: a triumph of hybrid approach Gut Pathog; 2019, 11 55</p> <p><b>Address:</b> 1Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu 632004 India.0000 0004 1767 8969grid.11586.3b</p> <p>2Division of Epidemiology and Communicable Diseases, Indian Council of Medical Research, New Delhi, 110 029 India.0000 0004 1767 225Xgrid.19096.37</p> <p><i>Shigella</i> is ranked as the second leading cause of diarrheal disease worldwide. Though infection occurs in people of all ages, most of the disease burden constitutes among the children less than 5 years in low and middle income countries. Recent increasing incidence of drug resistant strains make this as a priority pathogen under the antimicrobial resistance surveillance by WHO. Despite this, only limited genomic studies on drug resistant <i>Shigella</i> exists. Here we report the first complete genome of clinical <i>S. flexneri</i> serotype 2a and <i>S. sonnei</i> strains using a hybrid approach of both long-read MinION (Oxford Nanopore Technologies) and short-read Ion Torrent 400 bp sequencing platforms. The utilization of this novel approach in the present study helped to identify the complete plasmid sequence of pSS1653 with structural genetic information of AMR genes such as <i>sulII</i>, <i>tetA</i>, <i>tetR</i>, <i>aph(6)-Id</i> and <i>aph(3'')-Ib</i>.</p>	INT	JUL TO DEC	Clinical Microbiology	<p><b>PMID:</b> 31709015  <b>PMCID:</b> PMC6836418  <b>WOS:</b>000495627300001  <b>Impact Factor:</b> 3.169  <b>(BIOXBIO - 2018)</b>  <b>H-Index:</b> 31</p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Identification of AMR genes in mobile elements in this human-restricted enteric pathogen is a potential threat for dissemination to other gut pathogens. The information on Shigella at genome level could help us to understand the genome dynamics of existing and emerging resistant clones.				
398.	<p>Muthusamy, K., Sudhakar, S. V., Christudass, C. S., Chandran, M., Thomas, M. and Gibikote, S.  Clinicoradiological Spectrum of L-2-Hydroxy Glutaric Aciduria: Typical and Atypical Findings in an Indian Cohort  J Clin Imaging Sci; 2019, 9 3  <b>Address:</b> Department of Neurological Sciences, <b>Christian Medical College Vellore</b>, Tamil Nadu India.  Radiodiagnosis, <b>Christian Medical College Vellore</b>, Tamil Nadu India.</p> <p>Context: Neurometabolic disorders form an important group of potentially treatable diseases. It is important to recognize the clinical phenotype and characteristic imaging patterns to make an early diagnosis and initiate appropriate treatment. L-2-hydroxy glutaric aciduria (L2HGA) is a rare organic aciduria with a consistent and highly characteristic imaging pattern, which clinches the diagnosis in most cases. Aims: The study aims to describe the clinical profile, magnetic resonance imaging (MRI) patterns, and outcome in a cohort of children with L2HGA and to assess the clinicoradiological correlation. Materials and Methods: This is a retrospective descriptive study done at the Department of Radiodiagnosis and Neurological Sciences of our institution. Clinical and radiological findings of children diagnosed with L2HGA over an 8-year period (2010-2017) were collected and analyzed. Descriptive statistical analysis of clinical and imaging data was performed. Results: There were six girls and four boys. A total of 14 MRI brain studies in 10 patients with the diagnosis were analyzed. MRI of all patients showed a similar pattern with extensive confluent subcortical white-matter signal changes with symmetrical involvement of dentate nuclei and basal ganglia. In two children who presented with acute decompensation, there was asymmetric cortical involvement and restricted diffusion, which are previously unreported. There was no significant correlation between the radiological pattern with the disease duration, clinical features, or course of the disease. Conclusion: MRI findings in L2HGA are highly consistent and diagnostic, which helps in early diagnosis, particularly in resource-constraint settings, where detailed metabolic workup is not possible. The article also describes novel clinical radiological profile of acute encephalopathic clinical presentation.</p>	INT	JUL TO DEC	Neurological Sciences, Radiodiagnosis	<b>PMID:</b> 31448154 <b>Impact Factor:</b> 0.91 <b>(RG - 2018)</b> <b>H-Index: 14</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
399.	<p>Muthusamy, K., Sudhakar, S. V., Thomas, M., Yoganathan, S., Christudass, C. S., Chandran, M., Panwala, H. and Gibikote, S. Revisiting magnetic resonance imaging pattern of Krabbe disease - Lessons from an Indian cohort J Clin Imaging Sci; 2019, 9 25</p> <p><b>Address:</b> Departments of Neurological Sciences, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Departments of Radiodiagnosis, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Context: Krabbe disease shows considerable heterogeneity in clinical features and disease progression. Imaging phenotypes are equally heterogeneous but show distinct age-based patterns. It is important for radiologists to be familiar with the imaging spectrum to substantially contribute toward early diagnosis, prognostication, and therapeutic decisions. Aims: The study aims to describe different magnetic resonance imaging (MRI) patterns observed in a cohort of children with Krabbe disease and to assess correlation with age-based clinical phenotypes. Materials and Methods: This is a retrospective descriptive study done at the Departments of Radiodiagnosis and Neurological Sciences of our institution, a tertiary care hospital in Southern India. Imaging features of children diagnosed with Krabbe disease over a 10-year period (2009-2018) were collected and analyzed. Results: A total of 38 MRI brain studies from 27 patients were analyzed. Four distinct MRI patterns were recognizable among the different clinical subtypes. All patients from the early and late infantile group showed deep cerebral and cerebellar white matter and dentate hilum involvement. Optic nerve thickening was, however, more common in the former group. Adult-onset subtype showed isolated involvement of corticospinal tract, posterior periventricular white matter, and callosal splenium with the absence of other supra- and infra-tentorial findings. Juvenile subgroup showed heterogeneous mixed pattern with 78% showing adult subtype pattern and 22% showing patchy involvement of deep cerebral white matter with dentate hilum signal changes. Conclusion: Krabbe disease shows distinct imaging features which correspond to different clinical age-based subtypes. This article reemphasizes these distinct imaging phenotypes, highlights a novel imaging appearance in juvenile Krabbe, and also alludes to the rare variant of saposin deficiency. Awareness of these patterns is essential in suggesting the appropriate diagnosis and guiding conclusive diagnostic workup. Large multicenter longitudinal studies are needed to further define the role of imaging in predicting the clinical course and thus to guide therapeutic options.</p>	INT	JUL TO DEC	Neurological Sciences, Radiodiagnosis	<p><b>PMID:</b> 31448176 <b>Impact Factor:</b> 0.91 <b>(RG - 2018)</b> <b>H-Index:</b> 14</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
400.	<p>Muthusamy, K., Thomas, M., Yoganathan, S. and Sudhakar, S. V. Clinical Profile, Prognostic Indicators, and Therapeutic Outcomes of Pediatric Opsoclonus-Myoclonus-Ataxia Syndrome: A Single-Center Experience from South India Ann Indian Acad Neurol; 2019, 22 (3): 295-301</p> <p><b>Address:</b> Department of Neurological Sciences, Pediatric Neurology Division, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Radio Diagnosis, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Background: Opsoclonus myoclonus syndrome (OMS) is a neuroinflammatory disorder. Indian literature on its clinical profile and outcome is sparse. Objectives: The objective of this study is to describe the clinical profile and analyze outcomes and prognostic predictors in a cohort of children with OMS. Materials and Methods: This was a retrospective study of children with OMS between 2007 and 2017. Results: Twenty-two children were included in the study. The mean age at onset of symptom was 20.9 months (standard deviation [SD]: 7.5). The mean duration of delay in diagnosis was 8.4 months (SD 1.26) with acute cerebellitis being the most common misdiagnosis. Eleven children (50%) were diagnosed with tumor during evaluation and follow-up and 11 children (50%) belonged to idiopathic/postinfectious group. Magnetic resonance imaging brain was normal in all children except for one revealing cerebellar atrophy on follow-up. One child in the paraneoplastic group (neuroblastoma) had a positive PNMA2/Ta onconeural antibody. Children in the tumor group had an earlier age of onset (mean 15.5 vs. 26.3 months), shorter time to onset of opsoclonus from initial symptom (2.54 vs. 7.27 weeks), and higher severity score at presentation (13.7 vs. 11.3) compared to the nontumor group. Children in the nontumor group attained their first remission with treatment earlier (10.9 weeks, SD: 4.5) than the children with tumor (18.72 weeks, SD: 5.8). There was no significant difference in the outcome between the groups. Children with multiple relapses (&gt;3) and late surgical intervention for tumor (&gt;6 months after symptom onset) had a poor outcome. Discussion: A high index of suspicion coupled with early diagnosis and periodic tumor surveillance (even in the initially negative cases) along with aggressive combined multimechanistic immunotherapies is the key in improving outcomes. Conclusion: A high index of suspicion in appropriate clinical circumstances and early aggressive immunomodulation might lead to a better outcome.</p>	NAT	JUL TO DEC	Neurological Sciences, Radio Diagnosis	<p><b>PMID:</b> 31359941 <b>Impact Factor:</b> 0.898 <b>(BIOXBIO - 2018)</b> <b>H-Index:</b> 22</p>
401.	<p>N. Priya Predictors of mortality in acute exacerbation of interstitial lung disease: A 11-year retrospective study from a tertiary care hospital</p>	NAT	JUL TO DEC	Respiratory Medicine	<p><b>PMCID:</b> PMC6891926 <b>Impact Factor:</b> 0.58 <b>(RG-2018)</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>in South India  <u>Lung India</u>. 2019 Nov; 36(Suppl 3): S133.</p> <p><b>CMC, Vellore</b>, Tamil Nadu, India. E-mail: drpriya2005smailbox@rediffmail.com</p> <p>Background: AcuteExacerbation (AE) of interstitial lung diseases (ILDs) is the sudden acceleration of disease process superimposed on a diseased lung which is associated with increased mortality rates and ICU admissions. Objectives: 1 To determinefactors predicting mortality in acute exacerbation of ILD. 2. To determine the prognostic value of Composite Physiologic Index (CPI score) and, GAP index in predicting the mortality. Methodology: This is a Retrospective analysis of medical recordsstudy of patientsadmitted from January 2008 to -January 2019 with a diagnosis of acute ILD exacerbation. Details of various prognostic factors were extracted from the electronic medical records were studied. Results: Of the 150patients admitted with ILD acute exacerbation of ILD were admitted during this time period.,23% patients had the MDT diagnosis of IPF.The mortality rate was 46%(67/150 patients). Thecommonest ILD was idiopathic NSIP (51%) followed by IPF (23%). Only 3 patients wereventilated but all of them died. 34% of the total patients were diagnosed to have pulmonaryhypertension. Age more than 65 years, FVC %predicted &lt;50%, DLCO &lt;40%, ILD type of IPF,6MWD &lt;250meters are associated with poor outcomes ofwere found to be risk factors ofmortality in the univariate analysis. However, only age&gt;60 years (OR = 5.6; 95% CI = 1.3 – 24)and IPF (OR = 6.69; 95% CI = 1.3 – 43.76) were independent risk factors. GAP index&gt; 4 had apoor prognosis with high mortality and Composite physiological score (CPI score) more than40 had higher risk for mortality. CPI score of more than 40 is a better predictor of mortality inILD exacerbations with AUC 0.8 which is statistically significant. Conclusion: Age more than 60years and diagnosis of IPF were independent predictors of mortality in acute exacerbation ofILD. In this study factors associated with mortality in interstitial lung diseases are type of ILD as idiopathic pulmonary fibrosis, elderly age and low FVC and DLCO at diagnosis.</p>				<b>H-Index: 18</b>
<b>402.</b>	<p>Na, Fouzia, Kulkarni, Uday, Devasia, Anup, Korula, Anu, Lakshmi, Kavitha, Abraham, Aby, George, Biju, Mathews, Vikram and Srivastava, Alok</p> <p>Impact of Graft Versus Host Disease on Outcome of Allogeneic Haematopoietic Stem Cell Transplantation for Thalassemia Major - Comparison of Bone Marrow Vs Peripheral Blood Stem Cell Grafts Blood; November 2019, 134(Supplement_1):4537-4537</p>	<b>INT</b>	<b>JUL TO DEC</b>	Clinical Hematology	<b>PMC 35606</b> <b>Impact Factor: 16.562</b> <b>(BIOXBIO – 2018 / 2019)</b> <b>H-Index: 426</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>DOI: 10.1182/blood-2019-130491</p> <p>Among transplant related complications, graft versus host disease (GvHD) significantly affects survival among patients undergoing allogeneic hematopoietic stem cell transplantation (aHSCT). There is limited data on GvHD and its impact on outcomes of aHSCT in patients with thalassemia major (TM). We have reviewed the incidence and outcome of GVHD among patients with TM who underwent aHSCT at our center. All patients with TM undergoing their first aHSCT between January 2007 and December 2017 were included in this analysis. Till 2009, all patients received conditioning with busulfan (16mg/kg over 4 days) with cyclophosphamide (200mg/kg over 4 days). From 2010, most patients received treosulfan (42 G/m2 over 3 days) with thiotepa (8mg/Kg for one day) and fludarabine (160mg/m2over 4 days) based conditioning regimen. All patients receiving busulfan conditioning received bone marrow (BM) as the graft while most patients receiving treosulfan conditioning received mobilized peripheral blood stem cells (PBSC). GvHD prophylaxis was with short-course methotrexate (10mg/m2 on day +1, and 7mg/m2 on days 3, 6 and 11) with cyclosporine. Thymoglobulin was added for matched unrelated donors (MUD). GvHD was prospectively recorded and graded according to the Glucksberg classification. Between January 2007 and December 2017, 363 first transplants were done for patients with TM with HLA identical donors. There were 12(3.3%) class 1, 105(28.9%) class 2 and 246(67.8%) class 3 (Pesaro risk stratification), with 115(46.7%) of the latter being high risk (Vellore risk stratification - BBMT, 2007; 13: 889). The median age was 8 years (range: 1-25) with a male predominance (60%). 331 (91.2%) patients had matched related donors (MRD) and 32 (8.8%) had MUDs. Donor gender was mismatched in 207 (57%) of which 129 (35.5%) were female to male transplants. The graft was obtained from the bone marrow in 137 (37.7%) of whom 53 (38.7%) were class III, and from mobilized peripheral blood in 226 (62.3%) of whom 193 (85.4% were class III. 149 (41%) patients developed GvHD - acute GvHD (aGvHD) in 115 (31.7%) and chronic GvHD (cGvHD) in 80 (22%). aGvHD was grade I in 32 patients (27.8%), grade II in 36patients (31.3%), grade III in 16 patients (13.9%) and grade IV in 25 patients (21.7%), while 6 patients (5.2%) had features of overlap GvHD only (oral lichen planus). First line treatment was with steroids in all patients with grade II and above aGvHD (n=83) with 43 (51.8%) of them responding adequately. There were 37 patients (44.5%) who required various second line agents for aGvHD with 20 (24%)</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>receiving more than one immunosuppressive agent. 20 patients (24%) with persistent aGvHD went on to develop cGvHD. Out of the total of 80 patients with cGvHD, 13 (16.3%) had limited and 67 (83.7%) had extensive cGvHD. 26 patients (32.5%) developed de novo cGvHD, 8 (10%) of them after donor lymphocyte infusion (DLI) for potential rejection. The other 46 patients (57.5%) had chronic overlap GvHD following previous aGvHD. Among the different variables evaluated for association with aGvHD (patient/donor age, gender mismatch, MUD vs MRD), none were significant. Among those with MRD, aGVHD occurred in 36/135 patients (26.7%) of patients receiving BM grafts compared to 65/196 patients (33.2%) who received PBSC grafts (p=ns). cGvHD occurred in 23/106 patients (21.7%) in those receiving BM grafts vs 52/171 patients (30.4%) receiving PBSC (p=ns). 30 patients (8.3%) persisted to have cGvHD at last follow-up but only 20 (5.2%) required treatment. Mortality of the whole cohort was 66 (18.2%), out of which 32 (8.8%) were related to GvHD - 24 (6.6%) due to aGvHD and 8 (2.2%) due to cGvHD. At a median follow up of 41 months (range: 0-148), the 5-year and 10-year overall survival (OS) was 81.1±2.1% each for the whole cohort. The 5-year OS of those with grade 2-4 aGvHD was significantly lower than those with grade 0/1 aGvHD (65.7±5.3% vs 85.7±2.2%, p=0.000) [figure 1]. The 5 year OS of those with cGvHD was 88.9% ± 3.8% as compared to those without cGvHD was 96.9% ± 1.2% (P=0.009) [figure 2]. There was no significant difference in OS among those with limited and extensive cGvHD (90.9±3.6% vs 88.4±4.2% (p=ns). Our data shows that, as expected, severe aGvHD and extensive cGvHD significantly lowers survival in patients with TM undergoing aHSCT. However, PBSC graft did not result in higher acute or chronic GVHD compared to BM. Disclosures No relevant conflicts of interest to declare.</p>				
403.	<p>Nadarajan, A. R. and Varghese, G. Abdominal Surgical Emergencies in Patients with Hematological Disorders: An Exacting Experience for Surgeons Cureus; 2019, 11 (2): e4017</p> <p><b>Address:</b> General Surgery, <b>Christian Medical College Hospital, Vellore, IND.</b></p> <p>Management of surgical emergencies in patients with underlying hematological disorder is challenging due to increased incidence of peri-operative morbidity. We report two cases of abdominal surgical emergencies with pre-existing hematological conditions. The first</p>	INT	JAN TO JUN	General Surgery	<p><b>PMID:31007975</b> <b>PMC ID:6453618</b> <b>Impact Factor:</b> <b>H-Index: NA</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	case report is that of a patient diagnosed with pelvic abscess in a previously diagnosed case of Glanzmann's thrombasthenia and the second is a case of intestinal infarction previously diagnosed with paroxysmal nocturnal hemoglobinuria (PNH).				
404.	<p>Nadarajan, Abinaya R., Rymbai, Manbha L., Chase, Suchita and Nayak, Sukria                      Jejunal Diverticulosis Presenting as an Obscure Gastrointestinal Bleeda Challenge in Diagnosis and Management                      Indian Journal of Surgery; 2019, 81 (1): 86-88</p> <p><b>Address:</b>                      Surgery Unit IV, Department of General Surgery, <b>Christian Medical College and Hospital, Vellore, India</b></p> <p>Obscure gastrointestinal bleeding is defined as persistent or recurrent bleeding without an obvious cause after endoscopic and radiological evaluation. Obscure gastrointestinal bleeding originates most commonly from the small intestine. Jejunal diverticulosis is an uncommon diagnosis in which multiple mucosal herniations are present in the mesenteric border of jejunum. There is always a delay in diagnosis as it is a rare clinical entity. This is a case report of a 35-year-old male who presented with overt gastrointestinal bleeding and was managed at another center with surgery and embolization. He was evaluated, and a bleeding jejunal diverticulum was identified as the source of bleed during on-table enteroscopy after exhausting other investigation modalities and having delay in definitive management due to difficulty in localizing the source of bleed. Awareness of jejunal diverticulosis and its complications is very important in obscure gastrointestinal hemorrhage to prevent the diagnostic delay. A stepwise approach is very important to identify the source of obscure gastrointestinal bleed.</p>	NAT	JUL TO DEC	Surgery Unit IV	<p><b>PMID:</b>                      WOS:000464183700018  <b>Impact Factor: 0.550</b>  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 17</b></p>
405.	<p>Naik, Dukhabandhu, Singh, Haobam Surjitkumar, Das Gupta, Riddhi, Jebasingh, Felix, Paul, Thomas V. and Thomas, Nihal                      Prevalence and patterns of cardiac autonomic dysfunction in male patients with type 2 diabetes mellitus and chronic Charcot's neuroarthopathy: a cross-sectional study from South India</p> <p>International Journal of Diabetes in Developing Countries; 2019, 39 (4): 633-640                      Aims Our study aimed to look at the prevalence and patterns of cardiac autonomic neuropathy related dysfunction in male patients of type 2 diabetes mellitus with chronic Charcot's foot. Methods A total of 74 male patients with type 2 diabetes mellitus were included in</p>	INT	JUL TO DEC	Endocrinology	<p><b>WOS:000501903800006</b>  <b>PMC 35445</b>  <b>Impact Factor: 0.585</b>  <b>(BIOXBIO - 2018 - 2019)</b>  <b>H-Index: 22</b></p>

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	<p>this study. Three groups of patients were selected: Group 1 included patients with chronic Charcot's foot (n =24), group 2 included patients with diabetic peripheral neuropathy without chronic Charcot's foot (n =22) and group 3 included patients without peripheral neuropathy or chronic Charcot's foot (n =28). The autonomic functions were tested using a personal computer-based cardiac autonomic neuropathy (CANS-504) analyser. Results The combined sympathetic (SNS) and parasympathetic autonomic function (PNS) abnormalities were detected in about 70.8% in the chronic Charcot's group, 55.6% in the peripheral neuropathy group and 35.7% in the non-neuropathic group. In patients with chronic Charcot's foot (n =24), 29.2% had normal, 20.8% had borderline and 50% had abnormal PNS functions, while 4.2% had normal, 16.7% had borderline and 79.2% had abnormal SNS functions. The Meary's angle (183.1873.83 vs 157.98 +/- 14.11; p &lt;0.196) and Calcaneal pitch (7.07 +/- 3.30 vs 8.5 +/- 1.88; p &lt;0.219) were greater in the subjects with combined autonomic neuropathy, suggesting more structural deformity in them. Conclusion Cardiac autonomic neuropathy-related dysfunction was found to be more common in type 2 diabetes patients with chronic Charcot's foot. This study has highlighted that patients with diabetic mellitus and chronic Charcot's foot should be screened comprehensively in order to prevent complications related to cardiac autonomic dysfunction.</p>				
406.	<p>Naina, P., Syed, K. A., Irodi, A., John, M. and Varghese, A. M. Pediatric tracheal dimensions on computed tomography and its correlation with tracheostomy tube sizes Laryngoscope; 2019, <b>Address:</b> Department of ENT, <b>Christian Medical College, Vellore, India.</b> Department of Radiology, <b>Christian Medical College, Vellore, India.</b></p> <p>OBJECTIVE: Age-based formulas for selecting the appropriate size of tracheostomy tubes in children are based on data on tracheal dimensions. This study aims to measure the tracheal dimensions of Indian children by computerized tomography (CT) and to compare this with the dimensions of age-appropriate tracheostomy tubes. METHODS: CT scans of children aged less than 16 years that were taken for indications other than respiratory distress were included. Tracheal diameters at the tracheostomy point and tracheal length from the tracheostomy point to the carina were calculated from the scans. These dimensions were correlated with age, weight, and</p>	INT	JAN TO JUN	ENT, Radiology	<p><b>PMID:31228208</b> <b>PMC</b> <b>Impact Factor: 2.442</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 134</b></p>



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	height. The measurement on the CT scan was used to predict the appropriate size of tracheostomy tube, which was compared with the tracheostomy tube sizes. RESULTS: Two hundred and fourteen CT scans of children aged below 16 years were included in the study. On multiple logistic regression analysis, tracheal diameter correlated well with age and weight (P = 0.04 and 0.001, respectively), whereas tracheal length correlated well with age and height of the child (P = 0.03 and 0 < 0.001, respectively). On comparison with dimensions of the tracheostomy tube, tracheal diameter correlated well, and the length was found to be longer than needed to prevent endobronchial intubation. The regression value was used to predict the size of an ideal tracheostomy tube. CONCLUSION: Tracheal diameter of Indian children correlates well with the outer diameter of age-appropriate tracheostomy tubes, but the length of these tubes is longer than the ideal length. This would necessitate a change in the design of these tubes. LEVEL OF EVIDENCE: 2b Laryngoscope, 2019.				
407.	<p>Nair NP(1), Reddy N S(1), Giri S(1), Mohan VR(2), Parashar U(3), Tate J(3), Shah MP(3), Arora R(4)(5), Gupte M(4), Mehendale SM(4)(6); Investigators of the Rotavirus vaccine Impact Surveillance Network, Kang G(1)(5). Rotavirus vaccine impact assessment surveillance in India: protocol and methods.</p> <p>Collaborators: Vs S, Gs RP, Babu GK, Pamu P, Manohar B, Pradhan S, Dash M, Mohakud NK, Ray R, Gathwala G, Chawla S, Rawal M, Gupta M, Choudhary SS, Kaushik S, Balasubramanian S, Kumar CG, Narayan SA, S K, Simon A, Gupta RK, Goyal S, Sharma P, Thora S, Ghanghoriya P, George K, Goswami J, Wakhlu A, Gupta V, Mithal M, Vashishtha V.</p> <p>BMJ Open. 2019 Apr 25;9(4):e024840. doi: 10.1136/bmjopen-2018-024840.</p> <p><b>Author information:</b> (1)Department of GI Sciences, <b>Christian Medical College, Vellore, India.</b> (2)Department of Community Health, <b>Christian Medical College, Vellore, India.</b> (3)Centers for Disease Control and Prevention, Atlanta, Georgia, USA. (4)Indian Council of Medical Research, New Delhi, India. (5)Translational Health Science and Technology Institute, Faridabad, India.</p>	INT	JUL TO DEC	GI Sciences, Community Health	<p><b>PMCID: PMC6502045</b> <b>PMID: 31028037</b> <b>WOS:000471157200077</b> <b>Impact Factor: 2.376</b> <b>(BIOXBIO – 2018/2019)</b> <b>H-Index: 69</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>(6)National Institute of Epidemiology, Chennai, India.</p> <p>INTRODUCTION: Rotavirus infection accounts for 39% of under-five diarrhoeal deaths globally and 22% of these deaths occur in India. Introduction of rotavirus vaccine in a national immunisation programme is considered to be the most effective intervention in preventing severe rotavirus disease. In 2016, India introduced an indigenous rotavirus vaccine (Rotavac) into the Universal Immunisation Programme in a phased manner. This paper describes the protocol for surveillance to monitor the performance of rotavirus vaccine following its introduction into the routine childhood immunisation programme. METHODS: An active surveillance system was established to identify acute gastroenteritis cases among children less than 5 years of age. For all children enrolled at sentinel sites, case reporting forms are completed and a copy of vaccination record and a stool specimen obtained. The forms and specimens are sent to the referral laboratory for data entry, analysis, testing and storage. Data from sentinel sites in states that have introduced rotavirus vaccine into their routine immunisation schedule will be used to determine rotavirus vaccine impact and effectiveness. ETHICS AND DISSEMINATION: The Institutional Review Board of <b>Christian Medical College, Vellore</b>, and all the site institutional ethics committees approved the project. Results will be disseminated in peer-reviewed journals and with stakeholders of the universal immunisation programme in India. © Author(s) (or their employer(s)) 2019. Re-use permitted under CC BY. Published by BMJ. DOI: 10.1136/bmjopen-2018-024840 Conflict of interest statement: Competing interests: None declared.</p>				
408.	<p>Nair, B. R. and Rajshekhar, V. Factors Predicting the Need for Prolonged (&gt;24 Months) Antituberculous Treatment in Patients with Brain Tuberculomas World Neurosurg; 2019, <b>Address:</b> Department of Neurological Sciences, <b>Christian Medical College, Vellore</b>, India. Electronic <b>Address:</b> <a href="mailto:drbijeshr@cmcvellore.ac.in">drbijeshr@cmcvellore.ac.in</a> Department of Neurological Sciences, <b>Christian Medical College, Vellore</b>, India.</p> <p>BACKGROUND: Patients with brain tuberculomas are generally managed with 12-18 months of antituberculous treatment (ATT) with or without surgery. However, a subset of these patients may require ATT for longer periods. We studied the factors that were associated with the need for prolonged ATT (&gt;24 months) in patients</p>	INT	JAN TO JUN	Neurological Sciences	<p><b>PMID:30684718</b> WOS:000466491700031 <b>Impact Factor: 1.924</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 85</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	with brain tuberculomas. METHODS: This retrospective study included patients with intracranial tuberculomas managed from January 2000 to December 2015 if they were followed up until completion of therapy and resolution of the tuberculoma/s. The predictive factors analyzed were the number of lesions (solitary vs. multiple), location (infratentorial vs. supratentorial and infratentorial), previous ATT treatment (yes vs. no), surgery (yes vs. no), and size of the lesion ( $\leq 2.5$ cm vs. $> 2.5$ cm). RESULTS: Of the 86 patients, 19 (22%) received ATT for $> 2$ years. On multivariate analysis, multiple lesions were significantly associated with the need for prolonged ATT ( $P = 0.02$ ). Size of the tuberculoma showed a trend toward significance ( $P = 0.06$ ), with tuberculomas $> 2.5$ cm having a 3.68 times increased risk of requiring prolonged ATT. CONCLUSIONS: Although 78% of brain tuberculomas resolve with 12-24 months of ATT, 22% required $> 24$ months of ATT. Multiple tuberculomas had significant association with prolonged ATT, with a median duration of resolution of 36 months. Because tuberculomas $> 2.5$ cm were likely to need longer duration of ATT, brain tuberculomas that require surgery should be excised totally or reduced in size to $< 2.5$ cm to enable early resolution.				
409.	Nair, S. C., Geevar, T. and Dave, R. G. Plasma Coagulation Tests for Detection of Antiphospholipid Antibodies: What's Good, and What Might Be Improved? Indian J Hematol Blood Transfus; 2019, 35 (3): 407-408 <b>Address:</b> Department of Transfusion Medicine and Immunohaematology, <b>Christian Medical College, Vellore, Tamil Nadu India.</b> 0000 0004 1767 8969grid.11586.3b	NAT	JUL TO DEC	Transfusion Medicine and Immunohaematology	<b>PMID:</b> 31388248 <b>Impact Factor:</b> 0.869 <b>(BIOXBIO - 2018)</b> <b>H-Index: 12</b>
410.	Nandyal, M., Chandramouleeswaran, S. and Braganza, D. Feasibility of mobile telephonic follow-up among patients with alcohol dependence syndrome The National medical journal of India; 2019, 32 (2): 77-82 <b>Address:</b> Department of Psychiatry, <b>Christian Medical College, Vellore, Tamil Nadu, India</b>	NAT	JUL TO DEC	Psychiatry	<b>PMC Article</b> 35514 <b>Impact Factor: 0.786</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 38</b>
411.	Narayanan, I., Nsungwa-Sabiti, J., Lusyati, S., Rohsiswatmo, R., Thomas, N., Kamalarathnam, C. N., Wembabazi, J. J., Kirabira, V. N., Waiswa, P., Data, S., Kajjo, D., Mubiri, P., Ochola, E., Shrestha, P., Choi, H. Y. and Ramasethu, J. Facility readiness in low and middle-income countries to address care of high risk/ small and sick newborns Matern Health Neonatol Perinatol; 2019, 5 10 <b>Address:</b> 1Georgetown University Medical Center, Washington, DC,	INT	JAN TO JUN	Endocrinology	<b>PMID:31236281</b> <b>PMC ID:6580648</b> <b>Impact Factor:NA</b> <b>H-Index: NA</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>USA.0000 0001 2186 0438grid.411667.3                      2Ministry of Health, Kampala, Uganda.grid.415705.2                      Harapan Kita Women and Children's Hospital, West Jakarta, Indonesia.                      4Cipto Mangunkusumo Hospital, Universitas Indonesia, Jakarta, Indonesia.0000000120191471grid.9581.5  <b>5Christian Medical College, Vellore,</b> Tamil Nadu India.0000 0004 1767 8969grid.11586.3b                      6Institute of Child Health, Chennai, Tamil Nadu India.0000 0004 1801 0469grid.414710.7                      7Nsambya Hospital, Kampala, Uganda.0000 0004 1780 2544grid.461255.1                      8Department of Health Policy, Planning and Management, Makerere University School of Public Health, Kampala, Uganda.0000 0004 0620 0548grid.11194.3c                      9Global Health Division, Karolinska Institutet, Stockholm, Sweden.0000 0004 1937 0626grid.4714.6                      10Leader Makerere University Maternal and Newborn Centre of Excellence, Kampala, Uganda.0000 0004 0620 0548grid.11194.3c                      11Department of Pediatrics and Child Health, Mbarara University of Science and Technology, Mbarara, Uganda.0000 0001 0232 6272grid.33440.30                      12Makerere University School of Public Health, Kampala, Uganda.0000 0004 0620 0548grid.11194.3c                      13Department of HIV, Research and Documentation, St. Mary's Hospital Lacor, Gulu, Uganda.grid.440165.2                      14MedStar Georgetown University Hospital, Washington, DC, USA.0000 0000 8937 0972grid.411663.7</p> <p>Background: The successful promotion of facility births in low and middle-income countries has not always resulted in improved neonatal outcome. We evaluated key signal functions pertinent to Level II neonatal care to determine facility readiness to care for high risk/ small and sick newborns. Method: Facility readiness for care of high risk/ small and sick babies was determined through self-evaluation using a pre-designed checklist to determine key signal functions pertinent to Level II neonatal care in selected referral hospitals in Uganda (10), Indonesia (4) and India (2) with focus on the Sub-Saharan country with greater challenges. Results: Most facilities reported having continuous water supply, resources for hand hygiene and waste disposal. Delivery rooms had newborn corners for basic neonatal resuscitation, but few practiced proper reprocessing of resuscitation equipment. Birth weight records were</p>				

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	not consistently maintained in the Ugandan hospitals. In facilities with records of birth weights, more than half (51.7%) of newborns admitted to the neonatal units weighed 2500 g or more. Neonatal mortality rates ranged from 1.5 to 22.5%. Evaluation of stillbirths and numbers of babies discharged against medical advice gave a more comprehensive idea of outcome. Kangaroo Mother Care was practiced to varying extents. Incubators were more common in Africa while radiant warmers were preferred in Indian hospitals. Tube feeding was practiced in all and cup feeding in most, with use of human milk at all sites. There were proportionately more certified pediatricians and nurses in Indonesia and India. There was considerable shortage of nursing staff, (worst nurse -bed ratio ranging from 1 to 15 in the day shift, and 1 to 30 at night). There was significant variability in facility readiness, as in data maintenance, availability of commodities such as linen, air -oxygen blenders and infusion pumps and of infection prevention practices. Conclusions: Referral neonatal units in LMIC have challenges in meeting even the basic level II requirements, with significant variability in equipment, staffing and selected care practices. Facility readiness has to improve in concert with increased facility births of high risk newborns in order to have an impact on neonatal outcome, and on achieving Sustainable Development Goals 3.2.2.				
412.	<p>Narayanasamy, M., Ruban, A. and Sankaran, P. S.            Factors influencing to study medicine: a survey of first-year medical students from India            Korean J Med Educ; 2019, 31 (1): 61-71</p> <p><b>Address:</b> Department of Biochemistry, <b>Christian Medical College, Vellore, India.</b></p> <p>PURPOSE: Students joining medical studies may be motivated by many factors. However, there may also be some factors which may concern them. Although, it can be assumed that those joining medical studies would have largely been influenced positively, how the factors interact in different groups of students has not been studied adequately. METHODS: We conducted a questionnaire-based survey in first-year medical students. Besides the demographics and intentions about their future career plans, students rated a list of positively influencing items and a list of negatively affecting items relevant to our context that influenced their decision. We performed factor analysis followed by clustering of study participants. RESULTS: Ninety-seven students participated in the survey which comprised of 59% females with mean age of 18.6 years. The factors</p>	INT	JAN TO JUN	Biochemistry	<p><b>PMID:30852862</b>  <b>PMC ID:6589632</b>  <b>Impact Factor: 1.00</b>  <b>(RG-2018)</b>  <b>H-Index: 04</b></p>

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	extracted were named as 'personal growth factor,' 'professional calling factor,' 'personal concerns factor,' and 'professional concerns factor.' Four distinct clusters of participants differing in their average ratings to each of the above factors were identified. CONCLUSION: This study provides information on the factors that influence students to join medical studies from an Indian context. The motivational patterns were varied in different sub-groups of students. The data obtained from this study may provide pointers to educators to plan training of students, changes in curricular structure that takes into account the expansion of medical education into specialties and beyond.				
413.	<p>Nathaniel Samson, Lijo Varghese, Oommen George, George Joseph, Paul George, John Roshan            Trans-catheter Device Closure of Ruptured Sinus of Valsalva Aneurysms using PDA Occluder Devices            Journal of Clinical and Diagnostic Research; 2019, 13 (10): OC01-OC04</p> <p><b>PARTICULARS OF CONTRIBUTORS:</b></p> <ol style="list-style-type: none"> <li>1. Assistant Physician, Department of Cardiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</li> <li>2. Associate Professor, Department of Cardiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</li> <li>3. Professor, Department of Cardiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</li> <li>4. Professor, Department of Cardiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</li> <li>5. Professor, Department of Cardiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</li> <li>6. Professor, Department of Cardiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</li> </ol> <p>Introduction: Ruptured Sinus of Valsalva (RSOV) is a rare congenital heart disease. Indian data regarding trans-catheter device closure of RSOV is limited. In the current study we aim to look at the feasibility of using a Patent Ductus Arteriosus (PDA) occluder device for this purpose as it is a much economical alternative to the conventional devices. Aim: To study the immediate and intermediate term follow-up after RSOV device closure using PDA device. Materials and Methods: This retrospective analysis, from a large tertiary care hospital in South India, included 24 patients who underwent trans-catheter device closure of RSOV between December 2004 and December 2017, mostly using PDA occluders devices. Patient</p>	NAT	JUL TO DEC	Cardiology	<p>PMC 35619  <b>Impact Factor: 0.41</b>  <b>(RG - 2018)</b>  <b>H-Index: 28</b></p>

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	demographics, clinical characteristics, procedural and device related variables; immediate outcomes during hospital stay were collected from medical records. Follow-up data for residual shunt and complications were also collected. For the descriptive analysis, all continuous variables are expressed as mean values and standard deviation or median with range as appropriate, and discrete variables are presented as percentages Results: Of the 24 patients 75% were males; the mean age was 35 years (range: 12-61 years). Twenty three PDA occluders (Lifetech, Cardi-O-Fix) and 1-vascular plug were used in total. Successful device closure was achieved in 21 patients (87.5%) and the result was sustained at 6 months follow-up (median follow-up was 8 months). There was one procedure related mortality (immediate) due to aneurysm rupture, one patient was referred for surgical closure (one week after percutaneous procedure) due to persistent shunt across the defect and another referred for surgery due to device embolization (after 24 hours of the procedure). No other procedure related complications such as significant aortic regurgitation or coronary artery occlusion occurred. Conclusion: Trans-catheter device closure of RSOV using PDA device occluder is a safe, feasible, effective and economical modality of treatment with good short-term and intermediate outcomes. In carefully selected patients this provides an attractive alternative to surgical closure, thereby avoiding the inherent morbidity of sternotomy and cardiopulmonary bypass.				
414.	<p>Naveen Kumar, Lijo Varghese, Sujith Thomas Chacko, Rekha Karuppusami, Arun Jose, George Joseph                      Looking Beyond LDL-Cholesterol - A Study on Extended Lipid Profile in Indian Patients with Acute Coronary Syndrome                      Journal of Clinical and Diagnostic Research; 2019, 13 (11): OC01-OC06</p> <p><b>PARTICULARS OF CONTRIBUTORS:</b></p> <ol style="list-style-type: none"> <li>1. Assistant Professor, Department of Cardiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</li> <li>2. Associate Professor, Department of Cardiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</li> <li>3. Associate Professor, Department of Cardiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</li> <li>4. Lecturer, Department of Biostatistics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</li> <li>5. Lecturer, Department of Clinical Biochemistry, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</li> <li>6 Professor, Department of Cardiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India</li> </ol>	NAT	JUL TO DEC	Cardiology, Biostatistics, Clinical Biochemistry	<p><b>PMID:139715543</b>  <b>Impact Factor: 0.41</b>  <b>(RG - 2018)</b>  <b>H-Index: 28</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Introduction: Assessment of dyslipidemia with only Total Cholesterol (TC), Triglyceride (TGL), Low- and High-Density Lipoprotein Cholesterol (LDL-C, HDL-C) levels, Standard Lipid Profile (SLP), leads to under-estimation of dyslipidemia as a risk factor in Acute Coronary Syndrome (ACS). Aim: To assess whether extended lipid profile gives a better risk assessment in ACS patients. Materials and Methods: In this single-centre, prospective, observational study of statin-naïve patients presenting with ACS, SLP and Extended Lipid Profile (ELP), consisting of TC/HDL-C ratio, non-HDL-C, apolipoprotein-B, apolipoprotein-A1 and their ratio, were studied at baseline and after high-intensity statin therapy. For continuous data, descriptive statistics mean±standard deviation and also 25th-75th percentile was reported. Number of patients and percentages were reported for categorical data. Pearson correlation coefficient was used to find the relationship between continuous variables. Results: In the present study, 139 patients (mean age 55 years, range 21-88 years, 78% male) presented with ACS: ST-Elevation Myocardial Infarction (STEMI) 79%, non-STEMI 17%, Unstable Angina (UA) 4%. The ELP (barring non-HDL-C) showed more dyslipidemia than SLP. Dyslipidemia declined across the age spectrum from young to old and worsened across the ACS spectrum from UA to STEMI. High-intensity statin therapy reduced LDL-C significantly but not to target levels in most patients. Conclusion: ELP is better able to identify dyslipidemic risk than SLP or LDL-C alone. Dyslipidemia is more prevalent in young and STEMI patients, suggesting a greater role as risk factor in them. Achievement of target LDL-C with statin therapy remains practically elusive in most patients.</p>				
415.	<p>Nawahirsha, S., Gunasekaran, K., Prasad, J. D., Das, S. and Iyyadurai, R.            CLINICAL PROFILE AND OUTCOMES OF PATIENTS WITH ABDOMINAL TUBERCULOSIS FROM A TERTIARY CARE CENTER FROM SOUTH INDIA            Transactions of the Royal Society of Tropical Medicine and Hygiene; 2019, 113 S205-S205</p>	INT	JUL TO DEC	Infectious Diseases	<p><b>PMID:</b>            WOS:000493064400508  <b>Impact Factor: 2.307</b>  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 97</b></p>
416.	<p>Nehrujee, A., Vasanthan, L., Lepcha, A. and Balasubramanian, S.            A Smart phone-based gaming system for vestibular rehabilitation: A usability study            J Vestib Res; 2019,  <b>Address:</b> Department of Bioengineering, <b>Christian Medical College, Bagayam</b>, Vellore, Tamil Nadu, India.            Department of Physical Medicine and Rehabilitation, Physiotherapy Unit, <b>Christian Medical College, Bagayam</b>, Vellore, Tamil Nadu,</p>	INT	JAN TO JUN	Bioengineering, Physical Medicine and Rehabilitation, ENT	<p><b>PMID:31177254</b>  <b>PMC</b>  <b>Impact Factor: 1.11</b>  <b>(RG-2018)</b>  <b>H-Index: 48</b></p>



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>India. Department of Ear, Nose and Throat, Audiovestibular Unit, <b>Christian Medical College, Bagayam</b>, Vellore, Tamil Nadu, India.</p> <p>BACKGROUND Vestibular dysfunctions result in a wide range of impairments and can have debilitating consequences on a person's day-to-day activities. Conventional vestibular rehabilitation is effective but suffers from poor therapy compliance due to boredom. Virtual reality technology can make training more engaging and allow precise quantification of the training process. However, most existing technologies for vestibular rehabilitation are expensive and not suitable for use in patients' homes and most clinics. In this pilot study, we developed and evaluated the usability of a smartphone-based head-mounted display (HMD) for vestibular rehabilitation and quantified the simulator sickness induced by the system. METHOD Two adaptive training games were developed to train discrete and rhythmic head movements in the pitch and yaw planes. The usability and simulator sickness associated with the system were evaluated in a single testing session on healthy subjects and patients with unilateral vestibular dysfunction. Additionally, the head movement kinematics measured during training was also analyzed using different movement quality measures. RESULT SA total of 15 healthy subjects and 15 patients underwent testing with the system. Both groups found the system to be highly usable (&gt;80 score on the system usability scale). Following 20-30 min training with the system, healthy subjects reported minimal simulator sickness symptoms. On the other hand, patients reported a higher incidence rate for symptoms, which could have been the result of their vestibular condition. CONCLUSION The current study demonstrated the usability and safety of a smartphone-based system for vestibular rehabilitation. The system is compact, and affordable thus has the potential to become an excellent tool for home-based vestibular rehabilitation.</p>				
417.	<p>Ninan, M. M., Rupali, P., James, P. and Michael, J. S. Robustness of the Line Probe Assay for the Rapid Diagnosis and Characterization of Mutations in Extensively Drug-Resistant Tuberculosis Microb Drug Resist; 2019, 25 (6): 799-804 <b>Address:</b> 1 Department of Microbiology, <b>CMC, Vellore</b>, Tamil Nadu, India. 2 Department of Infectious Diseases, <b>CMC, Vellore</b>, Tamil Nadu, India. 3 Department of Pulmonary Medicine, <b>CMC, Vellore</b>, Tamil Nadu,</p>	INT	JAN TO JUN	Microbiology, Infectious Diseases, Pulmonary Medicine	<p><b>PMID:30785833</b> <b>Impact Factor: 2.344</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 62</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>India.</p> <p>INTRODUCTION: Extensively drug-resistant tuberculosis (XDRTB) is a public health concern. We evaluated the diagnostic accuracy of Genotype((R)) MTBDRsl for detection of resistance to fluoroquinolones (FQs) and second-line injectable drugs (SLIDs) and characterized mutations seen. MATERIALS AND METHODS: MTBDRsl was carried out either directly on sputum samples or indirectly on culture isolates (n = 100) from known multidrug-resistant tuberculosis (MDRTB) patients from July 2015 to September 2017. Diagnostic accuracy for the detection of resistance to FQs and SLIDs was calculated in comparison with conventional culture-based drug susceptibility testing. Mutations at the gyrA and rrs loci, as well as discrepant phenotypic and genotypic results, were studied. A subset of isolates underwent pyrosequencing. RESULTS: Out of 100 MDRTB samples/isolates tested, 59% were pre-XDRTB and 7% were XDRTB. The sensitivity and specificity for the detection of resistance to FQs were 96.6% [95% confidence interval (CI): 88.3-99.6] and 80% [95% CI: 64.4-90.9] and those for SLIDs were 70% [95% CI: 34.8-93.3] and 100% [95% CI: 95.9-100]. The most frequent mutations were the absence of wild type 3 with corresponding mutation 3c (20/66) at the gyrA locus, and absence of wild type 1 and corresponding mutation 1 (6/7) at the rrs locus. The absence of a wt2 band with a corresponding mutation at the gyrA locus was seen in four of eight patients with discrepant genotypic and phenotypic results for FQ resistance. All isolates tested by pyrosequencing (n = 5) were concordant with the line probe assay for FQ resistance with identical mutations (D94G) and four of five isolates were concordant with SLIDs with identical mutations (A1401G). CONCLUSION: The MTBDRsl is a useful test for accurate diagnosis of XDRTB and may help to tailor therapy.</p>				
418.	<p>Ninan, M. M., Sahni, R. D., Chacko, B., Balaji, V. and Michael, J. S. Candida auris: clinical profile, diagnostic challenge, and susceptibility pattern- an experience from a tertiary care centre in South India J Glob Antimicrob Resist; 2019, <b>Address:</b> Dept of Microbiology, <b>CMC Vellore</b>, Tamil Nadu, India. Electronic <b>Address:</b> marilyn@cmcvellore.ac.in.            Dept of Microbiology, <b>CMC Vellore</b>, Tamil Nadu, India.            Dept of Critical Care, <b>CMC Vellore</b>, Tamil Nadu, India.</p> <p>INTRODUCTION: Candida auris is an emerging, multidrug-resistant yeast transmitted in healthcare settings. Conventional methods of speciation are unable to identify C.auris up to species level. Three methods namely Vitek MS v 3.0, Vitek 2 and target sequencing of the</p>	INT	JUL TO DEC	Microbiology, Critical Care	<p><b>PMID:</b> 31655136  <b>Impact Factor: 0.91</b>  <b>(RG-2018)</b>  <b>H-Index: 16</b></p>

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	internal transcribed spacer(ITS) and 28srRNA genes were evaluated. Antifungal susceptibility testing (AFST) and risk factors of acquiring C.auris candidemia were also studied. MATERIALS AND METHOD: Between November 2016 and November 2017, 203 isolates of Candida spp were isolated from blood cultures, of which 11 isolates unidentifiable by conventional methods were further tested by Vitek MS version 3.0, Vitek 2 and confirmed by sequencing. Antifungal susceptibility testing was carried out on all isolates by microbroth dilution as per CLSI guidelines. The clinical and epidemiological data of all patients were reviewed from the electronic patient records. RESULTS: Of the 11 isolates identified as C.auris by both ITS and 28SrRNA sequencing, Vitek 2 identified only 5 as C.auris and Vitek MS v3.0 was not able to identify any of them as C.auris. Ten (90%) isolates were resistant to fluconazole, and all isolates were susceptible to amphotericin B and caspofungin. CONCLUSION: C.auris can be misidentified in routine microbiology laboratories and sequencing remains the gold standard if commercial identification systems are not updated.				
419.	Nirmal, B. and George, R. Blink sign in dermatoscopy of cicatricial alopecia Int J Dermatol; 2019, 58 (11): e231-e232 <b>Address:</b> Department of Dermatology, <b>Christian Medical College, Vellore, India.</b>	INT	JUL TO DEC	Dermatology	<b>PMID:</b> 31350756 <b>Impact Factor:</b> 1.794 <b>(BIOXBIO - 2018)</b> <b>H-Index: 85</b>
420.	Nirmal, B., Antonisamy, B., Peter, C. V. D., George, L., George, A. A. and Dinesh, G. M. Cross-Sectional Study of Dermatoscopic Findings in Relation to Activity in Vitiligo: BPLeFoSK Criteria for Stability J Cutan Aesthet Surg; 2019, 12 (1): 36-41  <b>Address:</b> Department of Dermatology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>  Background: Stability in vitiligo is an important concept in guiding patient management and a vital prerequisite before vitiligo surgery. Disease activity of vitiligo based on patient's history is imprecise. It is practically impossible to perform biopsy from all lesions of vitiligo to ascertain stability. Dermatoscopy can be used to examine all clinical lesions in a patient of vitiligo. There is a need to validate many reported dermatoscopic findings for universal use. Aims: To analyze the significance of dermatoscopic findings in the activity of vitiligo and to devise a cutoff score for stable vitiligo. Materials and Methods:	INT	JAN TO JUN	Dermatology, Biostatistics	<b>PMID:31057267</b> <b>PMC ID:6484572</b> <b>Impact Factor: 0.83</b> <b>(RG-2018)</b> <b>H-Index: 06</b>

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	Dermatoscopic examination was performed in 85 patients clinically diagnosed with vitiligo. Six dermatoscopic parameters, namely, border, pigment network, perilesional hyperpigmentation, perifollicular pigmentation, satellite lesions, and micro-Koebner phenomenon (acronym: BPLeFoSK) were evaluated against Wood's lamp findings as standard. Chi-square test was used to test association between categorical variables. Cutoff values for stability for these six parameters were plotted in receiver operating curve. Results: A total of 131 vitiligo lesions were analyzed with dermatoscopy. Absence of satellite lesions and absence of micro-Koebner phenomenon were the most sensitive parameters (96.7% and 100%, respectively). Sharp border and absent or reticulate pigment network within the vitiligo patch were the most specific findings (100% and 91.5%, respectively). Conclusion: A cutoff score of more than or equal to 1.5 using the "BPLeFoSK criteria" indicates stability in the vitiligo lesion.				
421.	Nirmal, B., George, R. and Bindra, M. S. Chronic paronychia with subungual purpura Indian J Dermatol Venereol Leprol; 2019, <b>Address:</b> Department of Dermatology-Unit-1 , <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Pathology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>	NAT	JAN TO JUN	Dermatology, Pathology	<b>PMID:30829296</b> <b>PMC</b> <b>Impact Factor: 0.46</b> <b>(RG-2018)</b> <b>H-Index: 39</b>
422.	Nisha, B., Lionel, K., Unnikrishnan, P., Praveen, R. and Hrishi, A. P. Day care neurosurgery in India: Is it a possible reality or a far-fetched illusion? A neuroanesthesiologist's perspective Neurology India; 2019, 67 (3): 938-941 <b>Address:</b> Division of Neuroanesthesia, Department of Anesthesiology, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram, Kerala, 695 011, India Department of Anesthesiology, <b>Christian Medical College, Vellore, Tamil Nadu, India</b>	NAT	JUL TO DEC	Neuroanesthesia, Anesthesiology	<b>PMC Letter 35422</b> <b>Impact Factor: 0.45</b> <b>(RG-2018)</b> <b>H-Index: 43</b>
423.	Olenski, S., Scuderi, C., Choo, A., Bhagat Singh, A. K., Way, M., Jeyaseelan, L. and John, G. Urinary tract infections in renal transplant recipients at a quaternary care centre in Australia Bmc Nephrology; 2019, 20 (1): <b>Address:</b> Royal Brisbane and Women's Hospital, Brisbane, QLD, Australia University of Queensland, Brisbane, QLD, Australia Department of Renal Medicine, Sunshine Coast University Hospital, PO Box 5340 MC, Sunshine Coast, QLD 4560, Australia QIMR Berghofer Medical Research Institute, Brisbane, QLD, Australia	INT	JUL TO DEC	Biostatistics, Nephrology	<b>PMID: 31881863</b> <b>PMCID: PMC6935183</b> <b>PMC Article 22366</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Christian Medical College, Vellore, Tamil Nadu, India</b></p> <p>Background: Urinary tract infections (UTI) are the most common of infections after renal transplantation. The consequences of UTIs in this population are serious, with increased morbidity and hospitalisation rates as well as acute allograft dysfunction. UTIs may impair overall graft and patient survival. We aimed to identify the prevalence and risk factors for post-transplant UTIs and assess UTIs' effect on renal function during a UTI episode and if they result in declining allograft function at 2 years' post-transplant. Additionally, the causative organism, the class of antibacterial drug employed for each UTI episode and utilisation rates of trimethoprim / sulfamethoxazole (TMP/SMX) prophylaxis were also quantified. Methods: This was a retrospective study of 72 renal transplant patients over a 5-year period who were managed at the Royal Brisbane and Women's Hospital. Patient charts, pathology records and dispensing histories were reviewed as part of this study and all UTIs from 2 years post transplantation were captured. Results: Of these patients, 20 (27.8%) had at least one UTI. Older age (<math>p = 0.015</math>), female gender (<math>p &lt; 0.001</math>), hyperglycaemia (<math>p = 0.037</math>) and acute rejection episodes (<math>p = 0.046</math>) were risk factors for developing a UTI on unadjusted analysis. Female gender (OR 4.93) and age (OR 1.03) were statistically significant risk factors for a UTI on adjusted analysis. On average, there was a 14.4% (SEM 5.20) increase in serum creatinine during a UTI episode, which was statistically significant (<math>p = 0.027</math>), and a 9.1% (SEM 6.23) reduction in serum creatinine after the UTI episode trending toward statistical significance. (<math>p = 0.076</math>). Common organisms (Escherichia coli and Klebsiella pneumoniae) accounted for 82% of UTI episodes with 70% of UTI cases requiring only a single course of antibiotic treatment. Furthermore, the antibiotic class used was either a penicillin (49%) or cephalosporin (36%) in the majority of UTIs. The use of TMP/SMX prophylaxis for Pneumocystis carinii pneumonia prophylaxis did not influence the rate of UTI, with &gt; 90% of the cohort using this treatment. Conclusions: There was no significant change in serum creatinine and estimated glomerular filtrate rate from baseline to 2 years post-transplant between those with and without a UTI. © 2019 The Author(s).DOI: 10.1186/s12882-019-1666-6</p>				
424.	<p>Oommen AM(1), Mini GK(2), George K(3).                      Intracluster correlation estimates from a World Health Organisation STEPwise approach to surveillance (STEPS) survey for cardiovascular risk factors in Vellore, Tamil Nadu, India.                      Public Health. 2019 Mar;168:102-106.</p>	INT	JUL TO DEC	Community Health,	<p>PMID: 30738282                      Impact Factor: 1.696                      (BIOXBIO – 2018-2019)                      H-Index: 66</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>doi: 10.1016/j.puhe.2018.12.019. Epub 2019 Feb 6.</p> <p><b>Author information:</b>                      (1)Community Health Department, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Electronic address: <a href="mailto:anuoommen@cmcvellore.ac.in">anuoommen@cmcvellore.ac.in</a>                      (2)Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum, Kerala, India; Global Institute for Public Health, Ananthapuri Hospitals and Research Institute, Trivandrum, Kerala, India.                      (3)Community Health Department, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>OBJECTIVES: Most World Health Organisation (WHO) STEPS surveys use cluster sampling to assess the prevalence of risk factors for non-communicable diseases (NCDs) for which design effects need to be estimated using intracluster correlation (ICCs) coefficients, for sample size calculation. Although there are many reports of risk factor surveys reported from developing countries, there are very few reports of ICCs for risk factors for NCDs, which can inform planning the appropriate sample size needed for such surveys. This study reports the ICCs for NCD risk factors, obtained from a WHO STEPS survey conducted in Vellore district, in the state of Tamil Nadu, South India. STUDY DESIGN: Cross-sectional study. METHODS: A cross-sectional study was carried out in 48 urban clusters (wards) and nine rural clusters (villages) between 2011 and 2012, using the WHO STEPS methodology for assessing behavioural, anthropometric, physical and biochemical risk factors. The ICC estimates for various risk factors were obtained using oneway and xtmelogit commands using STATA to study clustering of risk factors. RESULTS: The number of respondents was 6196 adults aged 30-64 years. The median ICC of cardiovascular risk factors in the urban area was 0.046, while it was 0.064 in the rural area. Clustering was higher for behavioural risk factors such as physical activity (ICC: 0.179 rural, 0.049 urban) and fruit and vegetable intake (ICC: 0.105 rural, 0.091 urban) as compared with physical risk factors (ICCs for hypertension: 0.044 rural, 0.006 urban; body mass index: 0.046 rural, 0.041 urban) and biochemical outcomes such as fasting plasma glucose (ICC: 0.017 rural, 0.027 urban). CONCLUSIONS: This study provides estimates of ICCs for cardiovascular risk factors from Vellore, South India, as such data have not been reported from WHO STEPS surveys in India or neighbouring countries. Such estimates of ICCs if reported from various WHO STEPS being carried</p>				

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	out across the country can contribute to better planning of epidemiological surveys. Clustering of behavioural risk factors at village/ward level as seen in this study points to the need for community-based interventions for health promotion, as spatial clustering influences behaviour, which in turn affects chronic disease outcomes. Copyright © 2018 The Royal Society for Public Health. Published by Elsevier Ltd. All rights reserved. DOI: 10.1016/j.puhe.2018.12.019				
<b>425.</b>	<p>Oommen, Anu Mary, Kapoor, Nitin, Thomas, Nihal and George, Kuryan Prevalence and clinical characteristics of individuals with newly detected lean diabetes in Tamil Nadu, South India: a community-based cross-sectional study International Journal of Diabetes in Developing Countries; 2019, 39 (4): 680-684</p> <p>Background and objectives Lean diabetes is an entity that has been observed to be higher in Asian populations. The estimates of the burden of lean diabetes in India are mainly from hospital-based studies. This study reports the prevalence of lean diabetes among individuals with newly detected diabetes, from Vellore, Tamil Nadu, South India. Methods A cross-sectional WHO STEPS survey was conducted among adults aged 30-64 years, in one rural block and 48 urban wards, in Vellore. Physical and anthropometric parameters were assessed in addition to fasting lipid profile and plasma glucose. Newly detected diabetes was defined as fasting plasma glucose <math>\geq</math> 126 mg/dl and lean diabetes as non-ketotic diabetes mellitus, without clinical features to suggest pancreatic diabetes, with a body mass index (BMI) <math>&lt;</math>18.5 kg/m<sup>2</sup>. Results Among 3445 rural and 2019 urban subjects, the proportion of lean diabetes among 280 subjects (146 rural, 134 urban) with newly detected diabetes was 5.5%, 95% CI: 1.7-9.3% (eight subjects) and 1.5%, 95% CI: 0-3.6% (two subjects), in the rural and urban areas respectively. The proportion of those with a normal BMI (18.5-22.9 kg/m<sup>2</sup>) was 25.3% and 18.7% in the rural and urban populations, while 69.2% and 79.9% had a BMI <math>\geq</math> 23 kg/m<sup>2</sup>. Those with lean diabetes were more likely to be older, illiterate, and involved in manual labor, than those with non-lean diabetes (<math>p &lt; 0.05</math>). Conclusion The prevalence of lean diabetes was low (5.5% of newly detected rural diabetes, 1.5% of newly detected urban diabetes) in Vellore, South India. Further documentation of the burden of this condition across India is needed to assess the public health implications for prevention and control.</p>	<b>INT</b>	<b>JUL TO DEC</b>	Endocrinology	<b>PMID:WOS:000501903800013</b> <b>PMC 35446</b> <b>Impact Factor: 0.585</b> <b>(BIOXBIO – 2018 - 2019)</b> <b>H-Index: 22</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
426.	<p>Oommen, S. P., Santhanam, S., John, H., Roshan, R., Swathi, T. O., Padankatti, C., Grace, H., Beulah, R., Jana, A. K., Kumar, M., Thomas, N. and Yadav, B.</p> <p>Neurodevelopmental Outcomes of Very Low Birth Weight Infants at 18-24 Months, Corrected Gestational Age in a Tertiary Health Centre: A Prospective Cohort Study J Trop Pediatr; 2019,</p> <p><b>Address:</b> Developmental Pediatrics Unit, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Neonatology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>OBJECTIVE: To determine the prevalence and risk factors for poor neurodevelopmental outcome in a cohort of very low birth weight (VLBW) infants. SUBJECTS AND METHODS: Four hundred and twenty-two infants of a total of 643 VLBW survivors from a teaching hospital in South India were followed up to assess their neurodevelopmental outcomes. RESULTS: Among the 422 children who completed the assessment, results of 359 children whose assessments were done between 18 and 24 months were analysed. Thirty-seven children (10.31%) had poor neurodevelopmental outcome, six children [1.67%] had cerebral palsy, one child had visual impairment and another had hearing impairment. Poor post-natal growth was independently associated with poor neurodevelopmental outcomes in the multivariate analysis (p = 0.045). Neonatal complications were not associated with the developmental outcome. CONCLUSION: Despite lower rates of neonatal complications compared with Western cohorts, significant proportion of VLBW infants had poor neurodevelopmental outcomes. Poor post-natal growth was an important determinant of the developmental outcome.</p>	INT	JAN TO JUN	Developmental Pediatrics, Neonatology, Biostatistics	<p><b>PMID:30793756</b> <b>PMC</b> <b>Impact Factor: 1.187</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 47</b></p>
427.	<p>O'shea, R., Panwar, J., Chu Kwan, W., Stimec, J., Camp, M. W. and Gargan, M.</p> <p>Establishing Safe Zones to Avoid Nerve Injury in the Approach to the Humerus in Pediatric Patients: A Magnetic Resonance Imaging Study The Journal of bone and joint surgery. American volume; 2019, 101 (23): 2101-2110</p> <p><b>Address:</b> Kaiser Permanente, San Diego, California. The Hospital for Sick Children, Toronto, Ontario, Canada. Department of Radiology, <b>Christian Medical College, Vellore,</b></p>	INT	JUL TO DEC	Radiology	<p><b>PMID: 31609890</b> <b>Impact Factor: 4.716</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 325</b></p>



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	<p><b>India.</b> University Hospitals Bristol, Bristol, England. BACKGROUND: The surgical anatomy of upper-extremity peripheral nerves in adults has been well described as "safe zones" or specific distances from osseous landmarks. In pediatrics, relationships between nerves and osseous landmarks remain ambiguous. The goal of our study was to develop a model to accurately predict the location of the radial and axillary nerves in children to avoid iatrogenic injury when approaching the humerus in this population. METHODS: We conducted a retrospective review of 116 magnetic resonance imaging (MRI) scans of entire humeri of skeletally immature patients; 53 of these studies met our inclusion criteria. Two independent observers reviewed all scans. Arm length was measured as the distance between the lateral aspect of the acromion and the lateral epicondyle. We then calculated the distances (defined as the percentage of arm length) between the radial nerve and distal osseous landmarks (the medial epicondyle, transepicondylar line, and lateral epicondyle) as well between the axillary nerve and the most lateral aspect of the acromion. RESULTS: The axillary nerve was identified at a distance equaling 18.6% (95% confidence interval [CI], +/-0.62%) of arm length inferior to the lateral edge of the acromion. The radial nerve crossed (1) the medial cortex of the posterior part of the humerus at a distance equaling 63.19% (95% CI: +/-0.942%) of arm length proximal to the medial epicondyle, (2) the middle of the posterior part of the humerus at a distance equaling 53.9% (95% CI: +/-1.08%) of arm length proximal to the transepicondylar line, (3) the lateral cortex of the posterior part of the humerus at a distance equaling 45% (95% CI: +/-0.99%) of arm length proximal to the lateral epicondyle, and (4) from the posterior to the anterior compartment at a distance equaling 35.3% (95% CI: +/-0.92%) of arm length proximal to the lateral epicondyle. A strong linear relationship between these distances and arm length was observed, with an intraclass correlation coefficient of &gt;0.9 across all measurements. CONCLUSIONS: The positions of the radial and axillary nerves maintain linear relationships with arm lengths in growing children. The locations of these nerves in relation to palpable osseous landmarks are predictable. CLINICAL RELEVANCE: Knowing the locations of upper-extremity peripheral nerves as a proportion of arm length in skeletally immature patients may help to avoid iatrogenic injuries during surgical approaches to the humerus.</p>				
428.	Otobo, Tarimobo M., Conaghan, Philip G., Maksymowych, Walter P., Van Der Heijde, Desiree, Weiss, Pamela, Sudol-Szopinska, Iwona, Herregods, Nele, Jaremko, Jacob L., Meyers, Arthur B., Rumsey,	INT	JUL TO DEC	Clinical Immunology & Rheumatology	PMID:WOS:00048402770023 Impact Factor: 3.634

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Dax, Inarejos, Emilio C., Kirkhus, Eva, Stimec, Jennifer, Panwar, Jyoti, Thorpe, Kevin, Jans, Lennart, Van Rossum, M. A., Tolend, Mirkamal, Perez, Manuela, Tzaribachev, Nikolay, Sandhya, Pulukool, Tse, Shirley, Simone, Appenzeller, Swami, Vimarsha G., Touma, Zahi, Lambert, Robert and Doria, Andrea S.</p> <p>Preliminary Definitions for Sacroiliac Joint Pathologies in the OMERACT Juvenile Idiopathic Arthritis Magnetic Resonance Imaging Score (OMERACT JAMRIS-SIJ)</p> <p>Journal of Rheumatology; 2019, 46 (9): 1192-1197</p> <p><b>Author Information</b>  <b>Reprint Address:</b> Doria, AS (reprint author)                      Hosp Sick Children, Dept Diagnost Imaging, 555 Univ Ave, Toronto, ON M5G 1X8, Canada.</p> <p><b>Addresses:</b></p> <p>[1] Univ Toronto, Fac Med, Inst Med Sci, Toronto, ON, Canada                      [2] Hosp Sick Children, Dept Diagnost Imaging, 555 Univ Ave, Toronto, ON M5G 1X8, Canada                      [3] Peter Gilgan Ctr Res &amp; Learning, SickKids Res Inst, Dept Translat Med, Toronto, ON, Canada                      [4] Univ Toronto, Dalla Lana Sch Publ Hlth, Toronto, ON, Canada                      [5] Univ Toronto, Hosp Sick Children, Div Rheumatol, Toronto, ON, Canada                      [6] Univ Toronto, Dept Med Imaging, Toronto, ON, Canada                      [7] Toronto Western Hosp, Ctr Prognosis Studies Rheumatol Dis, Dept Rheumatol, Toronto, ON, Canada                      [8] Univ Alberta, Dept Rheumatol, Edmonton, AB, Canada                      [9] Univ Alberta, Dept Radiol &amp; Diagnost Imaging, Edmonton, AB, Canada                      [10] Univ Alberta, Dept Pediat, Div Pediat Rheumatol, Edmonton, AB, Canada                      [11] Univ Leeds, Leeds Inst Rheumat &amp; Musculoskeletal Med, Leeds, W Yorkshire, England                      [12] Leeds Teaching Hosp Natl Hlth Serv NHS Trust, Natl Inst Hlth Res, Leeds Biomed Res Ctr, Leeds, W Yorkshire, England                      [13] Leiden Univ, Dept Rheumatol, Med Ctr, Leiden, Netherlands                      [14] Reade Emma Childrens Hosp, Acad Med Ctr, Amsterdam, Netherlands                      [15] Univ Penn, Perelman Sch Med, Div Rheumatol, Childrens Hosp Philadelphia, Philadelphia, PA 19104 USA                      [16] Dept Pediat, Philadelphia, PA USA                      [17] Dept Epidemiol, Philadelphia, PA USA                      [18] Nemours Childrens Hosp &amp; Hlth Syst, Dept Radiol, Orlando, FL USA</p>				<p><b>(BIOXBIO - 2018)</b>  <b>H-Index: 165</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>[19] Natl Inst Geriatr Rheumatol &amp; Rehabil, Dept Radiol, Warsaw, Poland</p> <p>[20] Ghent Univ Hosp, Dept Radiol &amp; Med Imaging, Ghent, Belgium</p> <p>[21] Hosp St Joan de Deu, Dept Radiol, Barcelona, Spain</p> <p>[22] Oslo Univ Hosp, Rikshosp, Dept Radiol, Oslo, Norway</p> <p>[24] Christian Med Coll &amp; Hosp, Dept Clin Immunol &amp; Rheumatol, Vellore, Tamil Nadu, India</p> <p>[25] State Univ Campina, UNICAMP, Dept Internal Med, Sao Paulo, Brazil</p> <p>[26] Leeds Teaching Hosp NHS Trust, NIHR Leeds Biomed Res Ctr, Leeds, W Yorkshire, England</p> <p><b>E-mail Addresses:</b><a href="mailto:andrea.doria@sickkids.ca">andrea.doria@sickkids.ca</a></p> <p>Objective. To develop definitions for the assessment of magnetic resonance imaging (MRI) pathologies of the sacroiliac joints (SIJ) in juvenile idiopathic arthritis. Methods. An Outcome Measures in Rheumatology (OMERACT) consensus-driven methodology consisting of iterative surveys and focus group meetings within an international group of rheumatologists and radiologists. Results. Two domains, inflammation and structural, were identified. Definitions for bone marrow edema, joint space inflammation, capsulitis, and enthesitis were derived for joint inflammation; sclerosis, erosion, fatty lesion, and ankylosis were defined for assessing structural joint changes. Conclusion. Preliminary consensus-driven definitions for inflammation and structural elements have been derived, underpinning the ongoing development of the OMERACT Juvenile Arthritis MRI SIJ scaling system (OMERACTJAMRIS-SIJ).</p>				
429.	<p>Pai, A. A., Devasia, A. J., Panetta, J. C., Mani, S., Stallon Illangeswaran, R. S., Mohanan, E., Balakrishnan, B., Lakshmi, K. M., Kulkarni, U., Aboobacker, F. N., Korula, A., Abraham, A., Srivastava, A., Mathews, V., George, B. and Balasubramanian, P.</p> <p>Pharmacokinetics and Efficacy of Generic Melphalan Is Comparable to Innovator Formulation in Patients With Multiple Myeloma Undergoing Autologous Stem Cell Transplantation</p> <p>Clin Lymphoma Myeloma Leuk; 2019, <b>Address:</b> Department of Hematology, <b>Christian Medical College, Vellore, India.</b></p> <p>Department of Pharmaceutical Sciences, St Jude Children's Research Hospital, Memphis, TN.</p> <p>Department of Hematology, <b>Christian Medical College, Vellore, India.</b> Electronic <b>Address:</b> <a href="mailto:bpoonkuzhali@cmcvellore.ac.in">bpoonkuzhali@cmcvellore.ac.in</a>.</p> <p>BACKGROUND: High-dose melphalan (MEL) is the standard conditioning regimen used for autologous stem cell transplantation</p>	INT	JUL TO DEC	Hematology,	<b>PMID:31791694</b> <b>PMC 35291</b>

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	(ASCT) in patients with multiple myeloma (MM). Generic MEL is routinely used in various transplant centers across the world including ours due to its reduced cost and ease of availability. We compared the pharmacokinetics (PK) and the clinical efficacy of generic MEL with that of the innovator formulation in MM patients undergoing ASCT. PATIENTS AND METHODS: Sixty-three patients diagnosed with MM receiving high-dose MEL were included in this study. MEL levels in plasma were measured using a liquid chromatography tandem mass spectrometry (HPLC/MS-MS) protocol and non-linear mixed effects modeling was used to evaluate the PK of the data. RESULTS: The interindividual variability (IIV) in MEL area under the concentration versus time curve (AUC) and clearance (CL) were 4.39, 5.88-fold for generic, and 4.34, 6.85-fold for the innovator formulation, respectively. The median MEL AUC and CL were comparable between the 2 formulations. The population PK analysis showed age and creatinine CL as the only significant covariates explaining IIV in MEL AUC/CL. Analysis of MEL PK parameters with clinical outcome showed no significant differences in terms of onset and severity of mucositis, day to neutrophil and platelet engraftment, as well as response status on day 100 post ASCT between patients receiving generic or innovator formulations of MEL. In addition, neither MEL AUC nor CL was found to be associated with day +100 response. CONCLUSION: Our study suggests that the PK and efficacy of the generic MEL is comparable to the innovator formulation.				
430.	<p>Pandey, S. K., Mani, S. E., Sudhakar, S. V., Panwar, J., Joseph, B. V. and Rajshekhar, V. Reliability of Imaging-Based Diagnosis of Lateral Ventricular Masses in Children World Neurosurgery; 2019, 124 e693-e701</p> <p><b>Address:</b> Department of Neurological Sciences, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India. Department of Radiodiagnosis, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India. Department of Neurological Sciences, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India. Electronic <b>Address:</b> rajshekhar@cmcvellore.ac.in.</p> <p>OBJECTIVE: We studied the accuracy of the radiologic diagnosis of lateral ventricular masses in children (&lt;20 years of age). METHODS: In this retrospective study, data were collected from children with lateral ventricular masses managed in our unit between 2001 and</p>	INT	JAN TO JUN	Neurological Sciences, Radiodiagnosis	<b>PMID:30660880</b> <b>Impact Factor: 1.924</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 85</b>

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	<p>2016. There were 43 patients (26 boys and 17 girls; mean age, 12.1 years; range, 8 months to 20 years). Magnetic resonance imaging was available for 36 patients, whereas in 7 patients only a contrast-enhanced computed tomography scan was available. The images were read independently by 3 radiologists, who were blinded to the pathology. Two differential diagnoses were offered for each patient. The agreement between the 3 radiologists was calculated using the Fleiss kappa statistic. RESULTS: The common pathologic diagnoses were subependymal giant cell astrocytoma (SEGA) (20.9%), low-grade astrocytoma (16.3%), high-grade astrocytoma (9.3%), choroid plexus papilloma (9.3%), and meningioma (9.3%). The sensitivity, specificity, and accuracy of the radiologic diagnoses were 62%, 96.7%, and 94.2%, respectively. Low-grade tumors such as low-grade gliomas, SEGAs, choroid plexus papillomas, and meningiomas were diagnosed with a high level of accuracy. High-grade gliomas, choroid plexus carcinomas, and other malignant neoplasms were difficult to diagnose on imaging. Cavernous angiomas were also difficult to diagnose. There was only fair agreement between the 3 radiologists (Fleiss kappa = 0.24). CONCLUSIONS: The pathologic spectrum of lateral ventricular tumors in children is wide, and identifying the pathology on imaging is difficult for malignant tumors. Benign tumors such as SEGAs, low-grade astrocytomas, and choroid plexus papillomas are relatively easier to diagnose. There is significant interobserver variability in the radiologic diagnosis of these tumors.</p>				
431.	<p>Pant Pai, N., Daher, J., Prashanth, H. R., Shetty, A., Sahni, R. D., Kannangai, R., Abraham, P. and Isaac, R.                      Will an innovative connected AideSmart! app-based multiplex, point-of-care screening strategy for HIV and related coinfections affect timely quality antenatal screening of rural Indian women? Results from a cross-sectional study in India                      Sexually Transmitted Infections; 2019, 95 (2): 133-139  <b>Address:</b> Department of Medicine, McGill University, Montreal, QC H4A 3S5, Canada                      Division of Clinical Epidemiology, Research Institute of the McGill University Health Centre, Montreal, Canada                      Rural Unit for Health and Social Affairs (RUHSA), <b>Christian Medical College, Vellore, Tamil Nadu, India</b>                      Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India</b>                      Department of Clinical Virology, <b>Christian Medical College, Vellore, Tamil Nadu, India</b></p>	INT	JUL TO DEC	Medicine, Microbiology, Virology  Clinical Clinical	<p><b>PMC Article                      35376                      Impact Factor: 3.365                      (BIOXBIO – 2018-2019)                      H-Index: 90</b></p>
432.	<p>Panwar, J., Hsu, C. C., Tator, C. and Mikulis, D.</p>	INT	JUL TO DEC	Radiology	<p><b>PMID:31822164</b></p>

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	<p>Magnetic Resonance Imaging Criteria for Post-concussion Syndrome (PCS): A study of 127 PCS Patients                      J Neurotrauma. 2019 Dec 10. doi: 10.1089/neu.2019.6809.</p> <p><b>Address: Christian Medical College and Hospital Vellore,</b>                      30025, Department of Radiology, Vellore, Tamil Nadu, India.                      Toronto Western Hospital, 26625, Joint Department of Medical Imaging, University Health Network, University of Toronto, Toronto, Ontario, Canada; <a href="mailto:drjyotimch@gmail.com">drjyotimch@gmail.com</a>                      Gold Coast University Hospital, Brisbane, Southport QLD , Department of Medical Imaging, Gold Coast, Queensland, Australia; <a href="mailto:charlie.ct.hsu@gmail.com">charlie.ct.hsu@gmail.com</a>.                      Toronto Western Hospital, Neurosurgery, 399 Bathurst St, Room 4W-422, Toronto, Canada, M5T 2S8; <a href="mailto:charles.tator@uhn.ca">charles.tator@uhn.ca</a>.                      Toronto Western Hospital, University Health Network, Department of Medical Imaging, Toronto, Ontario, Canada; <a href="mailto:david.mikulis@uhn.ca">david.mikulis@uhn.ca</a>.</p> <p>The purpose of this study was to assess the frequency of structural lesions on conventional MRI of the brain in a large prospective cohort of post-concussion syndrome (PCS) patients. Conventional 3T MRI was used to evaluate 127 prospectively enrolled PCS patients and 29 controls for non-specific white matter hyperintensities (WMH) and traumatic structural lesions including encephalomalacia, atrophy, microhemorrhage, subarachnoid hemorrhage and cortical siderosis. All PCS patients had the clinical diagnosis of one or more concussions based on the Concussion in Sport Group (CISG) consensus statements. Patients with recognized intracranial hemorrhage on prior head CT and MRI were excluded. The differences between the PCS and control groups were analyzed. Four patients in the PCS group (3.1%) had positive findings which included microhemorrhages in two patients and encephalomalacia in another two patients. None of these lesions was present in the control group but there was no statistical difference between the two groups (P = 0.5 for microhemorrhage and P = 0.5 for encephalomalacia). In the PCS group, 28 patients (22%) had WMH (15.7% had 1-10 lesions and 6.3% had &gt; 10 lesions), and these results did not differ from the age-matched control (20.6%, all with =1-10 lesions), P =0.9. The location of the WMH showed no significant difference in the number of juxtacortical WMH between the PCS and control groups (P = 0.5). Structural lesions were rare in PCS in this study and the presence of such findings suggests a more severe form of traumatic brain injury. Our data support the role for MRI in the diagnosis of PCS by exclusion of atrophy, encephalomalacia and all forms of intracranial</p>				<p><b>PMC 35292</b>  <b>Impact Factor: 3.754</b>  <b>(BIOXBIO – 2018-2019)</b>  <b>H-Index: 132</b></p>

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	hemorrhage. The presence of WMH irrespective of number is not an exclusion. This is the first description of the MRI criteria for PCS. Keywords-Neuroimaging Criteria; post-concussion syndrome; magnetic resonance imaging; hemorrhages; white matter hyperintensities.				
433.	<p>Panwar, J., Tse, S. M. L., Lim, L., Tolend, M. A., Radhakrishnan, S., Salman, M., Moineddin, R., Doria, A. S. and Stimec, J. Spondyloarthritis Research Consortium of Canada Scoring System for Sacroiliitis in Juvenile Spondyloarthritis/Enthesitis-related Arthritis: A Reliability, Validity, and Responsiveness Study J Rheumatol; 2019, 46 (6): 636-644</p> <p><b>Address:</b> From the Joint Department of Medical Imaging, University Health Network, University of Toronto; Department of Diagnostic Imaging, The Hospital for Sick Children, University of Toronto; Division of Pediatric Rheumatology, The Hospital for Sick Children, University of Toronto, Toronto, Ontario; Division of Pediatric Rheumatology, Department of Pediatrics, The University of Alberta, Edmonton, Alberta; Kanchi Kamakoti CHILDS Trust Hospital, Chennai; Department of Radiology, <b>Christian Medical College, Vellore, India</b>; Makassed Hospital, Jerusalem, Israel; Department of Family and Community Medicine, University of Toronto, Toronto, Ontario, Canada. drjyoticmch@gmail.com Jyoti.panwar@sickkids.ca.</p> <p>J. Panwar, MD, FRCR, Joint Department of Medical Imaging, University Health Network, University of Toronto, and Department of Diagnostic Imaging, The Hospital for Sick Children, University of Toronto, and Department of Radiology, <b>Christian Medical College</b>; S.M. Tse, MD, Division of Pediatric Rheumatology, The Hospital for Sick Children, University of Toronto; L. Lim, MD, FRCPC, Division of Pediatric Rheumatology, Department of Pediatrics, The University of Alberta; M.A. Tolend, Department of Diagnostic Imaging, The Hospital for Sick Children, University of Toronto; S. Radhakrishnan, MD, Kanchi Kamakoti CHILDS Trust Hospital; M. Salman, MD, Makassed Hospital; R. Moineddin, PhD, Department of Family and Community Medicine, University of Toronto; A.S. Doria, MD, PhD, MSc, Department of Diagnostic Imaging, The Hospital for Sick Children, University of Toronto; J. Stimec, MD, Department of Diagnostic Imaging, The Hospital for Sick Children, University of Toronto. drjyoticmch@gmail.com Jyoti.panwar@sickkids.ca.</p> <p>From the Joint Department of Medical Imaging, University Health Network, University of Toronto; Department of Diagnostic Imaging, The Hospital for Sick Children, University of Toronto; Division of</p>	INT	JAN TO JUN	Radiology	<p><b>PMID:30709956</b>  WOS:000469888600016  <b>Impact Factor: 3.470</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 165</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Pediatric Rheumatology, The Hospital for Sick Children, University of Toronto, Toronto, Ontario; Division of Pediatric Rheumatology, Department of Pediatrics, The University of Alberta, Edmonton, Alberta; Kanchi Kamakoti CHILDS Trust Hospital, Chennai; Department of Radiology, <b>Christian Medical College, Vellore, India</b>; Makassed Hospital, Jerusalem, Israel; Department of Family and Community Medicine, University of Toronto, Toronto, Ontario, Canada.</p> <p>J. Panwar, MD, FRCR, Joint Department of Medical Imaging, University Health Network, University of Toronto, and Department of Diagnostic Imaging, The Hospital for Sick Children, University of Toronto, and Department of Radiology, <b>Christian Medical College</b>; S.M. Tse, MD, Division of Pediatric Rheumatology, The Hospital for Sick Children, University of Toronto; L. Lim, MD, FRCPC, Division of Pediatric Rheumatology, Department of Pediatrics, The University of Alberta; M.A. Tolend, Department of Diagnostic Imaging, The Hospital for Sick Children, University of Toronto; S. Radhakrishnan, MD, Kanchi Kamakoti CHILDS Trust Hospital; M. Salman, MD, Makassed Hospital; R. Moineddin, PhD, Department of Family and Community Medicine, University of Toronto; A.S. Doria, MD, PhD, MSc, Department of Diagnostic Imaging, The Hospital for Sick Children, University of Toronto; J. Stimec, MD, Department of Diagnostic Imaging, The Hospital for Sick Children, University of Toronto.</p> <p>OBJECTIVE: Intra- and interreader reliability, construct validity, and responsiveness of the Spondyloarthritis Research Consortium of Canada (SPARCC) magnetic resonance imaging (MRI) scoring system were investigated for scoring sacroiliitis in patients with juvenile spondyloarthritis (JSpA)/enthesitis-related arthritis (ERA) who have received biologic and/or nonbiologic treatment. METHODS: Ninety whole-body MRI examinations with dedicated oblique coronal planes of the sacroiliac joints in 46 patients were independently reviewed and scored by 2 pediatric musculoskeletal radiologists, blinded to clinical details, using the SPARCC system. Intra- and interreader reliability was assessed by intraclass correlation coefficients (ICC). Construct validity testing was done by (1) correlating the SPARCC MRI scores of sacroiliitis with clinical disease activity indicators (cross-sectional validity), and (2) correlating the change in the MRI score with the change in clinical indicators before and after treatment (longitudinal validity). Responsiveness of the MRI and clinical indicators was also evaluated, grouped by biologic and nonbiologic treatment. RESULTS: When applied in children with</p>				



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	JSpA/ERA, the SPARCC showed almost perfect intra- and interreader reliability (ICC 0.79-1.00). There was poor cross-sectional and longitudinal correlation between clinical assessment indicators and MRI scoring. SPARCC scores showed higher responsiveness to treatment-related change than most clinical outcome measures. Three clinical outcome measures correlated longitudinally with SPARCC score in nonbiologic treatment: active joint count (r = 0.72, p < 0.001), FABER (Flexion, Abduction, External Rotation) test (r = 0.58, p = 0.012), and physician's global assessment (r = 0.61, p = 0.034). CONCLUSION: The SPARCC MRI scoring system is a reliable tool with relatively higher responsiveness than clinical indicators and is suitable for objective quantification of sacroiliitis when applied to pediatric patients with JSpA/ERA.				
434.	<p>Pappachan, L. G., Williams, A., Sebastian, T., Korula, G. and Singh, G.            Changes in central venous oxygen saturation, lactates, and ST segment changes in a V lead ECG with changes in hemoglobin in neurosurgical patients undergoing craniotomy and tumor excision: A prospective observational study            J Anaesthesiol Clin Pharmacol; 2019, 35 (1): 99-105</p> <p><b>Address:</b> Department of Anesthesiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</p> <p>Background and Aims: The aim of the study was to observe the trends in central venous oxygen saturation (ScvO2), lactate, and ST segment changes with change in hemoglobin in patients undergoing acute blood loss during surgery and to assess their role as blood transfusion trigger. Material and Methods: Seventy-seven consecutive patients undergoing craniotomy at a tertiary care institution were recruited for this study after obtaining written, informed consent. After establishing standard monitoring, anesthesia was induced with standard anesthetic protocol. Hemodynamic parameters such as heart rate, blood pressure (mean, systolic, diastolic), pulse pressure variation (PPV), and physiological parameters such as lactate, ScvO2, ST segment changes were checked at baseline, before and after blood transfusion and at the end of the procedure. Statistical Analysis: Comparison of the mean and standard deviation for the hemodynamic parameters was performed between the transfused and nontransfused patient groups. Pearson correlation test was done to assess the correlation between the covariates. Receiver operating characteristic (ROC) curve was constructed for the ScvO2 variable, which was used as a</p>	INT	JAN TO JUN	Anesthesiology	<b>PMID:31057249</b> <b>PMC ID:6495604</b> <b>Impact Factor: 0.47</b> <b>(RG-2018)</b> <b>H-Index: 25</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	transfusion trigger and the cutoff value at 100% sensitivity and 75% specificity was constructed. Linear regression analysis was done between the change in hemoglobin and the change in ScvO2 and change in hemoglobin and change in the ST segment. Results: There was a statistically significant positive correlation between the change in ScvO2 and change in hemoglobin during acute blood loss with a regression coefficient of 0.8 and also between change in ST segment and hemoglobin with a regression coefficient of -0.132. No significant change was observed with lactate. The ROC showed a ScvO2 cutoff of 64.5% with a 100% sensitivity and 75% specificity with area under curve of 0.896 for blood transfusion requirement. Conclusions: We conclude that ScvO2 and ST change may be considered as physiological transfusion triggers in patients requiring blood transfusion in the intraoperative period.				
435.	<p>Parasrampur, S., Patloori, S. C. S., Karuppusami, R., Chase, D. and Roshan, J.</p> <p>Cardiovascular implantable electronic device lead removal in a resource-constrained setting: A single-center experience from India Indian Pacing Electrophysiol J. 2019 Dec 13.</p> <p>pii: S0972-6292(19)30141-X.</p> <p>doi: 10.1016/j.ipej.2019.12.002. [Epub ahead of print]</p> <p><b>Address:</b> Department of Cardiology, <b>Christian Medical College, Vellore, India.</b></p> <p>Department of Cardiology, <b>Christian Medical College, Vellore, India.</b> Electronic <b>Address:</b> sirish1123@cmcvellore.ac.in.</p> <p>Department of Biostatistics, <b>Christian Medical College, Vellore, India.</b></p> <p>BACKGROUND: Data from large-volume centers in developed countries, using dedicated tools, show a high success rate with a good safety record for the percutaneous lead removal procedure. However, there are constraints to replicate the results in a resource-poor setting and there is limited data from India. METHODS: We retrospectively analyzed lead removal procedures performed in our institution from 2008 to 2019. RESULTS: Seventy-five patients underwent percutaneous removal of 138 leads. Of these, 44 procedures and 80 leads qualified as extraction with a median dwell time of 52.1 (IQR 28.2-117.2) months. Overall, 33/44 (75.0%) procedures were successful and 65/80 (81.2%) leads were successfully extracted. Manual traction was successful in the extraction of 44/57 (77.2%) leads. All leads implanted less than 2.7 years could be removed with manual traction alone. Specialized tools were used in 23 leads and 21 (91.3%) of those could be successfully extracted. Inability to use dedicated tools was an independent</p>	NAT	JUL TO DEC	Cardiology, Biostatistic	<p><b>PMID:31843556</b></p> <p><b>PMC 35293</b></p> <p><b>Impact Factor: 0.934</b></p> <p><b>(BIOXBIO – 2018-2019)</b></p> <p><b>H-Index: 22</b></p>

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	<p>predictor of procedural failure (adjusted OR 14.0; 95% CI 1.8-110.2; p-value 0.012). Right-sided implant (adjusted OR 12.6; 95% CI 1.3-119.5; p-value 0.027) was also independently associated with failure. There was 1 death (1.3%) and minor complications occurred in 6 (8.0%) patients. CONCLUSIONS: In a resource-limited setting, percutaneous lead extraction of predominantly pacemaker leads by manual traction methods achieved success in extracting about three-fourths of the leads. Inability to use specialized tools was the main factor limiting success. The complication rate was low.</p>				
436.	<p>Parker, E. P. K., Whitfield, H., Baskar, C., Giri, S., John, J., Grassly, N. C., Kang, G. and Praharaj, I.            FUT2 Secretor Status Is Not Associated With Oral Poliovirus Vaccine Immunogenicity in South Indian Infants            J Infect Dis; 2019, 219 (4): 578-581  <b>Address:</b> Department of Infectious Disease Epidemiology, St Mary's Campus, Imperial College London, United Kingdom.            Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore, India.</b></p> <p>FUT2 determines whether histo-blood group antigens are secreted at mucosal surfaces. Secretor status influences susceptibility to enteric viruses, potentially including oral poliovirus vaccine (OPV). We performed a nested case-control study to determine the association between FUT2 genotype (single-nucleotide polymorphisms G428A, C302T, and A385T) and seroconversion among Indian infants who received a single dose of monovalent type 3 OPV. Secretor prevalence was 75% (89 of 118) in infants who seroconverted and 80% (97 of 122) in infants who did not seroconvert (odds ratio, 0.79; 95% confidence interval, .43-1.45). Our findings suggest that FUT2 genotype is not a key determinant of variation in OPV immunogenicity.</p>	INT	JUL TO DEC	Gastrointestinal Sciences	<p><b>PMID:</b> 30239830  <b>Impact Factor:</b> 5.045  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 231</b></p>
437.	<p>Pasquini, M. C., Srivastava, A., Ahmed, S. O., Aljurf, M., Atsuta, Y., Doleysh, C., Galeano, S., Gluckman, E., Greinix, H., Hale, G. A., Hari, P., Hashmi, S. K., Kamani, N., Laughlin, M. J., Niederwieser, D., Seber, A., Szer, J., Snowden, J. A., Van Biesen, K., Watry, P., Weisdorf, D. J. and Apperley, J.            Worldwide Network for Blood and Marrow Transplantation Recommendations for Establishing a Hematopoietic Cell Transplantation Program, Part I: Minimum Requirements and Beyond            Biol Blood Marrow Transplant; 2019,  <b>Address:</b> CIBMTR (Center for International Blood and Marrow</p>	INT	JAN TO JUN	Hematology	<p><b>PMID:31071457</b>  <b>PMC</b>  <b>Impact Factor: 4.484</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 107</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Transplant Research), Department of Medicine, Medical College of Wisconsin, Milwaukee, WI. Electronic <b>Address:</b> mpasquini@mcw.edu.            Department of Hematology, <b>Christian Medical College, Vellore, India.</b>            Oncology Center, King Faisal Specialist Hospital &amp; Research Center, Riyadh, Saudi Arabia.            Japanese Data Center for Hematopoietic Cell Transplantation, Nagoya, Japan.            CIBMTR (Center for International Blood and Marrow Transplant Research), Department of Medicine, Medical College of Wisconsin, Milwaukee, WI.            Unidad de Hematologia, Hospital Britanico, Montevideo, Uruguay.            Hopital Saint-Louis, Paris, France.            Bone Marrow Transplantation Unit, Department of Internal Medicine I, Medical University of Vienna, Vienna, Australia.            Department of Hematology/Oncology, Johns Hopkins All Children's Hospital, St. Petersburg, FL.            Children's National Medical Center, Washington, DC.            Medical Director, Cleveland Cord Blood Center, Cleveland, Ohio.            University of Leipzig, Leipzig, Germany.            Hospital Samaritano, Sao Paolo, Brazil.            Clinical Haematology at Peter MacCalluma Cancer Centre and the Royal Melbourne Hospital, Victoria, Australia.            JAS Department of Haematology, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, United Kingdom.            Weill Cornell Medical College, New York, New York.            Division of Hematology, Oncology and Transplantation, Department of Medicine, University of Minnesota Medical Center, Minneapolis, Minnesota.            Haematology Department, Imperial College, Hammersmith Hospital, London, United Kingdom.</p> <p>Hematopoietic cell transplantation (HCT) is a highly complex procedure that requires a dedicated multidisciplinary team to optimize safety. In addition, institutions may have different needs regarding indications based on regional disease prevalence or may have an interest in developing specialized services. Structured recommendations are not commonly available, however. The Transplant Center and Recipient Issues Standing Committee of the Worldwide Network for Blood and Marrow Transplantation (WBMT) organized a structured review of all pertinent elements for establishing a transplantation program. First, we solicited</p>				

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	<p>components from committee members and grouped them into domains (infrastructure, staff, cell processing laboratory, blood banking, laboratory, radiology, pharmacy, HLA testing, ancillary services, and quality). Subsequently, reviewers scored each element on a 7-point scale, ranging from an absolute requirement (score of 1) to not required (score of 7). An independent group of 5 experienced transplantation physicians reviewed the rankings. The minimum requirements for establishing any HCT program were identified among elements with mean score of <math>\leq 2.0</math>, and specific elements for allogeneic and autologous HCT were identified. Mean scores of <math>&gt; 2.0</math> to <math>4.0</math> were classified as preferred recommendation, and mean scores of <math>&gt; 4.0</math> to <math>\leq 7.0</math> were considered ideal recommendations for advanced and complex types of transplantation. This structured set of recommendations guides the prioritization of minimum requirements to establish a transplantation program and set the stage for expansion and further development.</p>				
438.	<p>Pasquini, M. C., Srivastava, A., Ahmed, S. O., Aljurf, M., Atsuta, Y., Doleysh, C., Galeano, S., Gluckman, E., Greinix, H., Hale, G., Hari, P., Hashmi, S. K., Kamani, N., Laughlin, M. J., Niederwieser, D., Seber, A., Szer, J., Snowden, J. A., Van Biesen, K., Watry, P., Weisdorf, D. J. and Apperley, J.</p> <p>Worldwide Network for Blood and Marrow Transplantation (WBMT) recommendations for establishing a hematopoietic cell transplantation program (Part I): Minimum requirements and beyond</p> <p>Hematol Oncol Stem Cell Ther; 2019, <b>Address:</b> Medical College of Wisconsin, Milwaukee, WI, USA. Electronic <b>Address:</b> mpasquini@mcw.edu.</p> <p>Department of Hematology, <b>Christian Medical College, Vellore, India.</b></p> <p>Oncology Center, King Faisal Specialist Hospital &amp; Research Center, Riyadh, Saudi Arabia.</p> <p>Japanese Data Center for Hematopoietic Cell Transplantation (JDCHCT), Nagoya, Japan.</p> <p>Medical College of Wisconsin, Milwaukee, WI, USA.</p> <p>Unidad de Hematología - Hospital Británico, Montevideo, Uruguay.</p> <p>Hopital Saint-Louis, Paris, France.</p> <p>Medical University of Graz, Graz, Austria.</p> <p>Johns Hopkins All Children's Hospital, St. Petersburg, FL, USA.</p> <p>AABB, Bethesda, MD, USA.</p> <p>Cleveland Cord Blood Center, Cleveland, OH, USA.</p> <p>University of Leipzig, Leipzig, Germany.</p> <p>Hospital Samaritano, Sao Paulo, Brazil.</p>	INT	JUL TO DEC	Hematology, Stem Cell Research Centre	<p><b>PMID:</b> 31449780</p> <p><b>Impact Factor:</b> 0.42</p> <p><b>(RG - 2018)</b></p> <p><b>H-Index: 16</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>The Royal Melbourne Hospital, Melbourne, Australia.                      JAS Department of Haematology, Sheffield Teaching Hospitals NHS Foundation Trust, Sheffield, UK.                      Weill Cornell Medical College, New York, NY, USA.                      University of Minnesota, Minneapolis, MN, USA.                      Haematology Department, Imperial College, Hammersmith Hospital, London, UK.</p> <p>Hematopoietic cell transplantation (HCT) is a highly complex procedure that requires a dedicated multidisciplinary team to optimize its safety. In addition, institutions may have different needs regarding indications based on regional disease prevalence or may have an interest in developing specialized services. Yet, structured recommendations are not commonly available. Here, the Transplant Center and Recipient Issues Standing Committee for the Worldwide Network for Blood and Marrow Transplantation (WBMT) organized a structured review of all pertinent elements to establish a transplant program. First, we solicited components from committee members and grouped them in domains (infrastructure, staff, cell processing laboratory, blood banking, laboratory, radiology, pharmacy, HLA testing, ancillary services and quality). Subsequently, reviewers scored all elements on a 7-point scale, from an absolute requirement (score of 1) to not required (score of 7). An independent group of five experienced transplant physicians reviewed the rankings. Minimum requirements to establish any HCT program were identified among elements with mean score of <math>\leq 2.0</math>, and specific elements for allogeneic and autologous HCT were identified. Mean scores <math>&gt;2.0-4.0</math> were classified as preferred recommendation, and mean scores of <math>&gt;4.0</math> to <math>\leq 7.0</math> were considered ideal recommendations for advanced and complex types of transplantation. This structured set of recommendations guides the prioritization of minimum requirements to establish a transplant program and to set the path for expansion and further development.</p>				
439.	<p>Patloori, S. C. S., Lahiri, A., Kapa, S., Chase, D. and Roshan, J.                      Incessant tachycardia after successful ablation of an atriofascicular pathway                      Europace; 2019, <b>Address:</b> Department of Cardiac Electrophysiology and Pacing, <b>Christian Medical College, Vellore, India.</b>                      Division of Cardiovascular Diseases, Department of Medicine, Mayo Clinic, Rochester, MN, USA.</p>	INT	JUL TO DEC	Cardiac Electrophysiology	<p><b>PMID:</b> 31532480  <b>Impact Factor:</b> 6.100  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 92</b></p>
440.	<p>Paul, A. and Chacko, S. T.                      Congenital methaemoglobinemia diagnosed in an adolescent boy                      BMJ Case Rep; 2019, 12 (3):  <b>Address:</b> Cardiology, <b>Christian Medical College and Hospital</b></p>	INT	JAN TO JUN	Cardiology	<p><b>PMID:</b>30936348  <b>PMC</b>  <b>Impact Factor: 0.22</b>  <b>(RG-2018)</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Vellore</b>, Vellore, Tamil Nadu, India.</p> <p>A 14-year-old boy of Asian origin presented with a history of bluish discolouration of the finger and toenail bed with associated mild fatiguability on exertion since early childhood. Clinical examination revealed bilaterally symmetric uniform central cyanosis with no associated clubbing. Cardiovascular and respiratory system examination was normal. Pulse oximetry revealed an oxygen saturation of 87% in all four limbs. Transthoracic and transoesophageal echocardiography showed no evidence of shunt lesions. In view of the past diagnosis of pulmonary arteriovenous fistulae made at 4 years of age, a repeat cardiac catheterisation study was done, which revealed no shunt at any level. Interestingly, arterial oxygen tension of the chocolate-brown blood was normal in all the samples, suggesting the possibility of methaemoglobinaemia. Co-oximetry revealed methaemoglobin levels of 36%, confirming the diagnosis. Secondary causes were ruled out. The family was counselled about the hereditary nature of the condition.</p>				<b>H-Index: 20</b>
<b>441.</b>	<p>Paul, A., Alex, R., Jacob, J. R. and Yadav, B. Effects of heat stroke on surface ECG: a study on clinical outcomes Heart Asia; 2019, 11 (2): e011221 <b>Address:</b> Cardiology and cardiac electrophysiology, <b>Christian Medical College and Hospital Vellore</b>, Vellore, Tamil Nadu, India. Accident and Emergency, <b>Christian Medical College and Hospital Vellore</b>, Vellore, Tamil Nadu, India. Biostatistics, <b>Christian Medical College and Hospital Vellore</b>, Vellore, Tamil Nadu, India.</p> <p>Aims: Classic heat stroke is associated with high in-hospital mortality and morbidity. The relation between the ECG findings in heat stroke and the clinical outcomes of these patients has not been studied. The aim of this study was to describe the electrocardiographic features in patients with classic heat stroke and to determine if there is any correlation of ECG findings with in-hospital outcomes. Methods: We performed a retrospective study on 50 patients with classic heat stroke during summer months of 2016-2018. All 12-lead electrocardiographic recordings obtained from these patients were subjected to in-depth analysis. Statistical analysis was done to determine the correlation of electrocardiographic findings with in-hospital outcomes. Results: 37 patients were in sinus rhythm, while supraventricular arrhythmias including atrial fibrillation (n=6), ectopic atrial tachycardia (n=4) and atrial flutter (n=2) were observed in the rest. There was a high prevalence of QTc prolongation, low voltage P waves, conduction defects like</p>	<b>INT</b>	<b>JUL TO DEC</b>	Cardiology and cardiac electrophysiology, Accident and Emergency Medicine, Biostatistics	<b>PMID:</b> 31297165 <b>Impact Factor:</b> 0.82 <b>(RG - 2018)</b> <b>H-Index: 7</b>

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	incomplete right bundle branch block and repolarisation abnormalities. The ratio of QRS voltage in the limb leads to that in precordial leads was $\leq 0.5$ in nearly three-fourths of the patients. Among the observed electrocardiographic features, low P-wave voltage ( $<0.01$ mV) in lead II was found to have statistically significant correlation with adverse in-hospital outcome (OR 8.93, $p=0.04$ ), after adjustment for clinical covariates. Conclusion: There was high incidence of atrial arrhythmias in patients with classic heat stroke. A low P-wave voltage ( $<0.01$ mV) in lead II was predictive of adverse in-hospital outcome in this cohort of patients.				
442.	Paul, A., Chacko, S. T. and George, P. V. Cryptic cavity with an unusual drainage Heart; 2019, <b>Address:</b> Cardiology, <b>Christian Medical College and Hospital Vellore, Vellore, India.</b>	INT	JAN TO JUN	Cardiology	<b>PMID:31154430</b> <b>PMC</b> <b>Impact Factor: 5.420</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 165</b>
443.	Paul, A., Christopher, D. J. and Thangakunam, B. The puzzle of lymphoma among the granulomatous disorders Lung India; 2019, 36 (2): 164-166  <b>Address:</b> Department of Pulmonary Medicine, MOSC Mission Hospital, Thrissur, Kerala, India. Department of Pulmonary Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>	NAT	JAN TO JUN	Pulmonary Medicine	<b>PMID:30829255</b> <b>PMC ID:6410593</b> <b>Impact Factor: 0.58</b> <b>(RG-2018)</b> <b>H-Index: 18</b>
444.	Paul, A., Thomson, V. S., Refat, M., Al-Rawahi, B., Taher, A. and Nadar, S. K. Cardiac involvement in beta-thalassaemia: current treatment strategies Postgrad Med; 2019, 131 (4): 261-267  <b>Address:</b> a Department of Cardiology , <b>Christian Medical College</b> and Hospital , Vellore , India. b Departments of: Internal Medicine, Biochemistry & Molecular Genetics , American University of Beirut Medical Center , Beirut , Lebanon. c Department of Hematology , Sultan Qaboos University Hospital , Muscat Oman. d Department of Internal Medicine , American University of Beirut Medical Center , Beirut , Lebanon. e Department of Medicine , Sultan Qaboos University Hospital , Muscat , Oman.  Despite the advances in the management of thalassemia major, heart disease remains the leading cause of mortality in patients	NAT	JAN TO JUN	Cardiology	<b>PMID:31002266</b> <b>PMC</b> <b>Impact Factor: 2.057</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 48</b>



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	afflicted with this disorder. Cardiac involvement in thalassemia encompasses a spectrum of disorders including myocardial dysfunction, arrhythmias, pulmonary hypertension, and peripheral vascular disease. Although cardiac siderosis (accumulation of iron in cardiac myocytes) as a consequence of repeated blood transfusions is deemed to be the main etiologic factor for myocardial dysfunction in transfusion-dependent patients, the significance of other pathophysiologic mechanisms is being increasingly recognized especially in non-transfusion dependent patients. Management of cardiac complications in thalassemia major hinges on the treatment of the underlying pathophysiology, which often is unmitigated iron overload. The prevalence and predictors of cardiac complications in 'ex-thalassaemics' [thalassaemic patients undergoing allogeneic hematopoietic stem cell transplantation (HSCT) is unknown at present. In this review, we look at the pathogenesis of cardiac involvement in patients with beta-thalassemia major, the advances in the management of these patients and the future prospects.				
445.	Paul, G. R., Varkki, S. D., Reddy, H., John, S. and Jesan, D. IMPROVING CARE FOR PATIENTS WITH CYSTIC FIBROSIS IN AREAS WITH LIMITED RESOURCES: EXPERIENCES FROM THE CF-INDIA PROJECT Pediatric Pulmonology; 2019, 54 S233-S233	INT	JUL TO DEC	Pediatrics	PMID:WOS:000484544000303 Impact Factor: 2.801 (BIOXBIO - 2018) H-Index: 98
446.	Paul, J., Cherian, K. E., Kapoor, N. and Paul, T. V. Treating osteoporosis: a near miss in an unusual case of FGF-23 mediated bone loss BMJ Case Rep; 2019, 12 (3): Address: Endocrinology, Christian Medical College, Vellore, Tamil Nadu, India. Christian Medical College, Vellore, Tamil Nadu, India.  Oncogenic osteomalacia is a potentially curable condition caused by phosphaturic mesenchymal tumours. We present the case of 54-year-old woman who presented with bony pains and muscle weakness, and was erroneously treated with bisphosphonates elsewhere on the basis of Dual Energy X-ray Absorptiometry (bone density) scan that showed 'severe osteoporosis'. Further evaluation revealed the presence of hypophosphatemia, with a 1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid avid lesion involving left mandible on PET scan. Surgical excision of lesion led to improvement in her symptoms with normalisation of phosphorus, and histopathology was diagnostic of mesenchymal phosphaturic tumour. A diagnosis of oncogenic osteomalacia was made. A repeat bone mineral density assessment done a year later	INT	JAN TO JUN	Endocrinology	PMID:30878966 PMC Impact Factor: 0.22 (RG-2018) H-Index: 20

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	showed dramatic improvement. A meticulous examination and evaluation is warranted for any patient presenting with bony pains and muscle weakness. The detection of hypophosphatemia in an elderly individual should prompt the consideration of oncogenic osteomalacia, as localisation and excision of tumour usually results in cure.				
447.	Paul, J., Soumya, S. L., Kuriakose, C., Cherian, K. E., Kapoor, N. and Paul, T. V. Uncontrolled hypertension: hints from the skin Postgraduate Medical Journal; 2019, 95 (1126): 461-462 <b>Address:</b> Endocrinology, <b>Christian Medical College and Hospital Vellore</b> , Vellore, Tamil Nadu, India. Department of Endocrinology, Diabetes & Metabolism, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India <a href="mailto:thomasvpaul@yahoo.com">thomasvpaul@yahoo.com</a>	INT	JAN TO JUN	Endocrinology	<b>PMID:31129623</b> <b>PMC</b> <b>Impact Factor: 2.078</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 88</b>
448.	Paul, Praveen George, Fouzia, N. A., Korula, Sophy, Mathai, Sarah, George, Biju and Simon, Anna Hypercalcemia as a post stem cell transplantation complication in children with osteopetrosis - A single centre experience Hormone Research in Paediatrics; 2019, 91 211-211 <b>PMID:</b> WOS:000485922402099	INT	JUL TO DEC	Pediatrics, Pediatric Endocrinology	<b>PMID:</b> WOS:000485922402099 <b>Impact Factor: 2.324</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 82</b>
449.	Pease, N. J., Sundararaj, J. J., O'brian, E., Hayes, J., Presswood, E. and Buxton, S. Paramedics and serious illness: communication training BMJ Support Palliat Care; 2019, <b>Address:</b> Department of Palliative Medicine, Velindre Hospital, Cardiff, UK <a href="mailto:Nikki.Pease@wales.nhs.uk">Nikki.Pease@wales.nhs.uk</a> . Palliative Care Unit, <b>Christian Medical College and Hospital, Vellore</b> , Tamil Nadu, India. Macmillan End of Life Care Lead, Welsh Ambulance Service Trust, Cwmbran, UK. Marie Curie Hospice, Cardiff and the Vale, Penarth, UK. Wales Deanery, Ty Dysgu, Cefn Coed, Nantgarw, UK. School of Management, Swansea University, Swansea, UK. OBJECTIVES: The need to empower Ambulance Service staff at the point of delivery of end of life care (EoLC) is crucial. We describe the delivery, outcomes and potential impact of the Serious Illness Conversation project delivered to Welsh Ambulance Service Trust (WAST) staff. Over an 18-month period, 368 WAST staff attended face-to-face teaching, which included serious illness conversation communication skills, symptom control and 'shared decision making'. METHOD: Data collected from WAST staff were used to gain insight on perception of their role and challenges within the context of EoLC, understand the impact of teaching on self-confidence and	INT	JUL TO DEC	Palliative Meidcine	<b>PMID:</b> 31732661 <b>Impact Factor: NA</b> <b>H-Index: 21</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	identify impact on the wider service. A mixed methods approach was used for data analysis. RESULTS: WAST staff view themselves in several important roles, acting as 'facilitators' to patient-centred, seamless care, providing support, liaison between services and practical help in patient care at the end of life. The difficult questions and situations pertaining to EoLC were related to discussions on death and dying and managing expectation. The predominant barriers identified related to communication. Quantitative outcomes on the six communication domains indicate statistically significant improvement in self-assessed confidence. The overall impact to the wider ambulance service suggests a trend towards better use of resources. CONCLUSION: The perceived roles and challenges identified by paramedics can help in customising training objectives. The initial outcomes from the ongoing project with WAST demonstrate increased confidence in handling communication issues. Initial successive surveys suggest teaching is making a real life impact on patient care at end of life.				
450.	Peedicayil, A., Maheshwari, A. and Rajaram, S. Editorial Indian Journal of Gynecologic Oncology; 2019, 17 (4):  <b>Address: CMC Vellore, Vellore, India</b> TMH, Mumbai, India UCMS & GTB Hospital, New Delhi, Delhi, India	NAT	JUL TO DEC	Gynecologic Oncology	PMC Editorial 22391
451.	Peedicayil, A., Mittal, R., Joel, A., Rai, E., Sebastian, A., Thomas, V., Thomas, A., Chandy, R. and Subramani, K. STARTING A HIPEC PROGRAMME IN A LOW RESOURCE SETTING International Journal of Gynecological Cancer; 2019, 29 A133-A133	INT	JUL TO DEC	Obstetrics and Gynaecology	<b>PMID:</b> WOS:000491998200321 <b>Impact Factor: 1.746</b> <b>(BIOXBIO - 2018)</b> <b>H-Index:79</b>
452.	Peedicayil, J. Exposure to Enriched Environment May Act Epigenetically to Correct Defects due to Chronic Restraint Stress in Rats Int J Appl Basic Med Res; 2019, 9 (2): 124-125  <b>Address: Department of Pharmacology and Clinical Pharmacology, Christian Medical College, Vellore, Tamil Nadu, India.</b>	INT	JAN TO JUN	Pharmacology	<b>PMID:31041179</b> <b>PMC ID:6477953</b> <b>Impact Factor:</b> <b>H-Index: NA</b>
453.	Peedicayil, J. Identification of Biomarkers in Neuropsychiatric Disorders Based on Systems Biology and Epigenetics Front Genet; 2019, 10 985 <b>Address: Department of Pharmacology and Clinical Pharmacology, Christian Medical College, Vellore, India.</b> Clinically useful biomarkers are available for some neuropsychiatric	INT	JUL TO DEC	Clinical Pharmacology	<b>PMID: 31681422</b> <b>Impact Factor: NA</b> <b>H-Index: 61</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	disorders like fragile X syndrome, Rett syndrome, and Huntington's disease. Despite many decades of research on the pathogenesis of neuropsychiatric disorders like schizophrenia (SZ), bipolar disorder (BD), and major depressive disorder (MDD), the exact pathogenesis of these disorders remains unclear, and there are no clinically useful biomarkers for these disorders. However, there is increasing evidence that abnormal epigenetic mechanisms of gene expression contribute to the pathogenesis of SZ, BD, and MDD. Both systems (or network) biology and epigenetics (a component of systems biology) attempt to make sense of biological systems that are highly dynamic and multi-compartmental. This article suggests that systems biology, emphasizing the epigenetic component of systems biology, could help identify clinically useful biomarkers in neuropsychiatric disorders like SZ, BD, and MDD.				
454.	Peedicayil, J. Folic acid and its congeners in the treatment of schizophrenia Psychopharmacology (Berl); 2019, 236 (4): 1401-1402 <b>Address:</b> Department of Pharmacology and Clinical Pharmacology, <b>Christian Medical College, Vellore, India.</b> jpeedi@cmcvellore.ac.in.	INT	JUL TO DEC	Pharmacology	<b>PMID:</b> 30382355 <b>Impact Factor:</b> 3.424 <b>(BIOXBIO - 2018)</b> <b>H-Index:</b> 181
455.	Perumal, R., Bhowmick, K., Reka, K., Livingston, A., Boopalan, Prjvc and Jepegnanam, T. S. Comparison of Reverse Sural Artery Flap Healing for Traumatic Injuries Above and Below the Ankle Joint J Foot Ankle Surg; 2019, 58 (2): 306-311  <b>Address:</b> Assistant Professor, Department of Orthopaedics, <b>Christian Medical College, Vellore, India.</b> Assistant Professor, Department of Orthopaedics, <b>Christian Medical College, Vellore, India.</b> Electronic <b>Address:</b> kaushikbhowmick97@yahoo.co.in. Senior Demonstrator, Department of Biostatistics, <b>Christian Medical College, Vellore, India.</b> Professor, Department of Orthopaedics, <b>Christian Medical College, Vellore, India.</b>  The reverse sural artery (RSA) flap is popular among trauma surgeons to cover the distal third of the leg to the foot. However, flaps that inset in the foot seem to have a high necrosis rate. This study compared the healing of RSA flaps performed for defects proximal to the ankle versus defects distal to the ankle. Patient data were collected retrospectively between January 2005 and December 2009. Eighty-five patients with the lower leg, ankle, and traumatic	INT	JAN TO JUN	Orthopaedics, Biostatistics	<b>PMID:30850100</b> <b>PMC</b>  <b>Impact Factor: 1.138</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 58</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>foot injuries were divided into 2 groups. Group 1 (49 patients) had RSA flap cover for soft tissue and bony defect proximal and up to the ankle joint line, and group 2 (36 patients) had RSA flap cover distal to the ankle joint line. The time to healing and type of healing were compared between the groups. The demographics between the 2 groups were similar. The successful RSA flap healing rate was 65% in group 1 (32 of 49) and 42% in group 2 (15 of 36). The average time to flap healing between the groups was similar (p=.16). Group 1 had predominantly primary healing compared with group 2 (p=.03). Group 2 had a higher reoperation rate for wound necrosis, which was significant (p=.001). The success of the RSA flap is higher when used for proximal to ankle joint line defects. Surgeons should be aware of the chances of flap necrosis when undertaking RSA flap cover distal to the ankle joint line.</p>				
456.	<p>Perumalla, S. K., Paul, S., Abhilash, K. P. P., Gunasekaran, K., Rose, W., Mahasampath, G. and Jude, P. J.                      Eschar and IgM ELISA in the diagnosis of scrub typhus                      Indian J Med Microbiol; 2019, 37 (1): 113-115  <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Department of Emergency Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Department of General Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Department of Child Health, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Scrub typhus is one of the leading causes of acute febrile illness in India. This study aimed to determine the best diagnostic tool for the identification of scrub typhus and study the possible association between diagnostics and clinical characteristics. Patients with fever of <math>\leq 15</math> days admitted to the hospital satisfying the case definition of 47 kDa quantitative polymerase chain reaction (qPCR) positivity OR scrub typhus IgM ELISA positivity along with the presence of eschar OR Scrub typhus IgM ELISA positivity along with defervescence of fever within 72 h of initiation of specific therapy were recruited. Of the 116 patients satisfying the case definition, 47 kDa qPCR was positive in 43 (37%) patients, whereas IgM ELISA was positive in 104 (90%) patients and eschar was seen in 59 (51%) patients. The median duration of fever was 7.5 days (interquartile range 6-10 days). Multiorgan dysfunction syndrome (MODS) was described in 44 (37.9%) patients. Two patients (1.8%) succumbed</p>	NAT	JUL TO DEC	Clinical Microbiology, Emergency Medicine, General Medicine, Child Health, Biostatistics.	<b>PMID:</b> 31424021 <b>Impact Factor:</b> 0.950 <b>(BIOXBIO - 2018)</b> <b>H-Index: 41</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	to the illness. Presence of eschar and IgM ELISA positivity were detected in 106 (91%) cases. Scrub typhus, even with MODS, has low mortality because of immediate institution of specific therapy due to physician awareness. The presence of eschar and IgM ELISA positivity can be used to detect a majority of cases of scrub typhus.				
457.	<p>Perumalla, Susmitha Karunasree, Ragupathi, Naveen Kumar Devanga, Neeravi, Ayyan Raj, Anandan, Shalini, Michael, Joy Sarojini and Veeraraghavan, Balaji</p> <p>Molecular Characterisation of <i>Stenotrophomonas maltophilia</i> in Nosocomial Infections: Challenges and Way Forward Journal of Clinical &amp; Diagnostic Research; 2019, 13 (1): 1-4(DC01 - DC04)</p> <p><b>Author Affiliations:</b>                      1.Assistant Professor, Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India                      2.Senior Research Officer, Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India                      3.Assistant Research Officer, Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India                      4.Professor, Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India</p> <p>Introduction: <i>Stenotrophomonas maltophilia</i> (<i>S. maltophilia</i>), is an important rapidly emerging, opportunistic, non-fermenting Gram negative bacillus with high intrinsic resistance to drugs. It is one of the leading causative agents of nosocomial infections especially in the immunocompromised patients. Molecular typing of pathogens provides an important tool in epidemiological investigations involving nosocomial infections. Due to high geno-diversity, typing of <i>S. maltophilia</i> is challenging. Aim: The study was aimed to evaluate the best epidemiological tool to investigate clonal relatedness of <i>S. maltophilia</i>. Materials and Methods: A prospective study was conducted at a 2400 bedded tertiary care centre in southern India over a period of six months. Twenty-six isolates of <i>S.maltophilia</i> were obtained during the study period. Of these, 18 isolates from blood and Endotracheal Aspirates (ETA) cultures were included in the study since they were incriminated in causing nosocomial infection clinically for which appropriate treatment was initiated. These 18 clinical isolates of <i>S. maltophilia</i> were characterised to identify the clonality using Conventional Multi Locus Sequence Typing (MLST). A subset of 9 <i>S. maltophilia</i> isolates were sequenced using IonTorrent PGM platform. Further phylogenetic analysis was inferred from core</p>	NAT	JAN TO JUN	Clinical Microbiology	<p><b>PMID:134212719</b>  <b>PMC Article</b>  <b>Impact Factor: 0.41</b>  <b>(RG - 2018)</b>  <b>H-Index: 28</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	genome Single Nucleotide Polymorphisms (SNPs). Results: Using conventional MLST, one isolate (S04384), was identified as belonging to sequence type 13 (ST13) whereas sequencing of the remaining 17 isolates could not be successfully done using MLST PCR even after several attempts. A subset of nine isolates from these 17 were subjected to sequencing using Ion Torrent PGM platform. Using MLST Finder tool on this platform, one isolate was found to belong to sequence type 15 (ST15). The remaining eight isolates were observed to have novel sequence types; four of which were assigned sequence types ST283, ST284, ST285 and ST286. The remaining four had <50% similarity for mutM gene. Further phylogenetic analysis was studied using core genome SNPs. They revealed bifurcating and multifurcating groups among all these nine S. maltophilia isolates. None of them belonged to the same clonal group according to SNP based phylogeny. Conclusion: Frequent recombination events in S. maltophilia genome make it difficult to identify the clonality based on MLST. From this study, SNPs based whole genome phylogeny was observed as better methodology to identify clonal relatedness among S. maltophilia. DOI : 10.7860/JCDR/2019/39753.12434				
458.	Peter, D. C. V., Thomas, A. L., Pulimood, S. A. and Thomas, M. Setting sun pattern in dermoscopy of a scalp nodule Australas J Dermatol; 2019, 60 (1): 71-72 <b>Address:</b> Department of Dermatology, Venereology and Leprosy, <b>Christian Medical College, Vellore, India.</b> Department of Pathology, <b>Christian Medical College, Vellore, India.</b>	INT	JUL TO DEC	Dermatology, Venereology and Leprosy, Pathology.	<b>PMID:</b> 30175842 <b>Impact Factor:</b> 1.701 <b>(BIOXBIO - 2018)</b> <b>H-Index: 48</b>
459.	Peter, D., Agarwala, M., George, L., Balakrishnan, N., George, A. A. and Mahabal, G. Pilot study on dermoscopic patterns in cutaneous amyloidosis using a handheld dermoscope Journal of Investigative Dermatology; 2019, 139 (9): S240-S240	INT	JUL TO DEC	Dermatology, Venereology and Leprosy	<b>PMID:</b> WOS:000485661500151 <b>Impact Factor:</b> 6.290 <b>(BIOXBIO - 2018)</b> <b>H-Index: 181</b>
460.	Philip George, Amit Tirkey ABS-016: Predictors of Recurrence in Oral Cavity Cancers with Clear Surgical Margins Journal of Head & Neck Physicians and Surgeons; 2019, 7 (3):S9-S10 Department of Head and Neck Surgery, <b>Christian Medical College, Vellore,</b> Tamil Nadu, India. E-mail: <a href="mailto:bubbigeorge@gmail.com">bubbigeorge@gmail.com</a>  Background: Surgery is the definitive treatment for oral cancers and surgical margins are crucial in determining outcomes. Despite several advances in treatment of oral cancers, recurrence continues	NAT	JUL TO DEC	Head and Neck Surgery	<b>Impact Factor: 0.472</b> <b>H-Index: NA</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>to be a major challenge, even in the presence of clear margins. This study was conducted to evaluate the impact of various other factors on disease-free survival with pathologically clear surgical margins. Materials and Methods: This retrospective Abstract S10 Journal of Head &amp; Neck Physicians and Surgeons   October 2019   Volume 7   Supplement 1 study was done to study the clinico-pathological parameters associated with recurrence of oral cavity squamous cell carcinoma in patients with clear margins managed in our department between January 2010 and December 2015. Of the 526 patients operated, 161 cases with pathologically clear surgical margins were identified and reviewed for clinical details, histopathological data and recurrence. Results: Among the various factors known to predict recurrence and prognosis, the study population showed no statistically significant factor that could have affected recurrence rates in this subset of patients with clear surgical margins. Conclusion: Margins are an important predictor of disease control and the only factor that can be affected by the surgeon. When disease recurs with pathologically clear surgical margin, other factors routinely incorporated in the histopathology reports may not have predictive value. It is therefore imperative that future studies in this direction include other factors like worst pattern of invasion, lymphocytic host response, lymph node density and genetic factors, to develop a predictive model of recurrence oral cancers.</p>				
461.	<p>Philip, A., Mammen, M. D., Lepcha, A. and Alex, A.                      Posterior semicircular canal dehiscence: a diagnostic and surgical conundrum                      BMJ Case Rep; 2019, 12 (7):  <b>Address:</b> ENT Unit-4, <b>Christian Medical College Vellore</b>                      Association, Vellore, Tamil Nadu, India.</p> <p>Third window defects have increasingly been identified as a cause of vertigo. These defects are bony dehiscences that occur in the bony labyrinth, resulting in abnormal pressure gradient in the inner ear fluids leading to sound (Tullio's phenomenon) or pressure (Hennebert's sign) induced vertigo. The superior semicircular canal dehiscence syndrome is a well-described entity in this regard, however defects of the posterior semicircular canal are rare and may have overlapping symptomatology. We describe the history, clinical profile and management of a patient who had importunate symptoms despite being on conservative management for a year and had resolution of vestibular symptoms following surgical management.</p>	INT	JUL TO DEC	ENT	<p><b>PMID:</b> 31270089  <b>Impact Factor:</b> 0.22  <b>(RG-2018)</b>  <b>H-Index:</b> 20</p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
462.	<p>Philip, S. S., Braganza, A. D. and Rebekah, G. J. Comparison of a single intraoperative posterior sub-Tenon's capsule triamcinolone acetonide injection versus topical steroids for treatment of postcataract surgery inflammation in children Oman J Ophthalmol; 2019, 12 (1): 25-30</p> <p><b>Address:</b> Department of Ophthalmology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India. Department of Biostatistics, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>BACKGROUND: The aim of this study is to compare the clinical efficacy of a single intraoperative posterior sub-Tenon's capsule triamcinolone acetonide injection with postoperative topical steroids in controlling intraocular inflammation in uncomplicated pediatric cataract surgery. MATERIALS AND METHODS: A prospective comparative study of children (&lt;13 years of age) undergoing cataract surgery in a tertiary care eye center in South India. Preoperative evaluation was similar in both groups. The surgical procedure was the same for both groups except at the end of surgery only Group 1 (right eye of bilateral cataracts and all unilateral cataracts) received intraoperative 0.5 ml (40 mg/ml) posterior sub-Tenon's injection of triamcinolone acetonide. Postoperatively, Group 1 was administered only topical antibiotic and Group 2 was put on topical antibiotic, mydriatic, and steroids. Intraocular inflammation and intraocular pressure (IOP) were assessed clinically on day 1, 1(st) week, 1(st) month, and 3 months, postoperatively. RESULTS: A total of 30 eyes were included in the study. Age ranged between 1 month and 132 months, with 18 eyes included in Group 1 and 12 eyes in Group 2. The mean postoperative IOP at the 3 months follow-up was not significantly different between groups (P = 0.4). The presence of intraocular lens had no role in postoperative inflammation (P = 1). Group 2 showed more anterior segment inflammation with six eyes (50%) developing posterior synechiae and distortion of the pupil 3 months postoperatively. CONCLUSION: In pediatric cataracts, a single intraoperative sub-Tenon's capsule injection of triamcinolone acetonide appears to be safe and effective in controlling postcataract surgery inflammation.</p>	INT	JAN TO JUN	Ophthalmology, Biostatistics	<p><b>PMID:30787531</b> <b>PMC ID:6380151</b> <b>Impact Factor: 0.25</b> <b>(RG-2018)</b> <b>H-Index: 13</b></p>
463.	<p>Pichamuthu, Kishore and Prithishkumar, Ivan Appearance of the Optic Nerve Sheath Diameter (ONSD) using Higher Frequency Linear Probes in Detection and Monitoring of Raised Intracranial Pressures-A Cadaveric Study Journal of Clinical and Diagnostic Research; 2019, [Internet].2019</p>	NAT	JUL TO DEC	Medicine, Anatomy	<p><b>Impact Factor: 0.41</b> <b>(RG - 2018)</b> <b>H-Index: 28</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>July;13(7):AC05-AC08.  <a href="https://www.doi.org/10.7860/JCDR/2019/36359/12973">https://www.doi.org/10.7860/JCDR/2019/36359/12973</a> OR  <a href="http://www.jcdr.net//back_issues.asp?issn=0973-709x&amp;year=2019&amp;month=July&amp;volume=13&amp;issue=7&amp;page=AC05&amp;id=12973">http://www.jcdr.net//back_issues.asp?issn=0973-709x&amp;year=2019&amp;month=July&amp;volume=13&amp;issue=7&amp;page=AC05&amp;id=12973</a></p> <p>Introduction: Trans-bulbar ultrasonography of Optic Nerve Sheath Diameter (ONSD) is increasingly used to detect raised Intracranial Pressures (ICP). Current guidelines for measuring ONSD are based on earlier descriptions of anatomy of optic nerve sheath using a 7.5 MHz linear probe. There is wide variation in the cut-off value of an abnormal ONSD, mostly due to an edge artefact around the dura and uncertainty over placement of measurement cursors. Aim: To describe the detailed anatomy of the appearance of ONSD on cadaveric simulated models using a higher frequency probe. Materials and Methods: A 20G intravenous cannula was inserted into the subarachnoid space around optic nerve of nine embalmed cadavers and the space gradually insufflated with saline to mimic raised ICP. Axial and lateral ultrasonography of ONSD was done using a high frequency 13 MHz transducer, before and after insufflation of the space. The ultrasonic appearance of optic nerve sheath at normal and increased intracranial pressures was studied. Results: At normal pressures, the true subarachnoid CSF space was either not visible or seen as a thin sliver of anechoic space. At elevated pressures, this space appeared as an anechoic triangular or semi lunar space with scattered trabecular echoes on either side of anterior optic nerve in axial and longitudinal scans. Edge artefacts are easily appreciated. Conclusion: High frequency ultrasound probes (13 MHz) easily guide identification of duramater, distinguish edge artefacts and observe changes in appearance of subarachnoid space in elevated ICP. This would help in precise bed side monitoring of raised ICP especially in resource poor settings. Images described here can be a useful tool to educate and train ICU and emergency care providers.</p>				
464.	<p>Prabhakar Abhilash, K. P., Lath, D., Kowshik, J., Jose, A. and Chandy, G. M.            Blood alcohol levels in road traffic accidents: Factors associated and the relationship between history of alcohol consumption and blood alcohol level detection            Int J Crit Illn Inj Sci; 2019, 9 (3): 132-137  <b>Address:</b> Department of Emergency Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>            Department of Clinical Biochemistry, <b>Christian Medical College,</b></p>	INT	JUL TO DEC	Emergency Medicine, Clinical Biochemistry	<b>PMID:</b> 31620352 <b>Impact Factor: NA</b> <b>H-Index: 6</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Vellore, Tamil Nadu, India.</b>                      Introduction: Alcohol consumption contributes to a significant number of road traffic accidents (RTAs), and data regarding the reliability of history and blood alcohol content (BAC) in RTA victims are scant. Methodology: This retrospective study was conducted in the emergency departments (EDs) over 6 weeks. All adult RTAs presenting within 12 h of the incident were included for analysis. Results: The study cohort included 369 RTA patients, with the mean interval before presentation being 3 h (standard deviation: 2.22). Two-wheeler accidents (77.2%) were the predominant mode of injury. Usage of a helmet and seat belt was documented in a meager (6.4% [17/267] and 8.8% [3/34], respectively). A positive history of alcohol consumption was reported by 19.5% of cases (72/369). However, BAC was detectable in 30.1% of cases (111/369), with an alarming 19.78% (73/369) being above the legal limit for driving. Nearly 77.5% (86/111) of those who tested positive for alcohol consumption were driving the vehicle involved. Positive BAC levels showed a significant association with young age (18-39 years), male gender, two-wheeler usage, and between 5 PM and 12 AM. Conclusion: A history of alcohol consumption leading to an RTA is not reliable in the ED. Hence, measuring BAC levels in all RTA patients provides an objective and reliable form of documentation for medico-legal purposes.</p>				
465.	<p>Prabhakar, A. T., Mathew, V., Sivadasan, A., Aaron, S., George, A. and Alexander, M.                      Clinical profile of primary progressive aphasias in a tertiary care centre from India                      Int J Speech Lang Pathol; 2019, 21 (6): 547-552  <b>Address:</b> Department of neurological sciences, <b>Christian Medical College, Vellore, India.</b>                      Purpose: Progressive language dysfunction due to a selective neurodegeneration of the language networks is called primary progressive aphasia (PPA). However, demographic data on PPA is limited. In this study from India, we determined the prevalence and clinical profile of patients presenting with PPA and its subtypes. Method: Patients who were admitted to the neurosciences department during the period between January 2012 and December 2016 were screened, and patients who presented with slowly progressive aphasia for at least 2 years without other significant cognitive or behavioural symptoms and preservation of daily living activities were included. Patients had to fulfil the international consensus group criteria for PPA. All patients were evaluated with the mini-mental status examination (MMSE) and Strub and Black battery</p>	INT	JUL TO DEC	Neurological Sciences	<p><b>PMID:30642192</b>  <b>PMC 35298</b>  <b>Impact Factor: 0.80</b>  <b>(BIOXBIO – 2018-2019)</b>  <b>H-Index: 35</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	for neuropsychological testing. The language was tested using the progressive aphasia language scale (PALS).Result: During the study period from January 2012 to December 2016, 23 patients fulfilled the international consensus criteria for PPA. Of these, 16 (69.6%) patients were diagnosed with PPA-G, 6 (26%) patients had PPA-S and 1 (4.4%) patient had PPA-L.Conclusion: PPA is not an uncommon entity in India and the most common subtype in this study was PPA-G.				
466.	<p>Prabhakar, A. T., Suresh, T., Kurian, D. S., Mathew, V., Shaik, A. I. A., Aaron, S., Sivadasan, A., Benjamin, R. N. and Alexander, M. Timed Vibration Sense and Joint Position Sense Testing in the Diagnosis of Distal Sensory Polyneuropathy J Neurosci Rural Pract; 2019, 10 (2): 273-277</p> <p><b>Address:</b> Department of Neurological Sciences, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Introduction: Distal sensory polyneuropathy (DSP) is one of the most common neurological disorders. Although several studies have studied the role of the neurological examination in DSP, there are only limited studies on the utility of timed vibration sense (VBS) and joint position sense (JPS) testing in the diagnosis of DSP. Objectives: The objective is to study the utility of timed VBS testing and JPS testing at the great toe in clinical detection of DSP. Methods: This study was prospectively conducted in the neurology department of a tertiary care hospital in India. Patients with DSP referred to the electrophysiology laboratory from August 2017 to December 2017 were screened. Patients with symptomatic DSP which was confirmed by electrophysiological studies were taken as cases and normal participants with no symptoms or electrophysiological findings suggestive of DSP served as controls. Results: We studied 127 patients and 194 controls. The mean age of the patients was 48.7 (14.5) years in the patient group and 39.7 (14.5) years in the control group. The male: female ratio was 77/50 in the patient group and 112/82 in the control group. Abnormal clinical examination was found in 95% of the patients with DSP. The most common abnormal examination components were impaired ankle reflexes (70%), vibration (85%), and JPS (39.6%) sensation. Using the receiver operating characteristic curve for the diagnosis of DSP, a vibratory response lasting &lt;8 s at the great toe had a sensitivity of 85% and specificity of 42.8%. For JPS testing at the great toe, obtaining two or more incorrect responses had a sensitivity of 33% and specificity of 87.6%. Conclusion: VBS testing was more sensitive and JPS testing</p>	INT	JAN TO JUN	Neurological Sciences	<p><b>PMID:31001017</b> <b>PMC ID:6454947</b></p> <p><b>Impact Factor: 0.31 (RG-2018)</b> <b>H-Index: 18</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	was more specific in making a clinical diagnosis of DSP. For timed VBS, duration of >8 s at the great toe was a useful test to rule out DSP, and for JPS testing at the great toe, obtaining two or more incorrect responses was a useful test in ruling in the diagnosis of DSP.				
467.	Prabhakar, Appaswamy Thirumal, Ahmed, Atif Shaikh Iqbal, Nair, Aditya Vijayakrishnan, Mathew, Vivek, Aaron, Sanjith, Sivadasan, Ajith and Alexander, Mathew Neural Correlates of Urinary Retention in Lateral Medullary Infarction International Neurourology Journal; 2019, 23 (3): 205-210 Purpose: The brainstem plays an important role in the control of micturition, and brainstem strokes are known to present with micturition dysfunction. Micturition dysfunction in cases of lateral medullary infarction (LMI) is uncommon, but often manifests as urinary retention. In this study, we investigated the neuro-anatomical correlates of urinary retention in patients with LMI. Methods: This was a hospital-based retrospective study conducted in the neurology unit of a quaternary-level teaching hospital. Inpatient records from January 2008 to May 2018 were searched using a computerized database. Cases of isolated LMI were identified and those with micturition dysfunction were reviewed. MRI brain images of all patients were viewed, and individual lesions were mapped onto the Montreal Neurological Institute (MNI) space manually using MRICron. Nonparametric mapping toolbox software was used for voxel-based lesion-symptom analysis. The Liebermeister test was used for statistical analysis, and the resultant statistical map was displayed on the MNI template using MRICron. Results: During the study period, 31 patients with isolated LMI were identified. Their mean age was 48 years and 28 (90%) were male. Six of these patients (19%) developed micturition dysfunction. All 6 patients had urinary retention and 1 patient each had urge incontinence and overflow incontinence. In patients with LMI, the lateral tegmentum of the medulla showed a significant association with urinary retention. Conclusions: In patients with isolated LMI, we postulate that disruption of the descending pathway from the pontine micturition centre to the sacral spinal cord at the level of the lateral tegmentum results in urinary retention.	INT	JUL TO DEC	Neurological Sciences	<b>PMID:</b> WOS:000488236100006 <b>Impact Factor:</b> 1.29 <b>(RG- 2018)</b> <b>H-Index: 20</b>
468.	Prabhu, C. S., Madhavi, K., Amogh, V. N., Panwala, H. K. and Sathyakumar, K. Macrodystrophia Lipomatosa: A Single Large Radiological Study of a Rare Entity J Clin Imaging Sci; 2019, 9 4 <b>Address:</b> Department of Radiology, <b>Christian Medical College</b>	INT	JUL TO DEC	Radiology	<b>PMID:</b> 31448155 <b>Impact Factor:</b> 0.91 <b>(RG - 2018)</b> <b>H-Index: 14</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Vellore</b>, Tamil Nadu India.</p> <p>Introduction: We present one of the largest case series of Macrodytrophia lipomatosa, a rare congenital disorder of localized gigantism characterized by overgrowth of all the mesenchymal elements, predominantly involving the fibroadipose tissue. Aims: To detail the radiological features, pattern of distribution, associated conditions and to suggest an appropriate terminology to describe the condition. Methods and Material: It is a retrospective study. Data from PACS server dating from 2000 and 2018 was used. The cases with isolated enlarged limb or digit/digits with or without nerve involvement were included in the study. Statistical Analysis Used: Frequency and percentage were used for analysis of categorical variables. Results: A total of 31 cases was included for the final analysis, out of which 19 were males and 12 were females. Unilateral limb involvement was seen in 30 cases. The most common pattern identified was the 'nerve territory oriented' type in 28 cases confined to the hand or foot, 'diffuse or pure lipomatous' type in one case and mixed type was seen in two cases. The most common nerve territory involved was along the median nerve in the upper limb and along the medial plantar nerve in the lower limb. Neural involvement was seen in 16 cases of the upper limb and 10 cases of the lower limb. Syndactyly was seen in two cases, polydactyly in one case and symphalangism in one case. Conclusions: A diagnosis of macrodytrophia lipomatosa can be confidently made in cases with congenital isolated limb or digit/digits enlargement with or without fibrolipohamartoma of nerve. Radiographs and ultrasound are sufficient along with clinical examination to make accurate diagnosis. MRI is useful for assessing the extent and for planning surgery.</p>				
469.	<p>Pragasam, A. K., Anandan, S., John, J., Neeravi, A., Narasimman, V., Muthuirulandi Sethuvel, D. P., Elangovan, D. and Veeraraghavan, B. An emerging threat of ceftriaxone-resistant non-typhoidal salmonella in South India: Incidence and molecular profile Indian J Med Microbiol; 2019, 37 (2): 198-202</p> <p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Background: Non-typhoidal Salmonella (NTS) infection is a serious public health problem globally. Although NTS infections are self-limited, antimicrobial therapy is recommended for severe infections and immunocompromised patients. Antimicrobial resistance (AMR) in these pathogens further limits its therapeutic options. Here, we report an incidence of ceftriaxone resistance in NTS over the past 9 years in a southern Indian region. Materials and</p>	NAT	JUL TO DEC	Clinical Microbiology	<p><b>PMID:</b> 31745019  <b>Impact Factor:</b> 0.950  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 41</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Methods: Molecular mechanisms of resistance in ceftriaxone-resistant NTS have been tested by both phenotypic and molecular methods. Minimum inhibitory concentration was determined by the E-test and broth microdilution method. AMR gene markers of beta-lactamases such as AmpCs (blaMOX, blaCMY, blaDHA, blaFOX, blaACC and blaACT) and extended-spectrum beta-lactamases (ESBLs) (blaSHV, blaTEM, blaVEB, blaPER, blaCTXM-1like, blaCTXM-2like, blaCTXM-8like, blaCTXM-9like and blaCTXM-25like) were screened. The presence of IncH12 and IncI1 plasmid was also analysed. Results: The study reports a 5% prevalence of ceftriaxone resistance in NTS. The most common serogroup was Salmonella Group B followed by Salmonella Group E and Salmonella group C1/C2. The occurrence of blaCTX-M-1, blaTEM, blaCMY and blaSHV genes was observed in 54%, 54%, 48% and 3% of the isolates, respectively. Interestingly, few isolates carried dual resistance genes (ESBLs and AmpCs). IncH12 and IncI1 plasmid was identified in isolates carrying ESBL and AmpC genes, respectively. Conclusion: This study shows that ceftriaxone resistance is mainly mediated by beta-lactamases such as ESBL and AmpC. As the incidence of ceftriaxone resistance is rising gradually over the years, it is imperative to monitor the AMR in this species.</p>				
470.	<p>Pragasam, A. K., Veeraraghavan, B., Shankar, B. A., Bakthavatchalam, Y. D., Mathuram, A., George, B., Chacko, B., Korula, P. and Anandan, S.</p> <p>Will ceftazidime/avibactam plus aztreonam be effective for NDM and OXA-48-Like producing organisms: Lessons learnt from In vitro study</p> <p>Indian J Med Microbiol; 2019, 37 (1): 34-41</p> <p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Department of General Medicine Unit-1, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Department of Haematology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Department of Medical Intensive Care Unit, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Department of Division of Critical Care, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Introduction: Carbapenem resistance (CR) in Klebsiella pneumoniae is mainly mediated by bla NDM and bla OXA-48 carbapenemases. Newer Food and Drug Administration-approved antimicrobial ceftazidime/avibactam (C/A) has a potent activity against bla OXA-48-like producers. However, its activity is limited in organisms</p>	NAT	JUL TO DEC	Clinical Microbiology, General Medicine, Haematology, Medical Intensive Care Unit.	<p><b>PMID:</b> 31424008</p> <p><b>Impact Factor:</b> 0.950</p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 41</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>co-producing bla NDM and bla OXA-48-like. Addition of aztreonam (ATM) to C/A potentially expands the spectrum of coverage for carbapenemase co-producers. With this, we aimed to determine the synergistic activity of combination of C/A plus ATM against bla NDM, bla OXA-48-like and co-producers of bla NDM + bla OXA-48-like producing CR Klebsiella pneumoniae (CRKp). Materials and Methods: A total of 12 isolates of CRKp-harboursing genes encoding bla NDM and bla OXA-48-like were tested. Minimum inhibitory concentrations (MICs) were determined for several antimicrobial agents, including C/A (0.5-8 mug/ml) by broth microdilution method. Checkerboard assay was performed for the combination of C/A plus ATM at varying concentrations. Fold differences in the MIC of C/A with and without addition of ATM were determined to infer synergistic effects. Results: MIC of C/A and ATM ranged from 0.5 to &gt;8 mug/ml and 64 to 2048 mug/ml, respectively. Two isolates were susceptible to C/A with MIC of 0.5 and 1 mug/ml, while others were resistant with MIC of &gt;8 mug/ml. Synergistic effects of &gt;8-fold MIC difference in C/A MIC were noted with addition of ATM at 4 mug/ml. This was observed for all CRKp with profiles of bla NDM, bla OXA-48-like and co-producers of bla NDM + bla OXA-48-like genes, which was a promising effect. Notably, all five of the colistin-resistant CRKp were inhibited with &gt;8-fold MIC difference in the combination of C/A plus ATM at 4 mug/ml. Conclusion: With the increasing burden of CRKp, the use of C/A with ATM combination seems to be very promising, especially for bla NDM, bla OXA-48-like and co-producers of bla NDM + bla OXA-48like carbapenemases.</p>				
471.	<p>Praharaj, I., Platts-Mills, J. A., Taneja, S., Antony, K., Yuhas, K., Flores, J., Cho, I., Bhandari, N., Revathy, R., Bavdekar, A., Rongsen-Chandola, T., Mcmurry, T., Hought, E. R. and Kang, G. Diarrheal Etiology and Impact of Coinfections on Rotavirus Vaccine Efficacy Estimates in a Clinical Trial of a Monovalent Human-Bovine (116E) Oral Rotavirus Vaccine, Rotavac, India Clin Infect Dis; 2019, 69 (2): 243-250 <b>Address:</b> Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Division of Infectious Diseases and International Health, University of Virginia, Charlottesville. Centre for Health Research and Development, Society for Applied Studies. PATH, New Delhi, India. PATH, Seattle, Washington. KEM Hospital and Research Centre, Pune, Maharashtra, India. Department of Public Health Sciences, University of Virginia, Charlottesville. BACKGROUND: Rotavirus vaccine efficacy (VE) estimates in</p>	INT	JUL TO DEC	Gastrointestinal Sciences	<p><b>PMID:</b> 30335135 <b>Impact Factor:</b> 9.055 <b>(BIOXBIO - 2018)</b> <b>H-Index: 303</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	low-resource settings are lower than in developed countries. We detected coinfections in cases of severe rotavirus diarrhea in a rotavirus VE trial to determine whether these negatively impacted rotavirus VE estimates. METHODS: We performed TaqMan Array Card assays for enteropathogens on stools from rotavirus enzyme immunoassay-positive diarrhea episodes and all severe episodes (Vesikari score $\geq 11$ ), from a phase 3 VE trial of Rotavac, a monovalent human-bovine (116E) rotavirus vaccine, carried out across 3 sites in India. We estimated pathogen-specific etiologies of diarrhea, described associated clinical characteristics, and estimated the impact of coinfections on rotavirus VE using a test-negative design. RESULTS: A total of 1507 specimens from 1169 infants were tested for the presence of coinfections. Rotavirus was the leading cause of severe diarrhea even among vaccinated children, followed by adenovirus 40/41, Shigella/enteroinvasive Escherichia coli, norovirus GII, sapovirus, and Cryptosporidium species. Bacterial coinfections in rotavirus-positive diarrhea were associated with a longer duration of diarrhea and protozoal coinfections with increased odds of hospitalization. Using the test-negative design, rotavirus VE against severe rotavirus gastroenteritis increased from 49.3% to 60.6% in the absence of coinfections (difference, 11.3%; 95% confidence interval, -10.3% to 30.2%). CONCLUSIONS: While rotavirus was the dominant etiology of severe diarrhea even in vaccinated children, a broad range of other etiologies was identified. Accounting for coinfections led to an 11.3% increase in the VE estimate. Although not statistically significant, an 11.3% decrease in VE due to presence of coinfections would explain an important fraction of the low rotavirus VE in this setting.				
472.	Prakash, S. S. Medical education in India: Looking beyond doctor: Population ratio J Family Med Prim Care; 2019, 8 (3): 1290-1291  <b>Address:</b> Department of Biochemistry, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>	NAT	JAN TO JUN	Biochemistry	<b>PMID:31041296</b> <b>PMC ID:6482808</b> <b>Impact Factor: 0.21 (RG-2018)</b> <b>H-Index: NA</b>
473.	Pramanik, B. K., Angelin, J. J., Mathai, V. J., Mathai, S., Korula, S. and Simon, A. Smartphone App as Motivational Intervention to Improve Glycemic Control in Adolescents with Type 1 Diabetes Indian J Pediatr; 2019, <b>Address:</b> Pediatric Endocrine Division of Pediatrics Unit-1, Department of Pediatrics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Pediatric Endocrine Division of Pediatrics Unit-1, Department of Pediatrics, <b>Christian Medical College, Vellore, Tamil Nadu,</b>	NAT	JUL TO DEC	Pediatrics, Pediatric Endocrine Unit I	<b>PMID: 31353430</b> <b>Impact Factor: 1.136 (BIOXBIO - 2018)</b> <b>H-Index: 43</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>India. sarjomat@cmcvellore.ac.in.</p> <p>OBJECTIVES: Type 1 diabetes (T1D) adolescents often do not achieve good glycemic control. In the context of growing number of technologically savvy adolescents, this study was done to examine the effectiveness of a motivational smartphone app to improve their glycemic control. METHODS: Eleven to eighteen year old adolescents, treated by Pediatric endocrine team of <b>CMC, Vellore</b>, who had T1D <math>\geq 1</math> y duration with poor glycemic control (mean HbA1c <math>\geq 8.5\%</math> in preceding 12 mo) were recruited. An app programmed to provide 3 reminders per day regarding insulin, meals and physical exercise was installed on their phone. Diabetes management was continued as per the standard of care. HbA1C was measured after 3 mo. RESULTS: Thirty seven adolescents were recruited; 3 were excluded as the app became non-functional. Seventeen were boys, mean age was 13.8 y (11-18 y) and mean duration of diabetes was 4.9 y (0.8-16 y). The mean HbA1c levels over preceding 12 mo and at recruitment were 10.75% (1.88) and 10.6% (2.08) respectively. Twenty eight participants returned for repeat HbA1C after 3-4 mo. As compared to baseline there was significant reduction in HbA1c level: 10.6% (2.08) vs. 9.65% (1.6); <math>p = 0.004</math>. Twenty two of twenty eight participants showed reduction in HbA1c after app installation. The magnitude of change in HbA1c levels over a 3 mo period before and after the app use was analyzed. There was significant difference between mean HbA1c levels before and after app use; +0.28 (2.06) vs. -0.914 (1.52); <math>p = 0.019</math>. CONCLUSIONS: Following usage of smartphone app as a motivational intervention in adolescents with Type 1 diabetes, there was significant reduction in HbA1c level after 3 mo. With continued use, this may benefit them to achieve target HbA1c levels. Use of mobile phone apps as motivational interventions is feasible in adolescents with Type 1 diabetes in India.</p>				
474.	<p>Prasad, J., Karthik, G. and Ramya, I.</p> <p>Acute Paracetamol Tablet Overdose - Clinical Profile from A Tertiary Care Centre In South India</p> <p>Transactions of the Royal Society of Tropical Medicine and Hygiene; 2019, 113 S216-S216</p>	INT	JUL TO DEC	Infectious Diseases, Medicine	<p><b>PMID:</b> WOS:000493064400536</p> <p><b>Impact Factor: 2.307</b></p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 97</b></p>
475.	<p>Prasad, M., Kuriakose, T. S. and Rout, S.</p> <p>Incidental Finding of Annular Pancreas in a Routine Cadaveric Dissection: Case Report</p> <p>Journal of Morphological Sciences; 2019, 36 (4): 299-302</p> <p><b>Address: Department of Anatomy, Christian Medical College, Vellore, Tamil Nadu, 632002, India</b></p> <p>Annular pancreas is a rare congenital anomaly that results from the</p>	INT	JUL TO DEC	Anatomy	<p><b>PMC Article 22375</b></p> <p>Impact Factor:0.02</p> <p>(Researchgate 2018)</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	malrotation of the ventral pancreatic bud. The presentation of annular pancreas varies: it can be asymptomatic or present clinical symptoms of duodenal obstruction that can affect all age groups, from newborns to adults. In the present case report, we describe a complete type of annular pancreas at the level of the second part of the duodenum, which was an incidental finding in a prosected specimen. This anomaly has significant clinical relevance to clinicians and radiologists due to its variable presentation. The embryological, clinical and radiological aspects of this congenital anomaly are discussed in detail in the present article. © 2020 Georg Thieme Verlag. All rights reserved.				
476.	<p>Prasad, M., Rout, S., Putta, T., Kurien, R. T., Chowdhury, S. D., Eapen, A., Hepsy, Y. S. and Rabi, S.                      Anatomical Patterns of the Pancreatic Ductal System - A Cadaveric and Magnetic Resonance Cholangiopancreatography Study                      Journal of Morphological Sciences; 2019, 36 (4): 279-285</p> <p><b>Address:</b> Department of Anatomy, <b>Christian Medical College, Vellore</b>, Tamil Nadu, 632 002, India                      Department of Radiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India                      Department of Gastroenterology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India                      Department of Biostatistics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India</p> <p>Introduction Morphological variants of the pancreatobiliary system can predispose to chronic pancreatitis. The goal of the present study is to assess the prevalence of pancreatic duct patterns in the Indian population, both by cadaveric dissection and by magnetic resonance cholangiopancreatography (MRCP). Materials and Methods A total of 15 adult pancreas specimens of unknown age and gender, and 5 fetal pancreas specimens of different gestational ages with the intact second part of duodenum, were dissected by the piecemeal method. For clinical relevance, MRCP images of 103 clinically-diagnosed chronic pancreatitis patients irrespective of their etiology were obtained retrospectively from the existing database and studied. The anatomical patterns were classified as five different types based on the course of the main pancreatic duct and the accessory pancreatic duct and their openings into the duodenal wall, including variants like pancreas divisum and ansa pancreatica. Results in the cadaveric study, the main pancreatic duct was single with a straight course in 46.67% of the adult specimens, and in the MRCP study, the main</p>	INT	JUL TO DEC	Anatomy, Gastroenterology, Biostatistics	PMC Article 22374 Impact Factor:0.02 (Researchgate 2018)

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	pancreatic duct showed a descending course in 77.66% of the cases. The most common pattern was type III in both the cadaveric (80%) and radiological (55.33%) studies, and the accessory duct was absent on the MRCP in all type-III cases, while it ended blindly in the cadaveric specimens. Ansa pancreatica (type V) was observed in 1 adult specimen (6.7%), but not in the radiological study. Pancreas divisum (type IV) was observed in the 8 cases (7.76%) cases in the radiological study. Conclusion Knowledge of the anatomical variants of the pancreatic ductal system may be helpful for the radiologists during diagnostic and therapeutic interventional procedures. © 2020 Georg Thieme Verlag. All rights reserved.				
477.	<p>Prasad, Mythraeyee and Isaac, Bina            Variations in the Branching Pattern of the Radial Nerve Branches to Triceps Brachii Muscle            Journal of Clinical &amp; Diagnostic Research; 2019, 13 (2): 1-5 (AC01 - AC05)</p> <p><b>Author Affiliations:</b>            1.Assistant Professor, Department of Anatomy, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India            2.Professor, Department of Anatomy, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India</p> <p>Introduction: The axillary nerve arises from the posterior cord of the brachial plexus and supplies the deltoid and teres minor muscles. Axillary nerve injuries lead to abduction and external rotation weakness. In such cases, branches to the heads of triceps brachii muscle have been transferred to the axillary nerve to establish reinnervation of the deltoid muscle. In addition, the triceps nerve branches can be nerve recipients to reinstitute elbow extension. Aim: To study the different branching patterns of the radial nerve branches to triceps brachii muscle. Materials and Methods: Twenty eight upper limbs from adult cadavers were dissected to record variations in the branching pattern of the radial nerve branches to triceps brachii. Results: The branching patterns seen were types A 1 (3.6%), B1 (1st pattern) 1 (3.6%), B2 (2nd pattern) 1 (3.6%), and C3 22 (78.6%). Two new patterns observed were: type B2 (6th pattern) 1 (3.6%) and type D (2nd pattern) 2 (7.1%). The long head had single innervation in 89.3% cases and the lateral and medial heads had dual innervation in 10.7% and 7.1% cases respectively. Conclusion: The knowledge of the different branching patterns that are present will help surgeons to identify the most suitable radial nerve branch to triceps brachii that can be used for nerve transfer to</p>	NAT	JUL TO DEC	Anatomy	<p><b>PMID:</b>134457803  <b>PMC Article</b>  <b>Impact Factor: 0.41</b>  <b>(RG - 2018)</b>  <b>H-Index: 28</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	restore the motor function of the deltoid muscle or to reanimate the triceps brachii muscle.				
478.	<p>Preyander Singh Thakur, Nitin Kapoor, Ashish Goel<sup>1</sup>, H. S. Asha, Riddhi D. Gupta, Uday Zachariah<sup>1</sup>, C. E. Eapen<sup>1</sup>, Grace Rebekah<sup>2</sup>, Nihal Thomas, Thomas V. Paul</p> <p>Insulin resistance and body composition in chronic liver disease Indian J Endocrinol Metab; 2019, 23 (7): S8</p> <p>Departments of Endocrinology, Diabetes and Metabolism and <sup>1</sup> Gastrointestinal Sciences, <b>CMC Vellore</b>, Tamil Nadu, India, <sup>2</sup> Department of Biostatistics. E-mail: <a href="mailto:preyander.thakur@gmail.com">preyander.thakur@gmail.com</a></p> <p>ESICON 2019 Abstracts: Background: Patients with chronic liver disease (CLD) are at risk of metabolic complications such as diabetes mellitus (DM). Overt DM has been observed in 20%–40% and impaired glucose tolerance (IGT) in 60%–80% of patients with CLD. DM has a bi-directional relationship with CLD, as type 2 DM itself can cause liver disease. Second, CLD can lead to IGT and DM. Insulin resistance at the hepatic level, decreased clearance of insulin by the liver, and portosystemic shunting are the proposed mechanisms. Objectives: The aim of this study is to assess the insulin resistance and body composition in male patients with cryptogenic CLD and compare them with patients having hepatitis B-related CLD on antiviral therapy and age-matched controls. Methods: This was a cross-sectional study, conducted over a period of 18 months. Thirty male patients were recruited in each of cryptogenic CLD group, hepatitis B-related CLD group, and age-matched controls. Insulin resistance was assessed using homeostasis model assessment for insulin resistance (HOMA-IR), Quantitative Insulin Sensitivity Check Index (QUICKI), and McAuley index. Relevant biochemical investigations for the calculation of these indices, i.e. fasting blood glucose, fasting insulin, and fasting triglyceride levels were checked. Body composition analysis in the form of total body fat, fat mass/h<sup>2</sup>, lean mass/h<sup>2</sup>, appendicular skeletal mass/h<sup>2</sup>, and visceral adiposity indices were assessed with Hologic DXA QDR 4500 Discovery A machine. Results: Mean age in cryptogenic CLD, hepatitis B CLD and healthy controls group was 39.33 ± 9.18 years, 39.77 ± 8.33 years and 39.33 ± 3.47 years and mean BMI was 23.07 ± 3.77, 24.81 ± 3.94, and 23.93 ± 1.48 kg/m<sup>2</sup>, respectively. Patients with hepatitis B-related CLD were found to have significantly higher levels of fasting insulin (9.25 ± 5.29 vs. 6.09 ± 3.94 IU/ml in healthy controls P = 0.02), HOMA IR (2.15 ± 1.37 vs. 1.48 ± 1.03 in healthy controls,</p>	NAT	JUL TO DEC	Endocrinology	Impact Factor: 1.70 (resurchiefy.com) H-Index: 19

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>P = 0.03) and lower levels of QUICKI (<math>0.34 \pm 0.04</math> vs. <math>0.38 \pm 0.04</math> in healthy controls P = 0.009) and McAuley index (P = 0.01) than cryptogenic CLD and healthy controls. Patients with cryptogenic CLD had lower appendicular lean mass/h<sup>2</sup> as well as lower fat mass/h<sup>2</sup> compared to healthy controls. Conclusions: Patients with hepatitis B-related CLD had higher insulin resistance compared to cryptogenic cirrhosis as well as healthy controls. Cryptogenic cirrhosis patients had lower lean muscle and fat mass compared to healthy controls. Keywords: Body composition, chronic liver disease, insulin resistance</p>				
479.	<p>Price, A., Vasanthan, L., Clarke, M., Liew, S. M., Brice, A. and Burls, A. SMOOTH: Self-Management of Open Online Trials in Health analysis found improvements were needed for reporting methods of internet-based trials J Clin Epidemiol; 2019, 105 27-39 <b>Address:</b> Evidence Based Health Care, Department of Continuing Education, University of Oxford, Oxford, United Kingdom. Electronic <b>Address:</b> healingjia@msn.com. PMC Department, <b>Christian Medical College Vellore</b>, Tamil Nadu, India. Northern Ireland Methodology Hub, Centre for Public Health, School of Medicine, Dentistry and Biomedical Sciences, Queen's University, Belfast, Ireland. Department of Primary Care Medicine, University of Malaya, Malaya. Evidence Based Health Care, Department of Continuing Education, University of Oxford, Oxford, United Kingdom. University of London, London, United Kingdom. BACKGROUND AND OBJECTIVES: The growth of trials conducted over the internet has increased, but with little practical guidance for their conduct, and it is sometimes challenging for researchers to adapt the conventions used in face-to-face trials and maintain the validity of the work. The aim of the study is to systematically explore existing self-recruited online randomized trials of self-management interventions and analyze the trials to assess their strengths and weaknesses, the quality of reporting, and the involvement of lay persons as collaborators in the research process. STUDY DESIGN AND SETTINGS: The Online Randomized Controlled Trials of Health Information Database was used as the sampling frame to identify a subset of self-recruited online trials of self-management interventions. The authors cataloged what these online trials were assessing, appraised study quality, extracted information on how trials were run, and assessed the potential for bias. We searched out how public and patient participation was integrated into online trial</p>	INT	JUL TO DEC	Physical Medicine and Rehabilitation	<p><b>PMID:</b> 30171901 <b>Impact Factor:</b> 4.650 <b>(BIOXBIO - 2018)</b> <b>H-Index: 190</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>design and how this was reported. We recorded patterns of use for registration, reporting, settings, informed consent, public involvement, supplementary materials, and dissemination planning. RESULTS: The sample included 41 online trials published from 2002 to 2015. The barriers to replicability and risk of bias in online trials included inadequate reporting of blinding in 28/41 (68%) studies; high attrition rates with incomplete or unreported data in 30/41 (73%) of trials; and 26/41 (63%) of studies were at high risk for selection bias as trial registrations were unreported. The methods for (23/41, 56%) trials contained insufficient information to replicate the trial, 19/41 did not report piloting the intervention. Only 2/41 studies were cross-platform compatible. Public involvement was most common for advisory roles (n = 9, 22%), and in the design, usability testing, and piloting of user materials (n = 9, 22%). CONCLUSION: This study catalogs the state of online trials of self-management in the early 21st century and provides insights for online trials development as early as the protocol planning stage. Reporting of trials was generally poor and, in addition to recommending that authors report their trials in accordance with CONSORT guidelines, we make recommendations for researchers writing protocols, reporting on and evaluating online trials. The research highlights considerable room for improvement in trial registration, reporting of methods, data management plans, and public and patient involvement in self-recruited online trials of self-management interventions.</p>				
480.	<p>Prince James A study to find out the cause of damage to bronchoscopes <u>Lung India</u>. 2019 Nov; 36(Suppl 3): S176.</p> <p><b>Christian Medical College, Vellore</b>, Tamil Nadu, India. E-mail: <a href="mailto:drprincej@gmail.com">drprincej@gmail.com</a></p> <p>Introduction: Bronchoscopy services are essential for any Pulmonary Medicine department providing optimum health care. But Bronchoscopy instruments damage and repair incur a huge cost for the annual budget. Objectives: Purpose of this study was to calculate the total number of damages, type of damages and repair cost and to find out the cause of damage to Bronchoscopes. Methods: We retrospectively analyzed all the Bronchoscope damages occurred over a period of past 6 years from January 2013, and December 31, 2018, at Respiratory Medicine Department of Christian Medical College in Vellore. Results: Total of 8849 bronchoscopy procedures were performed over 6 years. Each individual bronchoscope was</p>	NAT	JUL TO DEC	Respiratory Medicine	<p><b>PMCID: PMC6891926</b> <b>Impact Factor: 0.58</b> <b>(RG-2018)</b> <b>H-Index: 18</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	used to perform between 500 and 1,770 procedures. Bronchoscopes were damaged 34 times over 6 years. . Types of damages were injury of the bending rubber coat on the distal bending section, suction channel damage and Deep scratches in connecting tube. The most frequent type of damage was bending rubber leak and channel leak. The total repair costs for 34-time Bronchoscopy repair was Rs-3567033. All damage was preventable type. The Repair company took 120-200 days for repairing working channel leak and 40-70 days for bending rubber leak. Conclusion: Bronchoscopy damages are common in high volume Bronchoscopy suits. They incur as large economic burden and also results in loss of days of Bronchoscopy services in the Department of Respiratory Medicine. However, most of the damages were preventable.				
481.	Pulimood, S. A., Peter, D., Tharakan, S. J., Thomas, M., Rao, S. S., Vedantam, R., Rupali, P., Rose, W. and Laxmanan, S. Single centre retrospective study of Leishmaniasis with skin manifestations from India Journal of Investigative Dermatology; 2019, 139 (9): S245-S245	INT	JUL TO DEC	Dermatology, Infectious Diseases	<b>PMID:</b> WOS:000485661500181 <b>Impact Factor:</b> 6.290 <b>(BIOXBIO - 2018)</b> <b>H-Index: 181</b>
482.	Pulivadulavenkatasai, J., Karunya, J., Murthy, A. S., Das, S., Godson, H. F. and Ram, T. S. Dosimetric Comparison of 3D Treatment Planning and Conventional Planning in Post-Operative Vaginal Mold Brachytherapy (VBT) for Patients with Gynecological Malignancies International Journal of Radiation Oncology Biology Physics; 2019, 105 (1): E354-E355	INT	JUL TO DEC	Radiation Therapy	<b>PMID:</b> WOS:000485671501100 <b>Impact Factor:</b> 6.203 <b>(BIOXBIO - 2018)</b> <b>H-Index: 228</b>
483.	Pun, T. B., Krishnamoorthy, V. P., Korula, R. J., Oommen, A. T. and Poonnoose, P. M. Response to: Distal femoral rotational alignment in the Indian population - An important consideration in total knee arthroplasty J Clin Orthop Trauma; 2019, 10 (6): 1133 <b>Address:</b> Orthopaedics Unit 2, <b>CMC, Vellore, India.</b>	INT	JUL TO DEC	Pediatric Orthopaedics	<b>PMID:</b> 31708642 <b>Impact Factor:</b> 0.35 <b>(RG - 2018)</b> <b>H-Index: 12</b>
484.	Purohit, N., Jain, A., Mathews, V. and Jayandharan, G. R. Molecular characterization of novel Adeno-associated virus variants infecting human tissues Virus Res. 2019 Oct 15;272:197716. doi: 10.1016/j.virusres.2019.197716. Epub 2019 Aug 13. <b>Address:</b> Department of Biological Sciences and Bioengineering, Indian Institute of Technology, Kanpur, UP, India Centre for Stem Cell Research, Vellore, TN, India Department of Hematology, <b>Christian Medical College, Vellore, TN, India</b>	INT	JUL TO DEC	Hematology	<b>PMC Article</b> <b>35342</b> <b>Impact Factor: 2.736</b> <b>(BIOXBIO - 2018-2019)</b> <b>H-Index: 104</b>
485.	Purva, M., Randeep, G., Rajesh, M., Mahesh, C. M., Sunil, G., Subodh, K., Sushma, S., Naveet, W., Pramod, G., Arti, K., Surbhi, K.,	NAT	JUL TO DEC	Infectious Diseases, Surgery, Pediatrics, Clinical	<b>PMC Article - 35613</b> <b>Impact Factor: 1.508</b>



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Omika, K., Sonal, K., Manoj, S., Arunaloke, C., Pallab, R., Manisha, B., Neelam, T., Priscilla, R., Subaramani, K., Ebor, J., Veeraraghavan, B., Camilla, R., Vijayalakshmi, N., Vibhor, T., Kuldeep, S., Pradeep, K. B., Neeraj, G., Daisy, K., Vimala, V., Chiranjay, M., Vandana, K. E., Muralidhar, V., Vijayshri, D., Ruchita, A., Kanne, P., Sukanya, S., Chand, W., Sanjay, B., Sourav, S., Karuna, T., Saurabh, S., Behera, B., Sanjeev, S., Thirunarayan, M. A., Reema, N., Lahri, S., Raja, R., HIRAK, J. R., Sujata, B., Desma, D., Mammen, C., Sudipta, M., Manas, K. R., Gaurav, G., Swagata, T., Satyajeet, M., Anupam, D., Tushar, S. M., Bashir, A. F., Gulnaz, B., Shaista, N., Sulochana, D., Khuraijam, R. D., Langpoklakpam, C. S., Padma, D., Anudita, B., Ujjwala, G., Neeta, K., Geeta, V., Tanvi, S., Shristi, J., Prachi, V., Mamta, L., Prithwis, B., Anil, C. P., Clarissa, L., Rajni, G., Rushika, S., Lata, K., Vinod, O. and Kamini, W.</p> <p>Assessment of core capacities for antimicrobial stewardship practices in indian hospitals: Report from a multicentric initiative of global health security agenda Indian Journal of Medical Microbiology; 2019, 37 (3): 309-317</p> <p><b>Address:</b> Department of Laboratory Medicine, JPNATC, All India Institute of Medical Sciences, Kolkata, West Bengal, India Department of Pulmonary Medicine and Sleep Disorders, All India Institute of Medical Sciences, Kolkata, West Bengal, India Department of Orthopedics, All India Institute of Medical Sciences, Kolkata, West Bengal, India Department of Surgery, Mahatma Gandhi University of Medical Sciences and Technology, Jaipur, Rajasthan, India Department of Microbiology, Safdarjung Hospital and VMCDelhi, India Department of Surgical Disciplines, All India Institute of Medical Sciences, Kolkata, West Bengal, India Department of Gastroenterolog, All India Institute of Medical Sciences, Kolkata, West Bengal, India Department of Microbiology, All India Institute of Medical Sciences, Kolkata, West Bengal, India Department of Cardiothoracic and Vascular Surgery, All India Institute of Medical Sciences, Kolkata, West Bengal, India Department of Medical Microbiology, Post Graduate Institute of Medical Education and Research Chandigarh, India Department of Infectious Diseases, <b>Christian Medical College and Hospital, Vellore, India</b> Department of Surgery, <b>Christian Medical College and Hospital, Vellore, India</b></p>			Microbiology	<b>(BIOXBIO-2018) H-Index: 75</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Pediatrics, <b>Christian Medical College and Hospital, Vellore, India</b></p> <p>Department of Clinical Microbiology, <b>Christian Medical College and Hospital, Vellore, India</b></p> <p>Department of Microbiology, P. D. Hinduja Hospital and Medical Research Center, Mumbai, Maharashtra, India</p> <p>Department of Microbiology, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India</p> <p>Department of Paediatrics, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India</p> <p>Department of Anaesthesiology, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India</p> <p>Department of Neonatology, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India</p> <p>Department of Microbiology, King George's Medical University, Lucknow, Uttar Pradesh, India</p> <p>Department of Microbiology, Kasturba Medical College, ManipalKarnataka, India</p> <p>Department of Medicine, Kasturba Medical College, ManipalKarnataka, India</p> <p>Department of Microbiology, Mahatma Gandhi Institute of Medical SciencesMaharashtra, India</p> <p>Department of Microbiology, Nizam's Institute of Medical Sciences, Hyderabad, Telangana, India</p> <p>Department of Clinical Microbiology and Immunology, Sir Ganga Ram Hospital, Kolkata, West Bengal, India</p> <p>Department of Microbiology, Sir Ganga Ram Hospital, Kolkata, West Bengal, India</p> <p>Department of Microbiology, Tata Medical Centre, Kolkata, West Bengal, India</p> <p>Department of Microbiology, Armed Forces Medical College, Pune, Maharashtra, India</p> <p>Department of AIIMS, Bhopal, India</p> <p>Department of Trauma and Emergency, All India Institute of Medical Sciences, Bhopal, Madhya Pradesh, India</p> <p>Department of Infection Control, Amrita School of Medicine, Kochi, Kerala, India</p> <p>Department of Microbiology, Apollo Hospital, Chennai, Tamil Nadu, India</p> <p>Department of Microbiology, Assam Medical CollegeAssam, India</p> <p>Department of Microbiology, Guahati Medical CollegeAssam, India</p> <p>Department of Microbiology, Institute of Post-Graduate Medical Education and Research, Seth Sukhlal Karnani Memorial Hospital,</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Kolkata, West Bengal, India                      Department of Microbiology, Lokmanya Tilak Municipal General Hospital, Mumbai, Maharashtra, India                      Department of Haematology, Tata Medical Center, Kolkata, West Bengal, India                      Department of Critical Care Medicine, Tata Medical Center, Kolkata, West Bengal, India                      Department of Surgical Oncology, Tata Medical Center, Kolkata, West Bengal, India                      Department of Microbiology, Tata Medical Center, Kolkata, West Bengal, India                      Department of Anaesthesiology, All India Institute of Medical Sciences, BhubaneswarOdisha, India                      Department of Medicine, All India Institute of Medical Sciences, BhubaneswarOdisha, India                      Department of General Surgery, All India Institute of Medical Sciences, BhubaneswarOdisha, India                      Department of Microbiology, Sher-i-Kashmir Institute of Medical Sciences, Srinagar, India                      Department of Microbiology, Regional Institute of Medical Sciences, Imphal, Manipur, India                      Department of Anaesthesiology, Regional Institute of Medical Sciences, Imphal, Manipur, India                      Department of Microbiology, All India Institute of Medical Sciences, Raipur, Chhattisgarh, India                      Department of Microbiology, Government Medical College, Surat, Gujarat, India                      Department of Critical Care and Respiratory Medicine, Mahatma Gandhi University of Medical Sciences and Technology, Jaipur, Rajasthan, India                      Department of Anaesthesiology and Critical Care, Mahatma Gandhi University of Medical Sciences and Technology, Jaipur, Rajasthan, India                      Department of Microbiology, Mahatma Gandhi University of Medical Sciences and Technology, Jaipur, Rajasthan, India                      Department of Anaesthesiology and IC, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong, Meghalaya, India                      Department of Microbiology, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences, Shillong, Meghalaya, India</p>				
<b>486.</b>	<p>R. Lavanya, Aaron Chapla, H. S. Asha<sup>1</sup> , Sophy Korula<sup>2</sup> , Deny Varghese, Parthiban, Simon Rajaratnam<sup>1</sup> , Sarah Mathai<sup>2</sup> , Anna Simon<sup>2</sup> , Thomas V. Paul<sup>1</sup> , Nihal Thomas<sup>1</sup></p>	<b>NAT</b>	<b>JUL TO DEC</b>	Endocrinology, Neurological Sciences	<b>Impact Factor: 1.70 (resurchify.com) H-Index: 19</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Novel allele-specific PCR and next-generation sequencing-based comprehensive genetic screening for congenital adrenal hyperplasia Molecular Endocrinology Laboratory, Department of Endocrinology Diabetes and Metabolism, Christian Medical College, 1 Department of Endocrinology Diabetes and Metabolism, Christian Medical College, 2 Department of Paediatric Endocrinology and Metabolism, Paediatric Unit 1, Christian Medical College, Vellore, Tamil Nadu, India. E-mail: <a href="mailto:lavyaravichandran1992@gmail.com">lavyaravichandran1992@gmail.com</a></p> <p>ESICON 2019 Abstracts: Introduction: Congenital adrenal hyperplasia (CAH) encompasses a heterogeneous group of autosomal recessive disorders resulting in a clinical spectrum of abnormalities associated with adrenal insufficiency. Several genes have been implicated in CAH, and CYP21A2 mutations of 21-hydroxylase (21-OH) deficiency are the most persistent cause in 90% of the patients. With substantial challenges in molecular analysis imposed by the pseudogene CYP21A1P, genetic diagnosis is not well established and widely available in India. Aims and Objectives: To establish an extended, cost-effective genetic diagnosis for CYP21A2, CYP11B1, CYP17A1, CYP19A1, and POR genes in CAH using allele-specific PCR (ASPCR) and next-generation sequencing (NGS)-based techniques. Methods: Fifty-five patients with clinically diagnosed 21-OH deficiency and five patients with 11<math>\beta</math>-OH deficiency were recruited in the study. Conventional DNA extraction and primary amplification of CYP21A2 and CYP21A1P with specific long-range primers were followed. The long-range CYP21A2 PCR product was utilized to genotype eight common hotspot mutations in CYP21A2 using in-house designed novel ASPCR primers – P30L, I2G, 8BPdel, I172N, E6clus (I236N, V237E, and M239K), V281L, Q318X, and R356W. The other four genes and those negative for CYP21A2 hotspots were subjected to targeted NGS for five-gene panel. The results were validated using Sanger sequencing. Results: 25 out of 34 (73.5%) pediatric patients and 8 out of 21 adults (38%) were found positive for different hotspots using ASPCR. NGS strategy is being used to identify other mutations (data analysis in progress). Discussion and Conclusion: The ASPCR genotyping was found to be highly specific and sensitive for eight hotspots screening for 55 patients. I172N had the highest frequency in adults (71%) and 12G splice variant (81%) in children. Six adults and 13 children were either being compound heterozygous or with one homozygous and multiple heterozygous mutations. The phenotype-genotype correlation was high in I2G, I172N, and Q318X. Thus, we suggest ASPCR approach as first-tier genetic testing to provide cost-effective</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	and robust genetic screening of the most common hotspots in CYP21A2 for clinically suspected pediatric patients and carrier testing. This largely voids the need for direct NGS-based or multiplex ligation-dependent probe amplification techniques. Keywords: 21-hydroxylase deficiency, allele specific PCR, congenital adrenal hyperplasia, genotyping, next generation sequencing				
487.	<p>Radhakrishna, V. N., Madhuri, V. and Palocaren, T. Optimizing the use of fibula in type II tibial hemimelia: early results J Pediatr Orthop B; 2019, 28 (2): 144-152 <b>Address:</b> Pediatric Orthopaedic Unit, <b>Christian Medical College,</b> Ida Scudder Road, Vellore, Tamil Nadu, India.</p> <p>We describe a technique for optimal use of fibula in reconstruction of type II tibial hemimelia. Six affected children with mean age of 1.4 years and treated over a 5-year period were reviewed. All underwent staged reconstruction by lowering the fibula to below knee level using Ilizarov soft tissue distraction, transfer of distal fibula under proximal tibia, and foot centralization. Mean follow-up period was 3.6 years (range: 1.6-6.05 years). Mean age at follow-up was 4.4 years, and increase in length was 4.08 cm. Tibiofibular union and foot centralization were universally achieved. Mild residual equinovarus deformity was present in three children and braced. Our technique allowed significant length gain and foot centralization in toddlers without distraction osteogenesis.</p>	INT	JUL TO DEC	Pediatric Orthopaedics	<p><b>PMID:</b> 30234726 <b>Impact Factor:</b> 0.740 <b>(BIOXBIO - 2018)</b> <b>H-Index: 48</b></p>
488.	<p>Rafic, K. M., Timothy Peace, S. B., Manu, M., Arvind, S. and Ravindran, B. P. A rationale for cone beam CT with extended longitudinal field-of-view in image guided adaptive radiotherapy Phys Med; 2019, 62 129-139</p> <p><b>Address:</b> Department of Radiation Oncology, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India. Electronic <b>Address:</b> raficmphy@gmail.com. Department of Radiation Oncology, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India. Department of Radiation Oncology, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India. Electronic <b>Address:</b> paul@cmcvellore.ac.in.</p> <p>PURPOSE: To investigate the efficacy of using cone beam CT with extended longitudinal field-of-view (CBCTeLFOV) for image guided adaptive radiotherapy (IGART). METHODS: The protocol acquires two CBCT scans with a linear translation of treatment couch in the patient plane, allowing a 1cm penumbral overlap (i.e. cone beam</p>	INT	JAN TO JUN	Radiation Oncology	<p><b>PMID:31153392</b> WOS:000469329200015 <b>Impact Factor: 1.058</b> <b>H-Index: 03</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>abutment) and fused as a single DICOM set (CBCTeLFOV) using a custom-developed software script (coded in MatLab(R)) for extended localization. Systemic validation was performed to evaluate the geometric and Hounsfield Units accuracy at the overlapping regions of the CBCTeLFOV using a Catphan(R)-504 phantom. Two case studies were used to illustrate the CBCTeLFOV-based IGART workflow in terms of dosimetric and clinical perspectives. Segmentation accuracy/association between repeat CT (re-CT) and CBCTeLFOV was evaluated. Moreover, the efficacy of the CBCTeLFOV image data in deformable registration was also described. RESULTS: Slice geometry, spatial resolution, line profiles and HU accuracy in the overlapping regions of the CBCTeLFOV yielded identical results when compared with reference CBCT. In patient studies, the dice-similarity-coefficient evaluation showed a good association (&gt;0.9) between re-CT and CBCTeLFOV. Dosimetric analysis of the CBCTeLFOV-based adaptive re-plans showed excellent agreement with re-CT based re-plans. Moreover, a similar and consistent pattern of results was also observed using deformed image data (initial planning CT deformed to CBCTeLFOV) with extended longitudinal projection and the same frame-of-reference as that of the CBCTeLFOV. CONCLUSION: Utilization of CBCTeLFOV proves to be clinically appropriate and enables accurate prediction of geometric and dosimetric consequences within the planned course of treatment. The ability to compute CBCTeLFOV-based treatment plans equivalent to re-CT promises a potential improvement in IGART practice.</p>				
489.	<p>Raghava Mohan V(1), Raj S(1), Dhingra MS(2), Aloysia D'Cor N(3), Singh AP(4), Saluja T(4), Kim DR(4), Midde VJ(3), Kim Y(4), Vemula S(3), Narla SK(3), Sah B(4), Ali M(5).                      Safety and immunogenicity of a killed bivalent (O1 and O139) whole-cell oral cholera vaccine in adults and children in Vellore, South India.                      PLoS One. 2019 Jun 18;14(6):e0218033.                      doi: 10.1371/journal.pone.0218033. eCollection 2019.</p> <p><b>Author information:</b>                      (1).Christian Medical College, Vellore, India.                      (2).Sanofi Pasteur, Swiftwater, Pennsylvania, United States of America.                      (3).Shantha Biotechnics Private Limited, Hyderabad, India.                      (4).International Vaccine Institute, Seoul, South Korea.                      (5).Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, United States of America.</p>	INT	JUL TO DEC	Clinical Virology	<p>PMID: 31211792                      PMID: PMC6581248  <b>Impact Factor:2.776</b>  <b>(BIOXBIO – 2018 - 2019)</b>  <b>H-Index: 268</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>This open-label study assessed the safety and immunogenicity of two doses (14 days apart) of an indigenously manufactured, killed, bivalent (<i>Vibrio cholerae</i> O1 and O139), whole-cell oral cholera vaccine (SHANCHOL; Shantha Biotechnics) in healthy adults (n = 100) and children (n = 100) in a cholera endemic area (Vellore, South India) to fulfill post-licensure regulatory requirements and post-World Health Organization (WHO) prequalification commitments. Safety and reactogenicity were assessed, and seroconversion rates (i.e. proportion of participants with a <math>\geq 4</math>-fold rise from baseline in serum vibriocidal antibody titers against <i>V. cholerae</i> O1 Inaba, O1 Ogawa and O139, respectively) were determined 14 days after each vaccine dose. No serious adverse events were reported during the study. Commonly reported solicited adverse events were headache and general ill feeling. Seroconversion rates after the first and second dose in adults were 67.7% and 55.2%, respectively, against O1 Inaba; 47.9% and 45.8% against O1 Ogawa; and 19.8% and 20.8% against O139. In children, seroconversion rates after the first and second dose were 80.2% and 68.8%, respectively, against O1 Inaba; 72.9% and 67.7% against O1 Ogawa; and 26.0% and 18.8% against O139. The geometric mean titers against O1 Inaba, O1 Ogawa, and O139 in both adults and children were significantly higher after each vaccine dose compared to baseline titers (<math>P &lt; 0.001</math>; for both age groups after each dose versus baseline). The seroconversion rates for O1 Inaba, O1 Ogawa, and O139 in both age groups were similar to those in previous studies with the vaccine. In conclusion, the killed, bivalent, whole-cell oral cholera vaccine has a good safety and reactogenicity profile, and is immunogenic in healthy adults and children. Trial Registration: ClinicalTrials.gov NCT00760825; CTRI/2012/01/002354. DOI: 10.1371/journal.pone.0218033</p> <p>Conflict of interest statement: Venkata Raghava Mohan, Santosh Raj, Ajit Pal Singh, Deok Ryun Kim, Yanghee Kim, Binod Sah and Mohammad Ali have no relevant conflict of interest to declare. Naveena Aloysia D'Cor, Venkat Jayanth Midde, Sridhar Vemula and Santhosh Kumar Narla are employed by Shantha Biotechnics Pvt. Ltd, a Sanofi Company. Tarun Saluja was employed by Shantha Biotechnics Pvt. Ltd at the time of study but is currently an employee of the International Vaccine Institute, Seoul. Mandeep Singh Dhingra was an employee of Shantha Biotechnics Pvt. Ltd at the time of the study but is currently an employee of Sanofi Pasteur, USA (part of the parent company of Shantha</p>				

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	Biotechnics Pvt. Ltd). Mandeep Singh Dhingra and Naveena Aloysia D'Cor also own stock interests in Sanofi. The International Vaccine Institute, Seoul received funding from the Bill and Melinda Gates Foundation to study the oral cholera vaccine (Shanchol), but has no commercial interest in the vaccine. The vaccine was provided by Shantha Biotechnics Pvt. Ltd (a Sanofi Company). This does not alter our adherence to PLOS ONE policies on sharing data and materials.				
490.	<p>Rahman, S. M. F., Vingilis, E. and Hameed, S. Views of physicians on the establishment of a department of family medicine in South India: A qualitative study J Family Med Prim Care; 2019, 8 (10): 3214-3219 <b>Address:</b> Department of Family Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Family Medicine, Schulich School of Medicine and Dentistry, Western University, London, Ontario, Canada. Objective: To explore the experiences and perceptions of physicians involved in establishing a department of Family Medicine in South India. Methods: In this study, descriptive qualitative methodology was used. Nine family physicians and one community medicine physician were interviewed. The data were subjected to thematic analysis. Findings: The establishment of a department of Family Medicine in South India in response to the local health-care demands needed support from the institution, visionary leaders and alumni of the institution. The key challenges perceived were lack of mentorship, lack of identity and misunderstanding of the work of family physicians. Conclusion: This study replicates earlier studies on the role of local health-care needs and visionary leaders in striving towards family medicine-based clinical services that further evolved into training and research opportunities in family medicine. The study identified the challenges and supportive forces behind the initiation of a department of Family Medicine and the role of family physicians in strengthening primary health care.</p>	NAT	JUL TO DEC	Family Medicine	<p><b>PMID:</b> 31742144 <b>Impact Factor: 0.21 (RG - 2018)</b> <b>H-Index: NA</b></p>
491.	<p>Rahmani, J., Clark, C., Kord Varkaneh, H., Lakiang, T., Vasanthan, L. T., Onyeché, V., Mousavi, S. M. and Zhang, Y. The effect of Aronia consumption on lipid profile, blood pressure, and biomarkers of inflammation: A systematic review and meta-analysis of randomized controlled trials Phytotherapy Research; 2019, 33 (8): 1981-1990 <b>Address:</b> Department of Community Nutrition, Faculty of Nutrition and Food Technology, National Nutrition and Food Technology Research Institute, Student Research Committee, Shahid Beheshti University of Medical Sciences, Tehran, Iran</p>	INT	JUL TO DEC	Physical Medicine and Rehabilitation	<p><b>PMC Review 35400</b> <b>Impact Factor: 3.766 (BIOXBIO – 2018-2019)</b> <b>H-Index: 112</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Centre for Sport, Exercise and Life Sciences, Coventry University, Coventry, United Kingdom</p> <p>Students' Scientific Research Center (SSRC), Tehran University of Medical Sciences (TUMS), Tehran, Iran</p> <p>Department Clinical Nutrition and Dietetics, Faculty of Nutrition and Food Technology, National Nutrition and Food Technology Research Institute, Student Research Committee, Shahid Beheshti University of Medical Sciences, Tehran, Iran</p> <p>National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore, India</p> <p>Department of Physical Medicine and Rehabilitation, Physiotherapy Unit, <b>Christian Medical College and Hospital, Vellore</b>, India</p> <p>National Institute for Freshwater Fisheries Research, New Bussa, Nigeria</p> <p>Department of Community Nutrition, School of Nutritional Sciences and Dietetics, Student Research Committee, Tehran University of Medical Sciences (TUMS), Tehran, Iran</p> <p>School of Public Health and Health Management, Chongqing Medical University, Chongqing, China</p>				
492.	<p>Rai E(1), Chen RYY(2), Noi CS(3), Hee HI(4)(5). Evaluation of anesthesia informed consent in pediatric practice - An observation cohort study. J Anaesthesiol Clin Pharmacol. 2019 Oct-Dec;35(4):515-521. doi:10.4103/joacp.JOACP_74_18.</p> <p><b>Author information:</b> (1)Department of Anesthesia, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. (2)University of Dundee, School of Life Sciences, Angus, Dundee, United Kingdom. (3)Department of Nursing, KK Women's and Children Hospital, Singapore. (4)Department of Paediatric Anaesthesia, KK Women's and Children Hospital, Singapore. (5)Duke NUS Medical School, Singapore.</p> <p>Background and Aims: An informed consent requires active participation by both physicians and patients. It is the responsibility of the physician to give the complete disclosure of information in easy language for the parent to understand. An informed consent process can be a challenge especially for the anesthetists when time is a limiting factor for patient-anesthetist interaction especially in same day admission and day surgery. The aim of this study was to</p>	NAT	JUL TO DEC	Anesthesia	<p><b>PMCID: PMC6939572</b> <b>PMID: 31920237</b> <b>Impact Factor: 0.47</b> <b>(RG-2018)</b> <b>H-Index: 25</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>subjectively evaluate the understanding and recall of the informed consent by the parents. Material and Methods: The validated survey was conducted over 10 weeks and was limited to one parent per child and to the parent who was directly involved in the consent process. Results: Majority of parents rated positively for adequate disclosure of all items of information. Consent process done on day of surgery was found to be associated with lower parental rating in adequacy of disclosure of pain relief options. Seniority of anesthetists was associated with higher parental rating of adequacy of information regarding post operative plan, specific risk of child and overall consent process. Consent for minor surgeries, on day of surgery, did not significantly affect the parental performance in their recall of disclosed information but was associated with significant lower rating of adequacy of postoperative plan. Postoperative pain is among the areas for improvement especially in day surgery cases. Conclusion: Consent taken on day of surgery was found to be associated with lower parental rating. Postoperative plan for pain required improvement especially in day surgery cases. Copyright: © 2019 Journal of Anaesthesiology Clinical Pharmacology. DOI: 10.4103/joacp.JOACP_74_18 Conflict of interest statement: There are no conflicts of interest.</p>				
493.	<p>Raj, J. P., Hansdak, S. G., Naik, D., Mahendri, N. V. and Thomas, N. SLEep among diabetic patients and their GlycaEmic control (SLEDGE): A pilot observational study J Diabetes; 2019, 11 (2): 122-128  <b>Address:</b> Church of South India Hospital, Erode, India.                      Department of Pharmacology, St. John's Medical College, Bangalore, India.                      Department of General Medicine, <b>Christian Medical College, Vellore, India.</b>                      Department of Endocrinology, <b>Christian Medical College, Vellore, India.</b>                      Department of Dietetics and Nutrition, <b>Christian Medical College, Vellore, India.</b>                      BACKGROUND: Recent cohort studies have proven the association between sleep deprivation and adverse glycemic control (GC). The aim of this study was to assess the prevalence of excessive daytime sleepiness (EDS), a subjective measure of sleep deprivation, among type 2 diabetic mellitus (T2DM) patients and its association with GC. METHODS: This cross-sectional study was conducted between July 2015 and June 2016 in five diabetes clinics in the district of Erode, Tamil Nadu, India. An equal number of consenting patients with</p>	INT	JUL TO DEC	General Medicine, Endocrinology, Dietetics and Nutrition.	<p><b>PMID:</b> 30003709  <b>Impact Factor:</b> 3.298  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 36</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	T2DM was recruited consecutively from each of the centers, and EDS was measured subjectively using the Epworth sleepiness scale (ESS), whereas GC was assessed using HbA1c levels. RESULTS: In all, 126 patients were screened and 102 were found eligible for the study. The prevalence of EDS was 17.5% (95% confidence interval 10.13-24.87). The association between ESS scores and HbA1c levels was analyzed using linear regression after adjusting for age, dietary intake, inflammatory markers (erythrocyte sedimentation rate), depression (Patient Health Questionnaire-9 score) and stress (Perceived Stress Scale score): for every unit increase in the ESS score, HbA1c increased by 0.143 g/dL (P < 0.001). CONCLUSION: Subjective EDS was seen in approximately one-quarter of patients with diabetes in our population. There was a positive association between EDS and glycemic control. Screening of patients with diabetes for EDS should be part of routine diabetes management.				
494.	Rajan, R., Cherian, K. E., Asha, H. S. and Paul, T. V. McCune Albright syndrome: an endocrine medley BMJ Case Rep; 2019, 12 (7): <b>Address:</b> Department of Endocrinology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> McCune Albright syndrome is a rare disorder that presents with multiple endocrine abnormalities. We report the case of a 24-year-old woman who presented with right lower limb pain, with no preceding trauma or fracture. On examination she was noted to have coarsened facial features, acral enlargement, bitemporal hemianopia, galactorrhoea and multiple cafe-au-lait macules. She gave history of precocious puberty, having attained menarche at 7 years of age. Biochemical investigations revealed hyperprolactinaemia, with unsuppressed growth hormone levels following a glucose load and subclinical hyperthyroidism. Technetium-99m methylene diphosphonate bone scan showed polyostotic fibrous dysplasia, MRI of the brain showed a pituitary macroadenoma. Thus she was diagnosed to have McCune Albright syndrome with multiple endocrine manifestations. She was treated with parenteral zoledronate for her bony lesions and initiated on cabergoline for plurihormonal pituitary macroadenoma. She is planned to be on close follow-up to assess for clinical improvement and appearance of other manifestations.	INT	JUL TO DEC	Endocrinology	<b>PMID:</b> 31308184 <b>Impact Factor: 0.22 (RG-2018)</b> <b>H-Index: 20</b>
495.	Rajan, R., Cherian, K. E., Kapoor, N. and Paul, T. V. Denosumab as a Bridge to Surgery in a Patient with Severe Hypercalcemia Due to Primary Hyperparathyroidism in the Setting of Renal Dysfunction	NAT	JAN TO JUN	Endocrinology	<b>PMID:31161118</b> <b>PMC ID:6540887</b> <b>Impact Factor: 1.70 (resurchify.com)</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Indian J Endocrinol Metab; 2019, 23 (2): 269-270  <b>Address:</b> Department of Endocrinology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>				<b>H-Index: 19</b>
496.	Rajan, R., Kuriakose, C., Paul, J., Kapoor, N., Cherian, K. E. and Paul, T. V. A rare cause of familial exogenous Cushing syndrome J Family Med Prim Care; 2019, 8 (5): 1798-1800  <b>Address:</b> Department of Endocrinology, <b>Christian Medical College and Hospital, Vellore, Tamil Nadu, India.</b>  Exogenous steroid use is the most common cause of Cushing syndrome. With the use of glucocorticoids(GC) for a variety of diseases, the indiscriminate use of this group of drugs has increased. We present a family from which both children were brought with features suggestive of Cushing syndrome. On evaluation, they were found to have suppressed hypothalamic pituitary adrenal (HPA) axis, signifying steroid use from exogenous sources. On further evaluation by a psychiatrist, the mother who was on treatment for chronic depression confessed that she had bought dexamethasone tablets over the counter, and administered the same, mixed with fruit juices to her sons. The family was counselled regarding the consequences of chronic steroid abuse and the children were started on replacement doses of prednisolone. Certain features like posterior subcapsular cataract, glaucoma, avascular necrosis of femur and psychosis are specific to exogenous Cushing syndrome. Despite efforts to understand the effects of long-term steroid treatment on the HPA axis, it is not yet clear as to which patients will have prolonged HPA axis suppression. The time taken for the recovery of HPA axis remains variable. Also, HPA axis suppression due to exogenous steroids may present as acute adrenal crisis. Hence, it is important to start these patients on replacement dose of steroids and also educate them regarding the increased requirement of steroids during stress.	NAT	JAN TO JUN	Endocrinology	<b>PMID:31198763</b> <b>PMC ID:6559065</b> <b>Impact Factor: 0.21 (RG-2018)</b> <b>H-Index: NA</b>
497.	Rajasekar, G., Muliyl, D. E., Cherian, A. G., Prasad, J. H. and Mohan, V. R. Prevalence and Factors Associated with Gestational Diabetes Mellitus among Antenatal Women at a Rural Health Center in Vellore J Assoc Physicians India; 2019, 67 (4): 42-47 <b>Address:</b> Assistant Professor, Department of Community Medicine, K.A.P. Viswanatham Government Medical College, Trichirapalli, Tamil Nadu; *Corresponding Author.	NAT	JUL TO DEC	Community Health, Obstetrics and Gynaecology	<b>PMID: 31311218</b> <b>Impact Factor: 0.34 (BIOXBIO - 2018)</b> <b>H-Index: 53</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Assistant Professor, Department of Community Health, <b>Christian Medical College, Vellore</b>, Tamil Nadu.                      Assistant Professor of OG, Department of Community Health, <b>Christian Medical College, Vellore</b>, Tamil Nadu.                      Professor, Department of Community Health, <b>Christian Medical College, Vellore</b>, Tamil Nadu.</p> <p>Background and Objectives: Gestational Diabetes Mellitus (GDM) has been well documented to be associated with significant mortality and morbidity among both mother and their offspring. Prevalence of GDM in India varies between regions and has been documented to be on the rise over the last two decades which is a public health concern and reflects an increase in the frequency of type 2 diabetes mellitus in these populations. This study aimed at estimating the prevalence of GDM among antenatal women attending a rural secondary care hospital in southern India and attempts to study associations between anthropometry, parental history, physical activity of pregnant women and GDM. Methods: A hospital based cross sectional study was done among 630 pregnant women who were screened with oral glucose tolerance test between 24 and 28 weeks of gestation based on IADPSG criteria. Risk factors for developing GDM were assessed by conducting home visits to 75 women diagnosed to have GDM and 150 randomly selected women without GDM. Results: Hospital based prevalence of GDM was 14% (95 % CI: 11.3% to 16.7%) and a significant rise in prevalence levels was noted with age. Women with family history of diabetes mellitus, women with body fat of more than 23% had 2.65 and 2.89 times significantly higher odds of developing GDM. Interpretation and conclusion: Family history of diabetes and excess body fat are risk factors associated with GDM. Among them excess body fat could be an independent risk factor without the influence of foetal weight and preventive measures could be directed towards it.</p>				
498.	<p>Rajasekaran, N. M., Horo, S. and Kuriakose, T.                      Primary ocular presentation of tuberous sclerosis - A case report                      Indian J Ophthalmol; 2019, 67 (3): 433-435</p> <p><b>Address:</b> Department of Ophthalmology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</p> <p>A 25-year-old man presented with decreased vision in the left eye with hypopigmented elevated subretinal lesion over the optic disk with abnormal vasculature, subretinal and retinal hemorrhages, and fluid in the macula. An area of high spike over the disk with corresponding orbital shadowing was seen on B scan</p>	NAT	JAN TO JUN	Ophthalmology	<p><b>PMID:30777981</b>  <b>PMC ID:6407376</b>                      WOS:000459241600039  <b>Impact Factor: 0.961</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 43</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	ultrasonography. Fundus fluorescein angiography revealed abnormal vasculature. Systemic examination revealed facial angiofibroma, ashleaf spot, and dental pits with multiple cortical tubers on CT brain. Intravitreal injection of bevacizumab led to visual and tomographic improvement. Abnormal retinal vascularization and exudation in young individuals may be a presenting feature in tuberous sclerosis.				
499.	Rajeev, S. A., Simon, Ebby George, Joseph, A. J. and Dutta, Amit Kumar Treatment outcomes of Acute Severe Ulcerative Colitis - Experience from a tertiary care centre in South India Journal of Gastroenterology and Hepatology; 2019, 34 247-247	INT	JUL TO DEC	Gastroenterology, Hepatology	<b>PMID:</b> WOS:000495492601149 <b>Impact Factor:</b> 3.632 <b>(BIOXBIO - 2018)</b> <b>H-Index: 117</b>
500.	Ralph, R., Prabhakar, A. T., Sathyendra, S., Carey, R., Jude, J. and Varghese, G. M. Scrub Typhus-Associated Opsoclonus: Clinical Course and Longitudinal Outcomes in an Indian Cohort Ann Indian Acad Neurol; 2019, 22 (2): 153-158  <b>Address:</b> Department of Internal Medicine, <b>Christian Medical College Hospital, Vellore</b> , Tamil Nadu, India. Department of Neurology, <b>Christian Medical College Hospital, Vellore</b> , Tamil Nadu, India. Department of Clinical Microbiology, <b>Christian Medical College Hospital, Vellore</b> , Tamil Nadu, India. Department of Infectious Diseases, <b>Christian Medical College Hospital, Vellore</b> , Tamil Nadu, India.  Context: Opsoclonus, a rare neurological manifestation in scrub typhus, causes significant distress and disability. There is a paucity of clinical data and outcomes in these patients. Aim: This study aims to describe the clinical and laboratory profile and longitudinal outcomes in a scrub typhus patient cohort with opsoclonus. Settings and Design: This retrospective study was conducted in a 2700-bed teaching hospital in South India, in scrub typhus patients with opsoclonus over a 5-year period. Patients and Methods: Clinical, laboratory, and radiological data and outcomes at discharge and 6- and 12-weeks postdischarge were documented. Results: Of 1650 scrub typhus patients, 18 had opsoclonus. 17 had opsoclonus at presentation, while one patient developed opsoclonus on the 5(th) admission day, 1-day postdefervescence. Opsoclonus was first noted after a median interval of 11 (7-18) days from fever onset. It was associated with myoclonus in 94% (17/18), cerebellar dysfunction in 67% (12/18), extrapyramidal syndrome (EPS) in 33% (6/18), and aseptic meningitis in 17% (3/18) patients. Mean cerebrospinal fluid	NAT	JAN TO JUN	Internal Neurology, Microbiology, Diseases.      Medicine, Clinical Infectious	<b>PMID:31007425</b> <b>PMC ID:6472253</b> <b>Impact Factor: 0.35</b> <b>(RG-2018)</b> <b>H-Index: 22</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	(CSF) white blood cell (WBC) count was 9 +/- 2.7 cells/cumm, with mean CSF protein 118.5 +/- 53.9 mg% and mean CSF glucose 97 +/- 13 mg% in 11/15 patients. Brain magnetic resonance imaging was unremarkable in 75% (9/12). Case-fatality rate was 5.5% (1/18). Complete resolution of the index neurological syndrome occurred at 12-week postdischarge. Conclusions: Opsoclonus is a rare neurological manifestation in scrub typhus, usually occurring in association with myoclonus, cerebellar dysfunction, or EPS. It appears to occur during the resolving febrile phase, with neurological deficits completely resolving at 12 weeks.				
501.	<p>Ralte Z(1), Naina P(1), Amladi A(2), John M(2), Anndan S(2), Varghese AM(1).            Determination of Biofilm-Forming Capacity of Otopathogens Isolated from Discharging Ears in Children with Chronic Otitis Media. Indian J Med Microbiol. 2019 Jul-Sep;37(3):442-445. doi:10.4103/ijmm.IJMM_19_404.</p> <p><b>Author information:</b>            (1)Department of ENT, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>            (2)Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Chronic otitis media is a common disease of the developing world with persistent ear discharge, leading to major complications. This study describes the microorganisms isolated from the middle ear and nasopharynx of children with chronically discharging ears. Middle ear and nasopharyngeal swabs from 89 children were studied, and the microorganisms isolated were assessed for biofilm-forming ability. Methicillin-susceptible Staphylococcus aureus was common in the nasopharynx, while the middle ear showed predominantly pseudomonas and Methicillin-resistant S. aureus. Pseudomonas aeruginosa showed strong biofilm formation, whereas Escherichia coli, Proteus sp. and Providentia sp. were weak biofilm producers. S. aureus isolates were negative for biofilm formation.            DOI: 10.4103/ijmm.IJMM_19_404            Conflict of interest statement: None</p>	NAT	JUL TO DEC	ENT, Clinical Microbiology	<p><b>PMID:</b> 32003349  <b>Impact Factor:</b> 0.950  <b>(BIOXBIO - 2018)</b>  <b>H-Index:</b> 41</p>
502.	<p>Ram A, Victor CP, Christy H, Hembrom S, Cherian AG, Mohan VR. Domestic violence and its determinants among 15-49-year-old women in a rural block in south India Indian J. Community Med. 2019; 44(4): 362-367.</p> <p><b>Affiliation</b></p>	NAT	JUL TO DEC	Community Health	<p><b>PMID:31802801</b>  <b>PMCID:PMC6881899</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Community Health, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. DOI:10.4103/ijcm.IJCM_84_19</p> <p><b>Address for correspondence:</b> Dr. Anne George Cherian, Department of Community Health, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. E-mail: <a href="mailto:annegc97@yahoo.co.in">annegc97@yahoo.co.in</a></p> <p>CONTEXT: Domestic violence in Indian setting has five major components: emotional abuse; physical violence; sexual violence; honor killing; dowry-related abuse; and death. AIMS: The aim of the study was to estimate the prevalence of domestic violence and 3 of its components - emotional abuse, physical violence, and sexual violence among women in the age group of 15-49 years in Kaniyambadi block, rural Vellore, Tamil Nadu and to determine the risk factors of domestic violence. SETTINGS AND DESIGN: A community-based cross-sectional study among women between the ages 15 and 49 years at the rural setting of Kaniyambadi block, Tamil Nadu. RESULTS: Prevalence of all forms of domestic violence among women was 77.5%, and forty percent women were classified as having ever been subjected to severe domestic violence. Prevalence of physical violence was 65.8%, sexual abuse was 17.5%, and emotional abuse was 54.2%. Alcohol consumption by husband (adjusted odds ratio [AOR] 4.37; 1.35, 14.18), controlling behavior by family member (AOR 8.07; 2.47, 26.37), and woman's employment (AOR 4.33; 1.27, 14.77) were statistically significant determinants of domestic violence. Three-fourth (73.1%) of the women felt that being subjected to domestic violence has affected their physical and mental health. CONCLUSIONS: The high prevalence of domestic violence in our community needs to be addressed as it has tacit implications on socioeconomic well-being, physical and mental health of a woman, her family, and thereby, society as a whole. Copyright: © 2019 Indian Journal of Community Medicine. (Copyright © 2019, Indian Association of Preventive and Social Medicine, Publisher MedKnow)</p>				
503.	<p>Ram, K., Varaprasad, K., Krishna, M. K., Kannan, N., Sundar, V., Joseph, M., Sinha, V. D., Shukla, D., Gururaj, G., Narayan, R. K., Pattisapu, J. V. and Vavilala, M. S.</p> <p>Prehospital Factors Associated with Discharge Outcomes: Baseline Data from the Andhra Pradesh Traumatic Brain Injury Project World Neurosurgery: X; 2019, 2 <b>Address:</b> Department of Neurosurgery, King George Hospital, Andhra Medical College Visakhapatnam, KGH, Opp KGH OP Gate, Maharani Peta, Visakhapatnam, Andhra Pradesh, India</p>	INT	JUL TO DEC	Neurological Science	<b>PMC Article 35337</b>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Anesthesiology &amp; Pain Medicine, University of Washington, Seattle, WA, United States                      Harborview Injury Prevention and Research Center, University of Washington, Seattle, WA, United States                      Department of Neurosurgery, Madras Medical College and Dr. Rai Memorial Medical Centre, Madras Medical College, Park Town, Chennai, Tamil Nadu, India                      Division of Neurocritical Care &amp; Trauma, Department of Neurological Science, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India                      Department of Neurosurgery, S.M.S Medical College Jaipur, Jawahar Lal Nehru Marg, Gangawal Park, Adarsh Nagar, Jaipur, Rajasthan, India                      Department of Neurosurgery, National Institute of Mental Health and Neuro Sciences, Bangalore, India                      Department of Epidemiology and Centre for Public Health, National Institute of Mental Health and Neuro Sciences, Bangalore, India                      Department of Neurosurgery, Zucker School of Medicine at Hofstra/Northwell, Manhasset, Hempstead, NY, United States                      Department of Pediatric Neurosurgery, University of Central Florida College of Medicine, Orlando, FL, United States</p>				
504.	<p>Ramalingam, S. and Thangavel, S.                      CRISPR-Cas9 Probing of Infectious Diseases and Genetic Disorders                      Indian Journal of Pediatrics; 2019, 86 (12): 1131-1135  <b>Address:</b> CSIR Institute for Genomics and Integrative Biology (IGIB), Mathura Road, Sukhdev Vihar, New Delhi, India                      Center for Stem Cell Research (CSCR), A Unit of inStem Bengaluru, <b>Christian Medical College Campus, Vellore</b>, Tamil Nadu, India</p> <p>The ability to precisely change the deoxyribonucleic acid (DNA) bases at specific sites offers tremendous advantages in the field of molecular biology and medical biotechnology. Identification of Clustered Regularly-Interspaced Short Palindromic Repeats (CRISPR), revelation of its role in prokaryotic adaptive immunity and subsequent conversion into genome and epigenome engineering system are the landmark research progresses of the decade. The possibilities of deciphering the molecular mechanisms of the disease, identifying the disease targets, generating the disease models, validating the drug targets, developing resistance to the infection and correcting the genotype have brought off much enthusiasm in the field of infectious diseases and genetic disorders. This review focuses on CRISPR/Cas9's impact in the field of infection and genetic disorders. © 2019, Dr. K C Chaudhuri Foundation.</p>	NAT	JUL TO DEC	Centre for Stem Cell Research	<p><b>PMID:31367975</b>  <b>PMC Review 22392</b>  <b>Impact Factor: 1.046</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 43</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	DOI:10.1007/s12098-019-03037-9				
505.	<p>Ramalingam, V. V., Demosthenes, J. P., Ghale, B. C., Rupali, P., Varghese, G. M., Abraham, O. C. and Kannangai, R.</p> <p>Frequency of cross-resistance to rilpivirine and etravirine among HIV-1 subtype C infected individuals failing nevirapine/efavirenz based ART regimen</p> <p>Infect Dis (Lond); 2019, 51 (1): 71-74</p> <p><b>Address:</b> a Department of Clinical Virology , Christian Medical College , Vellore , India.                      b Department of Infectious Diseases , Christian Medical College , Vellore , India.                      c Department of Medicine , Christian Medical College , Vellore , India.</p>	INT	JUL TO DEC	Clinical Virology, Infectious Diseases, Medicine.	<p><b>PMID:</b> 30371136</p> <p><b>Impact Factor: NA</b></p> <p><b>H-Index: 68</b></p>
506.	<p>Ramamoorthy, H., Abraham, P., Isaac, B. and Selvakumar, D.</p> <p>Mitochondrial pathway of apoptosis and necrosis contribute to tenofovir disoproxil fumarate-induced renal damage in rats</p> <p>Hum Exp Toxicol; 2019, 38 (3): 288-302</p> <p><b>Address:</b> 1 Department of Biochemistry, <b>Christian Medical College, Bagayam</b>, Vellore, Tamil Nadu, India.                      2 Department of Anatomy, <b>Christian Medical College, Bagayam</b>, Vellore, Tamil Nadu, India.</p> <p>Tenofovir disoproxil fumarate (TDF) is currently the only nucleotide analogue reverse-transcriptase inhibitor that is approved by the Food and Drug administration (FDA), USA, for the treatment of human immunodeficiency virus (HIV) infection. In recent days, renal toxicity is becoming common i HIV patients treated with TDF. However, the mechanism of tenofovir nephrotoxicity is not clear. We hypothesized that mitochondrial pathway of apoptosis, poly [ADP-ribose] polymerase (PARP) overactivation and neutrophil infiltration may contribute to tenofovir-induced renal damage. Renal damage was induced in adult male Wistar rats by the oral administration of 600 mg/kg body weight daily for five consecutive weeks. Kidneys were removed and used for histological and biochemical analyses. Apoptosis was detected by terminal deoxynucleotidyl transferase biotin-deoxyuridine triphosphate nick end-labelling (TUNEL) assay and caspase 3 activity and protein expression; mitochondrial pathway of apoptosis by cyt c release; and PARP activation by immunofluorescence, immunohistochemistry and Western blot techniques. Myeloperoxidase (MPO) activity was measured as a marker of neutrophil infiltration. TDF administration resulted in increased number of TUNEL-positive cells, activation of caspase 3 and release of cyt c from mitochondria into the cytosol in the kidneys. There was increased nuclear localization of PARP as well</p>	INT	JUL TO DEC	Biochemistry, Anatomy	<p><b>PMID:</b> 30326737</p> <p><b>Impact Factor: 2.171</b></p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 71</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	as increase in its protein level in the TDF-treated rat kidneys. In addition, renal MPO activity was increased ninefold as compared to controls. The results of the present study show that mitochondrial apoptotic pathway, PARP overactivation and neutrophil infiltration contribute to tenofovir-induced renal damage in rats.				
507.	<p>Ramani, S. and Giri, S.                      Influence of histo blood group antigen expression on susceptibility to enteric viruses and vaccines                      Curr Opin Infect Dis; 2019, 32 (5): 445-452  <b>Address:</b> Department of Molecular Virology and Microbiology, Baylor College of Medicine, Houston, Texas, USA.                      Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore, India.</b>                      PURPOSE OF REVIEW: Gastroenteritis results in substantial morbidity and mortality worldwide, especially in young children in low-and-middle-income settings. Rotavirus and norovirus are the leading causes of viral gastroenteritis. Although introduction of rotavirus vaccines into childhood immunization programmes has reduced disease burden, vaccine effectiveness remains low in developing countries. Norovirus is replacing rotavirus as the most common cause of diarrhea hospitalization in settings where rotavirus vaccines are highly effective. Genetically determined host factors, such as expression of histo blood group antigens (HBGAs) are hypothesized to play key roles in susceptibility to infections and gastroenteritis caused by these virus, as well as influence vaccine take. RECENT FINDINGS: Epidemiology studies provide strong support for virus genotype-dependent effects of host HBGA expression, specifically secretor status on susceptibility to rotavirus and norovirus. Secretor-positive persons are significantly more susceptible to gastroenteritis caused by rotavirus P[8] genotype, and to infection with the GII.4 genotype of human norovirus. There is increasing data on the role of secretor status on rotavirus vaccine take but results are currently conflicting. For analyses involving young infants, maternal HBGA status is an important factor to be considered in future studies. SUMMARY: Genetically determined HBGA expression influences susceptibility to enteric viruses of public health importance.</p>	INT	JUL TO DEC	Gastrointestinal Sciences	<p><b>PMID:</b> 31335438  <b>Impact Factor:</b> 3.752  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 94</b></p>
508.	<p>Ramchandra, Atul M., Chacko, Binila and Victor, Peter J.                      Pyrethroid poisoning                      Indian Journal of Critical Care Medicine; 2019, 23 (Suppl 4): S267-S271</p> <p><b>Affiliation:</b></p>	NAT	JUL TO DEC	Critical Care Medicine	

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Medical Intensive Care Unit, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.  <b>Corresponding Author:</b> Binila Chacko, Department of Medical Intensive Care Unit, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India, Phone: +91-9600272412, e-mail: <a href="mailto:binilachacko@gmail.com">binilachacko@gmail.com</a></p> <p>INTRODUCTION: Pyrethroid compounds are widely used as insecticides. These compounds not only have a versatile application, but also have favourable toxicological profiles with high selectivity and toxicity to insects and low toxicity to humans. Despite this, there have been several reports of toxicity to humans in both occupational exposure and deliberate ingestional poisoning. CLASSICAL PRESENTATION AND TREATMENT: Two classical syndromic presentations are described. Type I syndrome is characterised predominantly by tremors and is seen with exposure to type I pyrethroids. Type II pyrethroids, which are structurally modified type I pyrethroids with the addition of a cyano group, can result in type II syndrome characterized by choreo-athetosis and salivation. Mega-dose poisoning and mixed poisoning, particularly with organophosphorus compounds, is associated with significant toxicity and death. Treatment is supportive and symptomatic. A favourable outcome can be expected in most patients.</p> <p><b>HOW TO CITE THIS ARTICLE:</b> Ramchandra AM, Chacko B, Victor PJ. Pyrethroid Poisoning. Indian J Crit Care Med 2019;23(Suppl 4):S267-S271. Copyright © 2019; Jaypee Brothers Medical Publishers (P) Ltd.</p>				
509.	<p>Ramesh, S., Zaman, F., Madhuri, V. and Savendahl, L.            Radial Extracorporeal Shock Wave Treatment Promotes Bone Growth and Chondrogenesis in Cultured Fetal Rat Metatarsal Bones            Clin Orthop Relat Res; 2019, <b>Address:</b> S. Ramesh, V. Madhuri, Paediatric Orthopaedics, <b>Christian Medical College and Hospital, Vellore</b>, India S. Ramesh, F. Zaman, L. Savendahl, Department of Women's and Children's Health and Paediatric Endocrinology, Karolinska Institutet, Solna, Stockholm, Sweden S. Ramesh, V. Madhuri, Centre for Stem Cell Research, a Unit of In Stem Bengaluru, <b>Christian Medical College</b>, Bagayam, Vellore, India.</p> <p>BACKGROUND: Substantial evidence exists to show the positive effects of radialextracorporeal shock wave therapy (ESWT) on bone formation. However, it is unknown whether rESWT can act locally at the growth plate level to stimulate linear bone growth. One way to achieve this is to stimulate chondrogenesis in the growth plate without depending on circulating systemic growth factors. We wished</p>	INT	JUL TO DEC	Pediatric Orthopedics, Centre for Stem Cell Research	<p><b>PMID:31794485</b>  <b>PMC 35304</b>  <b>Impact Factor: 4.154</b>  <b>(BIOXBIO – 2018-2019)</b>  <b>H-Index: 185</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>to see whether rESWT would stimulate metatarsal rat growth plates in the absence of vascularity and associated systemic growth factors. QUESTIONS/PURPOSES: To study the direct effects of rESWT on growth plate chondrogenesis, we asked: (1) Does rESWT stimulate longitudinal bone growth of ex vivo cultured bones? (2) Does rESWT cause any morphological changes in the growth plate? (3) Does rESWT locally activate proteins specific to growth plate chondrogenesis? METHODS: Metatarsal bones from rat fetuses were untreated (controls: n = 15) or exposed to a single application of rESWT at a low dose (500 impulses, 5 Hz, 90 mJ; n = 15), mid-dose (500 impulses, 5 Hz, 120 mJ; n = 14) or high dose (500 impulses, 10 Hz, 180 mJ; n = 34) and cultured for 14 days. Bone lengths were measured on Days 0, 4, 7, and 14. After 14 days of culturing, growth plate morphology was assessed with a histomorphometric analysis in which hypertrophic cell size (&gt; 7 microm) and hypertrophic zone height were measured (n = 6 bones each). Immunostaining for specific regulatory proteins involved in chondrogenesis and corresponding staining were quantitated digitally by a single observer using the automated threshold method in ImageJ software (n = 6 bones per group). A p value &lt; 0.05 indicated a significant difference. RESULTS: The bone length in the high-dose rESWT group was increased compared with that in untreated controls (4.46 mm +/- 0.75 mm; 95% confidence interval, 3.28-3.71 and control: 3.50 mm +/- 0.38 mm; 95% CI, 4.19-4.72; p = 0.01). Mechanistic studies of the growth plate's cartilage revealed that high-dose rESWT increased the number of proliferative chondrocytes compared with untreated control bones (1363 +/- 393 immunopositive cells per bone and 500 +/- 413 immunopositive cells per bone, respectively; p = 0.04) and increased the diameter of hypertrophic chondrocytes (18 +/- 3 microm and 13 +/- 3 microm, respectively; p &lt; 0.001). This was accompanied by activation of insulin-like growth factor-1 (1015 +/- 322 immunopositive cells per bone and 270 +/- 121 immunopositive cells per bone, respectively; p = 0.043) and nuclear factor-kappa beta signaling (1029 +/- 262 immunopositive cells per bone and 350 +/- 60 immunopositive cells per bone, respectively; p = 0.01) and increased levels of the anti-apoptotic proteins B-cell lymphoma 2 (718 +/- 86 immunopositive cells per bone and 35 +/- 11 immunopositive cells per bone, respectively; p &lt; 0.001) and B-cell lymphoma-extra-large (107 +/- 7 immunopositive cells per bone and 34 +/- 6 immunopositive cells per bone, respectively; p &lt; 0.001). CONCLUSION: In a model of cultured fetal rat metatarsals, rESWT increased longitudinal bone growth by locally inducing chondrogenesis. To verify whether rESWT can also stimulate bone</p>				

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	growth in the presence of systemic circulatory factors, further studies are needed. CLINICAL RELEVANCE: This preclinical proof-of-concept study shows that high-dose rESWT can stimulate longitudinal bone growth and growth plate chondrogenesis in cultured fetal rat metatarsal bones. A confirmatory in vivo study in skeletally immature animals must be performed before any clinical studies.				
<b>510.</b>	<p>Ramos-Casals, Manuel, Lambotte, Oliver, Kostine, Marie, Calabrese, Leonard, Suarez-Almazor, Maria, Bingham, Clifton, Radstake, Timothy R., Baldini, Chiara, Schaeffer, Thierry, Gottenberg, Jacques-Eric, Schulze-Koops, Hendrik, Leipe, Jan, Calabrese, Cassandra, Brito-Zeron, Pilar, Flores-Chavez, Alejandra, Kostov, Belchin, Retamozo, Soledad, Citera, Gustavo, Aguilar, Eva, Richter, Michael, Lidar, Merav, Fisher, Benjamin, Michot, Jean-Marie, Liew, David, Buchanan, Russell, Schrupf-Heiberg, Marte, Guilpain, Philippe, Danda, Debashish, Olsson, Peter, Suzuki, Yasunori, Kilickap, Saadettin, Hernandez-Molina, Gabriela, Moca Trevisani, Virginia, Fernandes, Praprotnik, Sonja, Horvath, Ildiko, Fanny, Azuma, Naoto, Armagan, Berkan, Khamashta, Munther and Mariette, Xavier</p> <p>Immune-Related Adverse Events Induced by Cancer Immunotherapies. Big Data Analysis of 13,051 Cases (Immuno cancer International Registry)</p> <p>Annals of the Rheumatic Diseases; 2019, 78 607-608</p> <p><b>Author Information</b>  <b>Addresses:</b>                      [ 1 ] Hosp Clin Barcelona, IDIBAPS, Barcelona, Spain                      [ 2 ] Bicetre Hosp, Paris, France                      [ 3 ] Ctr Hosp Univ, Bordeaux, France                      [ 4 ] Cleveland Clin Fdn, 9500 Euclid Ave, Cleveland, OH 44195 USA                      [ 5 ] Univ Texas MD Anderson Canc Ctr, Houston, TX 77030 USA                      [ 6 ] Johns Hopkins Univ, Baltimore, MD USA                      [ 7 ] Univ Med Ctr Utrecht, Utrecht, Netherlands                      [ 8 ] Pisa Univ, Pisa, Italy                      [ 9 ] Strasbourg Univ, CNRS, Strasbourg, France                      [ 10 ] Univ Munich, Munich, Germany                      [ 11 ] Univ Mannheim, Mannheim, Germany                      [ 12 ] Hosp CIMA Sanitas, Barcelona, Spain                      [ 13 ] Hosp Especialidades Ctr Med La Raza, Mexico City, DF, Mexico                      [ 14 ] IDIBAPS, Barcelona, Spain                      [ 15 ] UNC, CONICET, IUCBC, INICSA, Cordoba, Argentina                      [ 16 ] IREP, Buenos Aires, DF, Argentina                      [ 17 ] GEAS SEMI Spanish Registry, Madrid, Spain</p>	<b>INT</b>	<b>JUL TO DEC</b>	Clinical Rheumatology and Immunology	<p><b>PMID:</b> WOS:000472207101537</p> <p><b>Impact Factor:</b> 14.299</p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 212</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	[ 18 ] Mayo Sch Grad Med Educ, Rochester, MN USA [ 19 ] Sheba Med Ctr, Tel Aviv, Israel [ 20 ] Univ Birmingham, Birmingham, W Midlands, England [ 21 ] Aus REISAMIC Registry, Melbourne, Vic, Australia [ 22 ] Austin Hlth, Melbourne, Vic, Australia [ 23 ] Diakonhjemmet Hosp, Oslo, Norway [ 24 ] Montpellier Univ Hosp, Montpellier, France [ 25 ] <b>Christian Med Coll &amp; Hosp, Vellore</b> , Tamil Nadu, India [ 26 ] Skane Univ Hosp Malmo, Malmo, Sweden [ 27 ] Kanazawa Univ Hosp, Kanazawa, Ishikawa, Japan [ 28 ] Hacettepe Univ, Ankara, Turkey [ 29 ] INCMNSZ, Mexico City, DF, Mexico [ 30 ] Univ Fed Sao Paulo, Sao Paulo, Brazil [ 31 ] Univ Med Ctr, Ljubljana, Slovenia [ 32 ] Debrecen Univ, Debrecen, Hungary [ 33 ] Hyogo Coll Med, Nishinomiya, Hyogo, Japan [ 34 ] Dubai Hosp, Dubai, U Arab Emirates [ 35 ] Univ Paris Sud, Paris, France				
511.	<p>Ramya, I., Mitra, S., D'sa, S., Sathyendra, S., Zachariah, A., Kumar, C. V., Carey, R. A. B. and Verghese, G. M.                      Outcomes and factors influencing outcomes of critically ill HIV-positive patients in a tertiary care center in South India                      J Family Med Prim Care; 2019, 8 (1): 97-101  <b>Address:</b> Department of Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Department of Accident and Emergency Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Department of Infectious Diseases, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Department of Critical Care, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>The incidence of (Human immune deficiency) HIV in India has fallen by 58% since the onset of the HIV epidemic. As of 2016 there are 2.1 million people living in India with HIV and only 49% of the adults with HIV are on ART (1). The HIV infected individuals may require intensive care due to various reasons. This study attempts to look at the outcomes of these patients admitted in the intensive care unit and the predictors of these outcomes. Aims: 1. To assess the outcomes of critically ill HIV infected patients admitted in the medical intensive care unit. 2. Assessment of the factors that are likely to influence the outcome. Materials and Methods: it is a retrospective medical review of all the patient records available on our electronic</p>	NAT	JUL TO DEC	Medicine, Accident and Emergency Medicine, Infectious Diseases, Critical Care	PMID: 30911487 Impact Factor: 0.21 (BIOXBIO - 2018) H-Index: NA

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	database. The study period was January 2008 - October 2013. Results: in our study cohort the commonest reason for admission into the intensive care unit was sepsis associated with multi organ dysfunction (64%). A low CD 4 count, renal failure acute respiratory distress syndrome, and hypotension and multi organ dysfunction were predictive of a poor outcome in our study. Conclusion: The most common cause of admission of PLHIV in ours study cohort was Infections, ART associated side effects and low CD4 counts, presence of multi organ dysfunction, acute respiratory distress syndrome (ARDS), hypotension were associated with adverse outcomes.				
512.	<p>Ranjalkar, J. and Chandy, S. J.                      India's National Action Plan for antimicrobial resistance - An overview of the context, status, and way ahead                      J Family Med Prim Care; 2019, 8 (6): 1828-1834  <b>Address:</b> Department of Pharmacology and Clinical Pharmacology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Antimicrobial resistance (AMR) is a multifaceted complex problem with momentous consequences for individuals as well as health-care systems. Understanding the gravity of the problem, the World Health Assembly has adopted the Global Action Plan on AMR in the year 2015 as a part of the tripartite collaboration with World Health Organization, Food and Agricultural Organization, and World Organization for Animal Health. India's National Action Plan (NAP) for AMR was released in April 2017 by the Union Ministry of Health and Family Welfare. The objectives of the NAP include improving awareness, enhancing surveillance measures, strengthening infection prevention and control, research and development, promoting investments, and collaborative activities to control AMR. On the basis of the NAP, various states have begun the process of initiating their State Action Plans. The aim of this article is to highlight some of the main components of the NAP and to make family physicians, general practitioners, and other stakeholders aware of the issue of AMR and its factors and what can be done. The article also discusses some of the challenges in implementation of NAP such as varied perceptions about antibiotic use and AMR among key stakeholders, inappropriate antibiotic use owing to a number of reasons, lack of diagnostic facilities, widespread use of antibiotics in various sectors, environmental contamination because of pharmaceutical industry, agricultural and hospital waste, gaps in infection prevention and control, and difficulty in enforcing regulations. Similar to other low-middle income countries (LMICs), lack of sufficient finances remains a major challenge in NAP</p>	NAT	JUL TO DEC	Clinical Pharmacology	<p><b>PMID:</b> 31334140  <b>Impact Factor: 0.21 (BIOXBIO - 2018)</b>  <b>H-Index: NA</b></p>



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	implementation in India as well. Overall, a strong political will, inter-sectoral co-ordination between public and private sectors and comprehensive strengthening of the healthcare systems are necessary to achieve the desired forward momentum.				
513.	<p>Ranjan, J., Ponnuvel, S., Fletcher, G. J., Anantharam, R., Radhakrishnan, K., Jeyaseelan, V. and Abraham, P.</p> <p>Evaluation of dried blood spots as a feasible alternative to plasma for the detection and quantification of hepatitis c virus in a tropical setting: A pilot study                      Indian J Med Microbiol; 2019, 37 (1): 60-66  <b>Address:</b> Department of Clinical Virology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Introduction: Confirmatory diagnosis of hepatitis C virus (HCV) infection (HCV RNA detection) is essential before start of the therapy. HCV RNA detection is not available in many parts of India. Shipment of plasma from distant places to referral laboratories may affect HCV RNA titres. Dried blood spots (DBS) provide an easy alternative for transporting samples to centres where HCV RNA testing is done. Aim: Evaluation of DBS as a feasible alternative to plasma for HCV diagnosis. Methods: In this cross-sectional study, 40 consecutive patients' blood samples were collected from patients referred from the Liver Clinic. Whole blood was spotted onto two Whatman 903(TM) cards. One card was incubated at <math>\geq 37</math> degrees C and other at 4 degrees C for 15 days, after drying. DBS was eluted and run in Abbott RealTime HCV assay. HCV was also quantified using the Abbott ARCHITECT HCV core antigen assay for 29 of the study patients. Results were compared with normal plasma values. Results: The median log HCV RNA value (in log<sub>10</sub>IU/mL) of plasma was 5.74, with normalised DBS it was 4.92 (<math>\geq 37</math> degrees C) and 4.66 (4 degrees C); difference in plasma and DBS median log values was 0.82 (<math>\geq 37</math> degrees C) and 1.08 (4 degrees C) logs, respectively. Interclass correlation values were 0.943, P &lt; 0.0001 (<math>\geq 37</math> degrees C) and 0.950, P &lt; 0.0001 (4 degrees C), showing high agreement. The median HCV core antigen value (in fmol/L) for plasma was 325.35, whereas it was 4.77 (<math>\geq 37</math> degrees C) and 4.64 (4 degrees C) for DBS samples. Conclusions: DBS can be used for sampling patients from distant resource-limited settings as an alternative to plasma for HCV RNA estimation. Larger studies are required to evaluate the feasibility of DBS in the Indian subcontinent, especially for HCV core antigen estimation.</p>	NAT	JUL TO DEC	Clinical Virology, Biostatistics	<p><b>PMID:</b> 31424012  <b>Impact Factor:</b> 0.950  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 41</b></p>
514.	Rathi, N., Desai, S., Kawade, A., Venkatramanan, P., Kundu, R.,	INT	JUL TO DEC	Wellcome Trust Research	PMC Letter

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Lalwani, S. K., Dubey, A. P., Venkateswara Rao, J., Narayanappa, D., Ghildiyal, R., Gogtay, N. J., Venugopal, P., Palkar, S., Munshi, R., Kang, G., Babji, S., Bavdekar, A., Juvekar, S., Ganguly, N., Niyogi, P., Uttam, K. G., Rajani, H. S., Kondekar, A., Kumbhar, D., Mohanlal, S., Agarwal, M. C., Shetty, P., Antony, K., Gunale, B., Dharmadhikari, A., Tang, Y., Kulkarni, P. S. and Flores, J.                      Response to: Letter from P. Gillard and B. Benninghoff                      Vaccine; 2019, 37 (23): 2991-2992  <b>Address:</b> PATH, India                      Serum Institute of India Pvt. Ltd., Pune, India                      Vadu Rural Health Program, KEM Hospital Research Centre, Vadu, Pune, India                      Sri Ramachandra Medical Centre, Chennai, India                      Institute of Child Health, Kolkata, India                      Bharati Vidyapeeth Medical College &amp; Hospital, Pune, India                      Maulana Azad Medical College, New Delhi, India                      Gandhi Medical College &amp; Gandhi Hospital, Secunderabad, India                      JSS Medical College &amp; Hospital, Mysore, India                      T.N. Medical College &amp; B.Y.L. Nair Charitable Hospital, Mumbai, India                      Seth GS Medical College &amp; KEM Hospital, Mumbai, India                      Andhra Medical College, Visakhapatnam, India                      The Wellcome Trust Research Laboratory Christian Medical College Vellore, India                      PATH, United States</p>			Laboratory,Clinical Microbiology	<b>35344</b>
<b>515.</b>	<p>Raveendran, S., Rajendra Benny, K., Monica, S., Pallapati, S. R., Keshava, S. N. and Thomas, B. P.                      Multiple Stab Incisions and Evacuation Technique for Contrast Extravasation of the Hand and Forearm                      J Hand Surg Am; 2019, 44 (1): 71 e1-71 e5  <b>Address:</b> Paul Brand Centre for Hand Surgery, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamil Nadu, India; Department of Radiology, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamil Nadu, India.                      Paul Brand Centre for Hand Surgery, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamil Nadu, India; Department of Radiology, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamil Nadu, India. Electronic <b>Address:</b> binu@cmcvellore.ac.in.                      Extravasation of intravenous contrast agents in the hand and forearm during computed tomography scanning is rising with the use of automated pressure injectors. The main concern in such a situation is progression to acute compartment syndrome and necrosis of the overlying skin. Management has been mainly</p>	<b>INT</b>	<b>JUL TO DEC</b>	Radiology, Paul Brand Centre for Hand Surgery	<p><b>PMID:</b> 30292713  <b>WOS:</b>000454610200020  <b>Impact Factor:</b> 2.090  <b>(BIOXBIO - 2018)</b>  <b>H-Index:</b> 103</p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	nonsurgical comprising upper limb elevation and orthosis, with surgical techniques such as liposuction and saline evacuation mainly used for large volume (>50 mL) extravasations. We have developed a technique of multiple stab incisions and drainage for the treatment of contrast extravasations.				
516.	<p>Ravi, N. S., Aslam, R. F. and Veeraraghavan, B. A New Method for Determination of Minimum Biofilm Eradication Concentration for Accurate Antimicrobial Therapy Methods Mol Biol; 2019, 1946 61-67</p> <p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> vbalaji@cmcvellore.ac.in.</p> <p>Antimicrobial susceptibility testing (AST) is an important technique to find the susceptibility pattern of clinical isolates in order to administer the appropriate drug. One such technique is minimum inhibitory concentration (MIC), which not only identifies the right drug but also suggests the appropriate concentration necessary to neutralize the organisms in planktonic form. MIC can vary in case of adherent organisms since they form biofilms and activate survival mechanisms like quorum sensing. Here we have strategized a new method which used an inoculator plate, a resazurin dye, and a standard plate to identify minimum biofilm eradication concentration (MBEC) of adherent organisms.</p>	INT	JAN TO JUN	Clinical Microbiology	<p><b>PMID:30798544</b> <b>PMC</b> <b>Impact Factor: 0.38</b> <b>(RG-2018)</b> <b>H-Index: 126</b></p>
517.	<p>Ravichandran, D., Gopalakrishnan, R., Kuruvilla, A. and Jacob, K. S. Sexual Dysfunction in Drug-Naive or Drug-Free Male Patients with Psychosis: Prevalence and Risk Factors Indian J Psychol Med; 2019, 41 (5): 434-439</p> <p><b>Address:</b> Wide Bay Hospital and Health Service, Hervey Bay and Maryborough Hospitals, Queensland, Australia. Department of Psychiatry, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Background: There is a growing body of literature on the high prevalence of sexual dysfunction in patients with psychotic disorders. However, most studies have focused on medication-related sexual side effects. Material and Methods: Consecutive males with a diagnosis of acute psychosis or schizophrenia who were either drug-naive or drug-free for six months were recruited to the study after obtaining informed consent. Sociodemographic and clinical data, psychopathology (using Positive and Negative Syndrome Scale), and sexual functioning (using The International Index of</p>	NAT	JUL TO DEC	Psychiatry	<p><b>PMID: 31548766</b> <b>Impact Factor: 0.64</b> <b>(RG - 2018)</b> <b>H-Index: 17</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Erectile Functioning and DSM-IV TR criteria) were assessed. Bivariate and multivariate statistics were obtained. Results: One hundred males were recruited. The overall prevalence of sexual dysfunction by DSM IV-TR criteria in this population was 17%. The factors that were associated with sexual dysfunction were older age and later age of onset of illness. The rate was higher on excluding those who said that they were not sexually active (25%). Conclusions: Sexual dysfunction may be found in patients with psychotic disorders even prior to commencing antipsychotic medications. It is possible that this is contributed to by several factors including the disease process. Assessment of sexual function in these patients will help in early identification and appropriate management.				
518.	<p>Reddy, N. S., Sindhu, K. N., Ramanujam, K., Bose, A., Kang, G. and Mohan, V. R.                      Exclusive breastfeeding practices in an urban settlement of Vellore, southern India: findings from the MAL-ED birth cohort                      Int Breastfeed J; 2019, 14: 29</p> <p><b>Address:</b> 1The Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004 India.0000 0004 1767 8969grid.11586.3b                      2Department of Community Health, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632002 India.0000 0004 1767 8969grid.11586.3b</p> <p>Background: Exclusive breastfeeding is recommended in the first six months of life. Observing breastfeeding practices and further the introduction of complementary food using a birth cohort can provide a better understanding with reference to the child's growth and nutrition. We aim to describe the exclusive breastfeeding practices in the Indian MAL-ED birth cohort. Methods: The Indian MAL-ED (Etiology, Risk Factors, and Interactions of Enteric Infections and Malnutrition and the Consequences for Child Health) birth cohort comprises of eight contiguous urban slums in Vellore. Of the 251 children enrolled in the cohort at birth, a 24 month follow-up was completed for 228 children and data collection was from March 2010 through February 2012. Trained field research assistants collected data on exclusive breastfeeding and complementary feeding practices from birth using a structured questionnaire through a biweekly surveillance. Survival and Cox proportional hazard regression analyses were used to estimate the duration of exclusive breastfeeding and factors influencing the same. Results: Breastfeeding was initiated within the first hour of birth in 148 (59%) infants. Colostrum was given in 225 (89.6%) infants whilst 32</p>	INT	JUL TO DEC	Gastrointestinal Sciences, Community Health	<p><b>PMID:</b> 31297139  <b>Impact Factor:</b> 2.12  <b>(RG - 2018)</b>  <b>H-Index:</b> 32</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	(12.7%) infants received prelacteal feeds. Exclusive breastfeeding up to four months was observed in 55 (22.1%, 95% Confidence Interval [CI] 17.1%, 27.5%) infants with only three (1.1%, 95% CI 0.2%, 3.5%) of the cohort mothers continuing to exclusively breastfeed up to six months. Cox proportional hazard regression analysis revealed no gender differences to being exclusive breastfed (Adjusted Hazard Ratio [AHR] 0.97; 95% CI 0.74, 1.27). Children from families of low socioeconomic status had a lower risk of early cessation of exclusive breastfeeding compared to children from middle or higher socioeconomic status (AHR 0.52; 95% CI 0.38, 0.71). Conclusions: Early initiation of exclusive breastfeeding is important and improving rates suggest continuation of efforts in this direction energetically. Continuation of exclusive breastfeeding practice is significantly low in these urban slums with introduction of animal milk and complementary foods even before six months of age. This highlights the urgent need to evaluate pragmatic interventions to raise awareness on the importance of exclusive breastfeeding and its practice.				
519.	Richardson, A. L., Baskind, N. E., Karuppusami, R. and Balen, A. H. Effect of deprivation on IVF outcome: a cohort study BJOG; 2019, <b>Address:</b> Leeds Fertility, Seacroft Hospital, Leeds Teaching Hospitals NHS Trust, York Road, Leeds, LS14 6UH. Department of Biostatistics, <b>Christian Medical College and Hospital, Vellore, India.</b> OBJECTIVE: To determine whether socioeconomic deprivation affects IVF outcome independent of the number of cycles undertaken DESIGN: A retrospective review of prospectively collected data SETTING: A tertiary level fertility clinic in the North of England POPULATION: All participants undergoing their first NHS-funded, single, fresh embryo transfer between January 2012 and December 2017 METHODS: For each case, identified from the clinic database, we recorded the following: age; body mass index; FSH; number of eggs retrieved; ethnicity; cause of subfertility; stage of embryo transfer; and whether any adjuncts i.e. EmbryoGlue(R) or Time Lapse Imaging were used. Socio-economic deprivation was assessed using the Index Measure of Deprivation (IMD) determined by the residential postcode. MAIN OUTCOME MEASURES: Clinical pregnancy (CP) and live birth (LB) rates across IMD quintiles RESULTS: 3091 women were included. Overall, CP and LB rates were 35.9% and 31.3% respectively. CP rates increased significantly from 31.0% in the most deprived group to 38.8% in the least deprived group (p<0.01). Similarly, LB rates were significantly lower in the most deprived group compared with the least deprived group (26.8%	INT	JUL TO DEC	Biostatistics	<b>PMID:</b> 31715078 <b>Impact Factor:</b> 5.193 <b>(BIOXBIO - 2018)</b> <b>H-Index:148</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	versus 35.4%, p<0.01). After adjusting for confounding variables, women in the least deprived group were significantly more likely to have a LB (aRR 1.18, 95% CI 1.00-1.39) than women in the most deprived group. CONCLUSIONS: More socio-economically deprived patients are significantly less likely to achieve a CP and LB than less deprived patients independent of the number of cycles of IVF undertaken.				
520.	<p>Riju, J., Ahamed, S., Thomas, R. and Telugu, R. B. Ectomesenchymal chondromyxoid tumour: an uncommon characteristic tumour of the anterior tongue BMJ Case Reports Oct 2019, 12 (10) e231278; DOI: 10.1136/bcr-2019-231278</p> <p><b>Address:</b> Department of Head and Neck Surgery, <b>Christian Medical College, Vellore</b>, India <a href="mailto:jjriju@yahoo.co.in">jjriju@yahoo.co.in</a>. Department of ENT, <b>Christian Medical College, Vellore</b>, India. Department of General Pathology, <b>Christian Medical College, Vellore</b>, India.</p> <p>Ectomesenchymal chondromyxoid tumour (ECMT) is a rare benign tumour which classically presents in the anterior tongue. This tumour is grossly under-reported due to lack of immunohistochemical staining in many centres. We report a 46-year-old man who presented with mass in the anterior tongue and was diagnosed with ECMT. Further management of this lesion is explained with a review of the literature.</p>	INT	JUL TO DEC	Head and Neck Surgery, ENT, General Pathology	<p><b>PMID:</b> 31653634 <b>Impact Factor: 0.22 (RG-2018)</b> <b>H-Index: 20</b></p>
521.	<p>Riju, Jeyashanth, Ahamed, Shameer, Thomas, Regi and Telugu, Ramesh Babu ABS-003: Ectomesenchymal Chondromyxoid Tumor: An Uncommon Characteristic Tumor of the Anterior Tongue BMJ Case Reports; 2019, 12 (10): e231278</p> <p><b>Author affiliations</b> Department of Head and Neck Surgery, <b>Christian Medical College, Vellore</b>, India Department of ENT, <b>Christian Medical College, Vellore</b>, India Department of General Pathology, <b>Christian Medical College, Vellore</b>, India Correspondence to Dr Jeyashanth Riju; <a href="mailto:jjriju@yahoo.co.in">jjriju@yahoo.co.in</a></p> <p>Background/Purpose: Ectomesenchymal Chondromyxoid Tumor (ECMT) is a type of myoepithelioma. WHO had named this lesion as "ECMT of the anterior tongue" due to the peculiar location of this tumor. This is a disease which might be grossly under-reported due</p>	INT	JUL TO DEC	Ent, Head and Neck Surgery, General Pathology	<p><b>Impact Factor: 0.22 (RG-2018)</b> <b>H-Index: 20</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	to exceeding numbers of differential diagnosis in myxoid tumors and the diagnosis of which can be ascertained only by immunohistochemistry. Methods: 46 years old man with no history of substance abuse or comorbidities presented with complaints of painless swelling over the tongue. MRI showed a well-defined T1WI isointense and T2WI hyperintense 2x2 cm lesion in left paramedian anterior superior tongue with no significant neck nodes. Results: Wide excision of the lesion was done with negative margin. IHC showed GFAP positive, S100 positive and SMA negative which was suggestive of ECMT. Discussion: Less than 80 such tumors have been reported till now. Malignant part of ECMT is Extraskelatal Myxoid Chondrosarcoma which is extremely rare but has been reported in head and neck. ECMT presents as a painless, slow growing, dome-shaped or sessile firm mass measuring about 5 to 20 mm in largest dimension which commonly presents in the dorsal aspect of the tongue. Conclusion: ECMT should be kept as a differential diagnosis especially for proliferative lesion arising from the anterior one-third dorsal aspect of the tongue. Excision of the lesion with adequate margin will prevent further recurrence				
522.	<p>Ronald Anto, Konduru Vidya, Jeyashanth Riju, Amit Tirkey            ABS-086:The Trigemino-cardiac Reflex: A Rare Intraoperative Phenomenon            Journal of Head &amp; Neck Physicians and Surgeons; 2019, 7 (3):S49            Department of Head and Neck Surgery, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. E-mail: <a href="mailto:ronaldanto90@gmail.com">ronaldanto90@gmail.com</a></p> <p>Background: The trigeminocardiac reflex (TCR) is defined as sudden onset of parasympathetic dysrhythmias including hemodynamic irregularities, apnea, and gastric hypermotility during stimulation of sensory branches of the trigeminal nerve. Methods and Results: This is a clinical profile of two patients who presented with the unusual extracranial schwannoma of the trigeminal nerve. One was a 31 year old female and the second was a 54 year old female, both presented with a swelling in the cheek, both diagnosed to have schwannoma of the maxillary division of the trigeminal nerve. The first patient underwent excision via Caldwell Luc approach and the second via a sublabial approach. Intraoperatively, both patients developed bradycardia with hypotension during handling of the tumor, which recovered spontaneously. No postoperative complications were experienced. Discussion: Although commonly described during neurosurgical procedures, TCR can also occur during maxillofacial, nasal, dental, and skull-base surgeries. After stimulation of the</p>	NAT	JUL TO DEC	Head and Neck Surgery	<b>Impact Factor: 0.472</b> <b>H-Index: NA</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	trigeminal nerve, neuronal signals are sent to the sensory nucleus of the trigeminal nerve, constituting the afferent pathway of the reflex arc. The efferent pathway is activated through fibers to the motor nucleus of the vagus nerve which terminate in the myocardium and act as cardio-inhibitors. Apart from a few clinical reports in literature, the physiological function of this brainstem reflex has not yet been fully explored. Conclusion: It is important for head and neck surgeons and anesthesiologists to be aware of the trigeminocardiac reflex in order to predict, prevent and manage its potentially catastrophic effects.				
523.	<p>Rose, A. The ethics of volunteer selection and compensation in Controlled Human Infection Models in India Indian J Med Ethics; 2018, 3 (4): 285-289 <b>Address:</b> Professor, Department of Community Medicine, <b>Christian Medical College, Vellore</b>, Tamil Nadu 632 002 India., <a href="mailto:anurose@cmcvellore.ac.in">anurose@cmcvellore.ac.in</a></p> <p>Controlled human infection model studies, or challenge studies, involve the intentional infection of a consenting healthy human volunteer with a virulent organism under controlled conditions Such studies differ from clinical trials in that though both involve healthy volunteers, in challenge studies the potential harm experienced by participants is intended, not merely potentially foreseen, as in clinical trials. Given the special nature of CHIM studies, careful consideration of participant selection and compensation is essential. This paper explores the ethical criteria for recruiting participants in such studies, their own possible motivation such as monetary payment or access to treatment and how that should not be an inducement. It also distinguishes between compensation as inducement and fair compensation for the possible contracting of an illness, isolation and adverse effects, and indicates that more research on the subject needs to be done.</p>	NAT	JAN TO JUN	Community Medicine	<p><b>PMID:30683638</b> <b>PMC</b> <b>Impact Factor: 0.17</b> <b>(RG-2018)</b> <b>H-Index: 14</b></p>
524.	<p>Rose, A. and Sekhar, A. Bioethics of establishing a CHIM model for dengue vaccine development Int J Infect Dis; 2019, <b>Address:</b> Departments of Community Health, Bioethics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. Departments of Community Health, Bioethics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. Electronic <b>Address:</b> <a href="mailto:amrita.sekhar@thsti.res.in">amrita.sekhar@thsti.res.in</a>.</p>	INT	JAN TO JUN	Community Health	<p><b>PMID:30641207</b> <b>Impact Factor: 0.81</b> <b>(RG-2018)</b> <b>H-Index: 73</b></p>



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>INTRODUCTION: Controlled human infection models (CHIM) have been used in vaccine development to up-select and down-select potential vaccine candidates and to provide proof of vaccine efficacy, and have also been used as a basis for licensure of vaccines for cholera and typhoid by regulatory agencies. CHIM IN DENGUE VACCINES DEVELOPMENT: Dengue fever results in approximately 400 million infections a year and is of significant health concern especially in India. There are currently no antivirals for the disease and the only licensed vaccine for dengue is not widely used owing to safety concerns. Controlled dengue human challenge models (DHCM) are currently being used to assess the efficacy of vaccines in development for dengue. DENGUE CHIM IN INDIA: Conducting CHIM studies in India especially for evaluation of dengue vaccine candidates will be hugely beneficial as the disease is endemic to India and hence the effect of pre-exposure to the virus on vaccine safety and efficacy can be established. However, to date no CHIM studies have been conducted in India and there is a need to educate ethics committee members, policy makers and the public on the importance of such studies and what they entail.</p>				
525.	<p>Rose, J. S., Lalgudi, S., Joshua, A., Paul, J., Thambaiah, A., Wankhar, S., Chacko, G., Kuriakose, T. and Korah, S.                      An experimental study to test the efficacy of Mesenchymal Stem Cells in reducing corneal scarring in an ex-vivo organ culture model                      Exp Eye Res; 2019, 190 107891  <b>Address:</b> Department of Ophthalmology, <b>Christian Medical College, Vellore, India.</b>                      Department of Ophthalmology, <b>Christian Medical College, Vellore, India.</b> Electronic <b>Address:</b> shammi_8188@yahoo.com.                      Centre for Stem Cell Research, <b>Christian Medical College, Vellore, India.</b>                      Department of Bioengineering, <b>Christian Medical College, Vellore, India.</b>                      Department of General Pathology, <b>Christian Medical College, Vellore, India.</b>                      In this study, we evaluated the effect of placenta-derived Mesenchymal Stem Cells (MSCs) versus placebo in improving corneal transparency following experimental injury in an ex-vivo organ culture model of post-mortem human corneas. We also compared the influence of MSCs on the basic histopathology of the cornea and the immunohistochemistry markers of fibrotic corneal scarring. Mesenchymal Stem Cells extracted from the placenta were isolated and expanded in-vitro. Five pairs of post-mortem human corneas harvested for the corneal transplant of equal grade were included in</p>	INT	JUL TO DEC	Ophthalmology, Centre for Stem Cell Research, Bioengineering, Geneal Pathology	<p><b>PMID:31812437</b>  <b>PMC 35307</b>  <b>Impact Factor: 4.154</b>  <b>(BIOXBIO – 2018-2019)</b>  <b>H-Index: 112</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>the study. Corneas of the same pair were randomly assigned to either the case arm or the control arm. All corneas underwent a standardized superficial keratectomy, 4 mm in diameter. The case and control arm corneas received an intrastromal injection of MSCs and placebo respectively. The corneal button was maintained in an organ culture system for 28 days under the standard protocol. Laser light was passed through the corneas mounted on a self-styled modified artificial anterior chamber. Image analysis was used to quantify corneal transparency. Haematoxylin &amp; Eosin staining and Immunohistochemistry was done for Alpha SMA (Smooth Muscle Actin). Laser scatter measurements were measured using Image Analysis (Image J Software). The difference in the mean of Full-Width Half Maximum (FWHM), Max intensity and Red pixel intensity between the cases and the controls was 101.5, 16.3 and 11.4 respectively which was found to be statistically significant (P &lt; 0.05). Histopathology showed a disorganized Bowman's layer in the controls as compared to the cases. Alpha Smooth Muscle Actin at the injury site stained 3 + in all controls as compared to 1 + in the cases, showing a statistically significant difference (p = 0.005). Based on our findings, we consider that placenta-derived Mesenchymal Stem Cells can alter evolving corneal scarring into a more favourable outcome with better corneal transparency and lesser fibrotic corneal scarring.</p>				
526.	<p>Rose, W., Sindhu, K. N., Abraham, A. M., Kang, G. and John, J. Incidence of dengue illness among children in an urban setting in South India: A population based study . Int J Infect Dis. 2019 Jan 24. pii: S1201-9712(19)30044-X. doi: 10.1016/j.ijid.2019.01.033. [Epub ahead of print]</p> <p><b>Address:</b> Department of Child Health, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India. Electronic <b>Address:</b> winsleyrose@cmcvellore.ac.in.</p> <p>The Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India. Electronic <b>Address:</b> sindhukn@cmcvellore.ac.in.</p> <p>Department of Clinical Virology, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India. Electronic <b>Address:</b> asha_ma@cmcvellore.ac.in.</p> <p>The Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India. Electronic <b>Address:</b></p>	INT	JAN TO JUN	Child Health, Gastrointestinal Sciences, Clinical Virology, Community Health	<p><b>PMID:30685587</b>  <b>PMC</b>  <b>Impact Factor: 0.81</b>  <b>(RG-2018)</b>  <b>H-Index: 73</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>gkang@cmcvellore.ac.in. Department of Community Health, <b>Christian Medical College, Vellore</b>, Tamil Nadu 632004, India. Electronic <b>Address:</b> jacob@cmcsph.org.</p> <p>OBJECTIVES: Our main objective was to estimate population based dengue incidence estimates in children with fever &gt;3 days. METHODS: The study used the 'National Surveillance System for Enteric Fever in India' (NSSEFI) cohort at the Vellore site. Children aged 6 months to 14 years from a peri-urban setting in Vellore were followed up for a year for the presence of fever. All children who had fever &gt;3days were eligible for blood culture to diagnose typhoid. All children that presented with fever &gt;3days on alternate days of the week were also tested for dengue. Dengue incidence estimates were then calculated. RESULTS: There were 6648 children followed up with a cumulative observation period of 5800 child years. There were 11753 fever episodes with 3171 (27%) episodes lasting &gt;3 days. Totally, 784 children with 868 episodes of fever were tested for Dengue. NS1 antigen or Dengue IgM or both were positive in 82 (9.4%) of those tested for Dengue. Dengue PCR was positive in 33/64 (51.6%) of the samples positive samples. The annual incidence rate of dengue was 49.5 per 1000 child years among children with fever &gt;3 days. CONCLUSIONS: There is high burden of dengue in peri-urban Vellore.</p>				
527.	<p>Roy, S., Prabhu, A. J., Abraham, D. T., Mazhuvanchary Jacob, P. and Manipadam, M. T. An Insight into the Utility of Sub-Categorisation of Atypia of Undetermined Significance for Risk Stratification: A Retrospective Study on an Indian Cohort with Histopathological Correlation Acta Cytol; 2019, 63 (3): 182-188</p> <p><b>Address:</b> Department of Pathology, <b>Christian Medical College, Vellore, India.</b> Department of Pathology, <b>Christian Medical College, Vellore, India</b>, annejennifer91@gmail.com. Department of Endocrine Surgery, <b>Christian Medical College, Vellore, India.</b></p> <p>BACKGROUND: Atypia of undetermined significance or follicular lesion of undetermined significance (AUS/FLUS) criterion in thyroid fine-needle aspirates (FNAs) has been a heterogeneous entity with much inter-observer variation. Sub-categorisation of AUS/FLUS has been observed to play an effective role in risk stratification. We</p>	INT	JAN TO JUN	Pathology, Surgery  Endocrine	<p><b>PMID:30889578</b> <b>PMC Impact</b> <b>Factor:0.88</b> (RG-2018) <b>H-Index: 53</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	aimed to validate AUS/FLUS sub-categorisation in correlation with the spectrum of malignancy. STUDY DESIGN: Subjects included patients with AUS/FLUS diagnosed between January 2015 and December 2016. AUS/FLUS cases were sub-categorised into those exhibiting (1) architectural atypia, (2) cytological atypia, (3) architectural and cytological atypia, (4) AUS with Hurthle cells, and (5) AUS not otherwise specified (AUS-NOS). Each sub-category was correlated with their corresponding incidence of malignancy in surgical resections. RESULT: The overall incidence of AUS/FLUS in our centre was 13% (132/1,018). On retrospective review of 117 patients with AUS/FLUS, smears with cytological atypia showed a higher incidence of malignancy (78.3%) than those with architectural atypia (75.3%). AUS/FLUS cases with both cytological and architectural atypia had a malignancy rate of 71.4%. CONCLUSION: AUS/FLUS cases with cytological atypia had a higher risk of malignancy than those with architectural atypia. The sub-categorisation of AUS/FLUS is diagnostically important for the proper risk stratification of patients.				
528.	<p>Rupali, P. Introduction to Tropical Medicine Infect Dis Clin North Am; 2019, 33 (1): 1-15</p> <p><b>Address:</b> Department of Infectious Diseases, Infectious Diseases Training and Research Center, Ida Scudder Road, <b>Christian Medical College Hospital, Vellore</b>, Tamilnadu 632004, India. Electronic <b>Address:</b> prisci@cmcvellore.ac.in.</p> <p>Tropical medicine deals with infectious and noninfectious diseases geographically located between the tropics of Cancer and Capricorn. It encompasses diseases that result from poverty, poor sanitation, infrastructure, and inadequate health resources. Lack of availability of clean water and food made with unhygienic practices add to the morbidity of these diseases. The tropics are reeling under the onslaught of climate change, deforestation, and air, water, and soil pollution, which worsens an already fragile health system. This article provides an overview of the definition, classification, geophysical problems, syndromic approach to common tropical infections, diagnostic challenges in the tropics, and access to medicines.</p>	INT	JAN TO JUN	Infectious Diseases	<p><b>PMID:30712755</b> <b>PMC</b> <b>Impact Factor: 5.449</b> <b>(BIO-2019)</b> <b>H-Index: 84</b></p>
529.	<p>Rupali, P., Garg, D., Viggweswarupu, S., Sudarsanam, T. D., Jeyaseelan, V. and Abraham, O. C. Etiology of Classic Fever of Unknown Origin (FUO) among Immunocompetent Indian Adults</p>	NAT	JAN TO JUN	Medicine, Geriatrics, Biostatistics,	<p><b>PMID:30935167</b> <b>PMC</b> <b>Impact Factor: 0.34</b> <b>(RG-2018)</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>J Assoc Physicians India; 2019, 67 (1): 21-26</p> <p><b>Address:</b> Professor of Medicine, Department of Biostatistics, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu.                      Post Graduate Student, Department of Biostatistics, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu.                      Professor, Department of Geriatrics, Department of Biostatistics, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu.                      Associate Professor, Department of Biostatistics, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu.</p>				<b>H-Index: 53</b>
<b>530.</b>	<p>Rupali, P., Palanikumar, P., Shanthamurthy, D., Peter, J. V., Kandasamy, S., Zacchaeus, N. G. P., Alexander, H., Thangavelu, P., Karthik, R., Abraham, O. C., Michael, J. S., Paul, H., Veeraraghavan, B., Chacko, B., Jeyaseelan, V., Alangaden, G., Prentiss, T. and Zervos, M. J.</p> <p>Impact of an antimicrobial stewardship intervention in India: Evaluation of post-prescription review and feedback as a method of promoting optimal antimicrobial use in the intensive care units of a tertiary-care hospital                      Infect Control Hosp Epidemiol; 2019, 40 (5): 512-519</p> <p><b>Address:</b> Department of Infectious Diseases,<b>Christian Medical College,Vellore</b>, Tamilnadu,India.  <b>Christian Medical College,Vellore</b>, Tamilnadu,India.                      Surgical Intensive Care Unit,<b>Christian Medical College,Vellore</b>, Tamilnadu,India.                      Department of Medicine,<b>Christian Medical College,Vellore</b>, Tamilnadu,India.                      Department of Clinical Microbiology,<b>Christian Medical College,Vellore</b>, Tamilnadu,India.                      Medical Intensive Care Unit,<b>Christian Medical College,Vellore</b>, Tamilnadu,India.                      Department of Biostatistics,<b>Christian Medical College,Vellore</b>, Tamilnadu,India.                      Infectious Diseases Transplant Fellowship Program,Henry Ford Hospital,Detroit, Michigan.                      Global Health Initiative,Henry Ford Hospital,Detroit, Michigan.                      Division of Infectious Diseases,Henry Ford Hospital,Detroit, Michigan.</p> <p>OBJECTIVE: Antimicrobial stewardship programs (ASPs) are effective in developed countries. In this study, we assessed the effectiveness of an infectious disease (ID) physician-driven</p>	<b>INT</b>	<b>JAN TO JUN</b>	Infectious Diseases, Surgical Intensive Care Unit, Medicine,	<p><b>PMID:31084674</b> <b>PMC</b></p> <p><b>Impact Factor: 2.16</b> <b>(RG-2018)</b> <b>H-Index: 125</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>post-prescription review and feedback as an ASP strategy in India, a low middle-income country (LMIC). DESIGN AND SETTING: This prospective cohort study was carried out for 18 months in 2 intensive care units of a tertiary-care hospital, consisting of 3 phases: baseline, intervention, and follow up. Each phase spanned 6 months. PARTICIPANTS: Patients aged <math>\geq 15</math> years receiving 48 hours of study antibiotics were recruited for the study. METHODS: During the intervention phase, an ID physician reviewed the included cases and gave alternate recommendations if the antibiotic use was inappropriate. Acceptance of the recommendations was measured after 48 hours. The primary outcome of the study was days of therapy (DOT) per 1,000 study patient days (PD). RESULTS: Overall, 401 patients were recruited in the baseline phase, 381 patients were recruited in the intervention phase, and 379 patients were recruited in the follow-up phase. Antimicrobial use decreased from 831.5 during the baseline phase to 717 DOT per 1,000 PD in the intervention phase (<math>P &lt; .0001</math>). The effect was sustained in the follow-up phase (713.6 DOT per 1,000 PD). De-escalation according to culture susceptibility improved significantly in the intervention phase versus the baseline phase (42.7% vs 23.6%; <math>P &lt; .0001</math>). Overall, 73.3% of antibiotic prescriptions were inappropriate. Recommendations by the ID team were accepted in 60.7% of the cases. CONCLUSION: The ID physician-driven implementation of an ASP was successful in reducing antibiotic utilization in an acute-care setting in India.</p>				
531.	<p>Russell, P. S. S. The clinical utility of a multivariate genetic panel for identifying those at risk of developing Opioid Use Disorder while on prescription opioids Scand J Pain; 2019, <b>Address:</b> Department of Psychiatry, Child and Adolescent Psychiatry Unit, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p>	INT	JUL TO DEC	Psychiatry, Child and Adolescent Psychiatry	<b>PMID:31881003</b> <b>PMC 35308</b>
532.	<p>Russell, S., Viswanathan, S. A., Shankar, S., Mammen, P. M. and Russell, P. S. S. The clinical usefulness of three depression screens for adolescents in India: A need in primary-care settings J Family Med Prim Care; 2019, 8 (5): 1748-1751 <b>Address:</b> Department of Psychiatry, Child and Adolescent Psychiatry Unit, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Introduction: Adolescent Depression (AD) although is widely</p>	NAT	JAN TO JUN	Psychiatry	<b>PMID:31198748</b> <b>PMC ID:6559099</b> <b>Impact Factor: 0.21</b> <b>(RG-2018)</b> <b>H-Index: NA</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>prevalent and is a prioritized disorder, it is under-diagnosed and under reported in primary-care. We document the post-test probability of three measures and select the best measure for identifying AD in primary-care settings in India based on the clinical utility. Materials and Methods: Three measures have been validated in India for AD and thus can be further evaluated for primary-care use; we calculated the positive (+PTP) and negative (-PTP) post-test probability from the prevalence of AD in India for Beck Depression Inventory-21 item version (BDI-21), Patient Health Questionnaire-9 item version (PHQ-9), and Children's Depression Rating Scale-Revised version (CDRS-R) using the Bayes theorem. The usefulness of the measure was defined a priori based on the odds ratio (OR) of +PTP (OR &gt; 3) and -PTP (OR &lt; 0.1). Results: The +PTP and -PTP for BDI-21 was 43% (95%CI = 40, 45%; OR = 0.7) and 25% (95%CI = 13, 43%; OR = 0.3) respectively. Similarly, the +PTP and - PTP for PHQ-9 was 74% (95%CI = 66, 81%; OR = 2.9) and 10% (95%CI = 6, 17%; OR = 0.1). Finally, +PTP and - PTP for CDRS-R was 78% (95%CI = 69, 84%; OR = 3.5) and 12% (95%CI = 7, 18%; OR = 0.1). Only CDRS-R achieved the useful decided a priori as can be seen in the Fagan's Nomograms. Conclusion: This research provides the evidence base for selecting CDRS-R as the screening measure, for Adolescent Depression, for clinical use in Primary-care settings in India.</p>				
533.	<p>Rustagi, N., Singh, S., Dutt, N., Kuwal, A., Chaudhry, K., Shekhar, S. and Kirubakaran, R.                      Efficacy and safety of stent, valves, vapour ablation, coils and sealant therapies in advanced emphysema: A meta-analysis                      Turkish Thoracic Journal; 2019, 20 (1): 43-60  <b>Address:</b> Department of Community and Family Medicine, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India                      Department of Pharmacology, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India                      Department of Pulmonary Medicine, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India                      Department of Pulmonary Medicine, Pacific Institute of Medical Sciences, Gyan Nagar, Near Gyan Mandir School, Sector-4, Hiran Magri, Udaipur, Rajasthan, India                      Department of Dentistry, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India                      Department of Obstetrics and Gynaecology, All India Institute of Medical Sciences, Jodhpur, Rajasthan, India                      Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu, India</b></p>	INT	JUL TO DEC	Biostatistics	<p><b>PMC Review</b>  <b>35352</b>  <b>Impact Factor:NA</b>  <b>H-Index: 2</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
534.	<p>S. G. Basavaraj, Nitin Kapoor, Nihal Thomas, Thomas V. Paul                      Parkinson's disease and osteoporosis in elderly men (POEM study) – A cross-sectional study to look for bone health in Parkinson's disease                      Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, Tamil Nadu, India. E-mail: <a href="mailto:thomasvpaul@yahoo.com">thomasvpaul@yahoo.com</a></p> <p>Introduction: Osteoporosis is an important nonmotor component of Parkinson's disease and Parkinsonism(PD) and coupled with disability, postural imbalances, and increase chance of falls, lead to a higher number of fractures and its associated adverse outcomes. Although there are studies showing the impact of PD on bone mineral density (BMD) in PD patients, most of these studies are from the Western countries, and there is a paucity of data from the Asian countries, including India. Aims and Objective: The aim is to study the BMD and bone health parameters in male patients with Parkinsonism and compare them with age-matched controls from the community. Materials and Methods: We performed a cross-sectional study of 49 patients with Parkinsonism and 33 patients from community which were age-matched to Parkinsonism groups as control group. We assessed BMD, bone biochemistry, and bone turnover markers in the study participants. Results: The baseline characters were similar in both the groups, with mean age of 61.2 years. The PD group had significantly lower 25OH-Vitamin D levels and higher bone resorption marker (CTx C terminal telopeptide of Type 1 collagen) levels. The BMD was not statistically different among three groups at any site. However, in patients with Parkinsonism and postural instability (severe disease), there was significantly lower BMD at femoral neck, hip, and lumbar spine, even after adjusting for confounding factors like BMI. In patients with Parkinsonism, there was significant negative correlation of duration and severity (according to modified Hoehn and Yahr scale) of the disease with BMD. Conclusion: Higher prevalence of Vitamin D deficiency in the disease groups needs to be treated adequately. Lower BMD values in patients with Parkinsonism and postural instability need periodic bone health assessment and appropriate management for osteoporosis. Keywords: Bone mineral density, c-terminal telopeptide of type 1 collagen, osteoporosis, Parkinson's disease</p>	NAT	JUL TO DEC	Endocrinology	<p><b>Impact Factor: 1.70</b>  <b>(resurchiefy.com)</b>  <b>H-Index: 19</b></p>
535.	<p>Sabu, P., Elangovan, D., Pragasam, A. K., Bakthavatchalam, Y. D., Rodrigues, C., Chitnis, D. S., Chaudhuri, B. N. and Veeraraghavan, B.                      Efficacy ratio: A tool to enhance optimal antimicrobial use for intra-abdominal infections</p>	NAT	JAN TO JUN	Clinical Microbiology	<p><b>PMID:30783326</b>  <b>PMC ID:6364343</b>  <b>Impact Factor: 0.80</b>  <b>(RG-2018)</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Indian J Pharmacol; 2018, 50 (6): 332-335</p> <p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Department of Microbiology, PD Hinduja Hospital and Medical Research Centre, Mumbai, Maharashtra, India.                      Department of Microbiology and Immunology, Choithram Hospital, Indore, Madhya Pradesh, India.                      Department of Microbiology, Fortis Hospital, Kolkata, West Bengal, India.</p> <p>BACKGROUND: Antimicrobial resistance and inappropriate antibiotic regimen hamper a favorable outcome in intra-abdominal infections. Clinicians rely on the minimum inhibitory concentration (MIC) value to choose from the susceptible antimicrobials. However, the MIC values cannot be directly compared between the different antibiotics because their breakpoints are different. For that reason, efficacy ratio (ER), a ratio of susceptible MIC breakpoint and MIC of isolate, can be used to choose the most appropriate antimicrobial. MATERIALS AND METHODS: A prospective, observational study conducted during 2015 and 2016 included 356 Escherichia coli and 158 Klebsiella spp. isolates obtained from the intra-abdominal specimens. MIC was determined by microbroth dilution method, and ER of each antibiotic was calculated for all the isolates. RESULTS: For both E. coli and Klebsiella spp., ertapenem, amikacin, and piperacillin/tazobactam had the best activities among their respective antibiotic classes. DISCUSSION: This is the first study calculating ER for deciding empiric treatment choices. ER also has a potential additional value in choosing the use of susceptible drugs as monotherapy or combination therapy. A shift in ERs over a period of time tracks rising MIC values and predicts antimicrobial resistance development. CONCLUSION: Estimation of ER could be a meaningful addition for the interpretation of an antimicrobial susceptibility report, thus helping the physician to choose the best among susceptible antimicrobials for patient management.</p>				<b>H-Index: 52</b>
<b>536.</b>	<p>Sahajanandan, R., Dhanyee, A. S. and Gautam, A. K.                      A comparison of King vision video laryngoscope with CMAC D-blade in obese patients with anticipated difficult airway in tertiary hospital in India - Randomized control study                      J Anaesthesiol Clin Pharmacol; 2019, 35 (3): 363-367  <b>Address:</b> Department of Anaesthesia, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.                      Background and Aims: This randomized control trial was conducted</p>	<b>INT</b>	<b>JUL TO DEC</b>	Anaesthesia	<p><b>PMID:</b> 31543586  <b>Impact Factor:</b> 0.47  <b>(RG - 2018)</b>  <b>H-Index:</b> 25</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>to compare two video laryngoscopes in obese patients with anticipated difficult airway. Video laryngoscopes have shown to be beneficial in many difficult airway scenarios including obesity. Many studies have shown that even though the glottic view is better, it takes longer to negotiate the endotracheal tube. We proposed to compare CMAC D-blade with King vision-channeled blade for intubating obese patients with anticipated airway difficulty. We hypothesized that channeled scope may be superior as once visualized, tube could be easily negotiated. This would be reflected by time taken for the glottis visualization, time taken for intubation, incidence of complications, and hemodynamic stability. Material and Methods: Sixty-three patients who fulfilled inclusion criteria were enrolled after informed consent. Based on the computer-generated randomization, they were assigned to group 1 (King vision laryngoscope - KVL) and group 2 (CMAC D-blade). All anesthetists who intubated, performed 20 intubations with both video laryngoscopes on manikin before performing the study case. The parameters analyzed were time to visualize the glottis, time to successful intubation, and intubation-related hemodynamic variations and complications. Results: The mean time taken to visualize the glottis with KVL was 12.93 s compared to 10 s with CMAC D-blade (P value 0.12). Time taken to intubate was 50.04 s with KVL compared to CMAC D-blade which took 46.93 s (P value 0.64). KVL had a complication rate of 20.7% compared to 3.1% with CMAC D-blade (P value 0.04). Conclusion: There was no statistically significant difference in time to visualize the glottis and intubation between KVL and CMAC D-blade. But there was a high incidence of complications with KVL.</p>				
537.	<p>Sahil Mahajan, Arpudh Michael Anandaraj, Lijo Varghese, Oommen Kattunilam George                      Contemporary Outcomes Following Endovascular Therapy of Coarctation of Aorta- Experience from a Tertiary Care Centre in India                      Journal of Clinical and Diagnostic Research; 2019, 13 (9): OC05-OC09</p> <p><b>PARTICULARS OF CONTRIBUTORS:</b></p> <ol style="list-style-type: none"> <li>1. Assistant Professor, Department of Cardiology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> <li>2. Assistant Physician, Department of Cardiology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> <li>3. Associate Professor, Department of Cardiology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> <li>4. Professor, Department of Cardiology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</li> </ol>	NAT	JUL TO DEC	Cardiology	PMC 35618 <b>Impact Factor: 0.41</b> <b>(RG - 2018)</b> <b>H-Index: 28</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Introduction: Since 1980s, endovascular therapy has evolved as an important therapeutic strategy for Coarctation of the Aorta (CoA). Aim: This study sought to present a comprehensive contemporary data on the efficacy and safety of endovascular therapy in all age groups with both native and recurrent CoA in patients presenting to a tertiary care centre in Southern India. Materials and Methods: This single centre retrospective study included 91 consecutive patients who underwent Balloon Angioplasty (BA) or stenting for CoA between November 2002 and October 2017. Clinical, angiographic and procedural data was collected and outcomes including procedural success, complications, incidence of re-stenosis and hypertension at follow-up were evaluated. The effect of pre-specified variables on the procedural result was also evaluated using chi-square or two sample t-test, as appropriate. Results: Of the 91 patients, 63 were males; median age was 20 years {interquartile range (IQR):11-29}. The median followup duration was 17 months (IQR -7.5 to 36 months). Eighty four (92%) cases were with native coarctation. Fifty five (60%) had discrete coarctation and 36 (40%) had associated tubular hypoplasia of isthmus. Seventy two (79%) patients underwent stent implantation and 19 (21%) underwent BA. Immediate procedural success was achieved in 68 (94%) patients in the stent implantation group and 13 (68%) patients in BA group. Sixty percent of the failures were from BA group. Twelve (18%) patients had re-obstruction on follow-up. Seven (11%) patients underwent re-intervention. Conclusion: Endovascular therapy is a relatively safe and effective treatment modality in CoA when done carefully</p>				
538.	<p>Sahu, S., Gohil, A. J., Patil, S., Lamba, S., Paul, K. and Gupta, A. K. Distally based peroneus brevis muscle flap: A single centre experience Chin J Traumatol; 2019, 22 (2): 108-112</p> <p><b>Address:</b> Department of Plastic &amp; Reconstructive Surgery, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamilnadu, India. Department of Plastic &amp; Reconstructive Surgery, <b>Christian Medical College &amp; Hospital, Vellore</b>, Tamilnadu, India. Electronic <b>Address:</b> amishjg@gmail.com.</p> <p>PURPOSE: Defects around the distal one third of the leg and ankle are difficult to manage by conservative measures or simple split thickness skin graft. Distally based peroneus brevis muscle flap is a well described flap for such defects. METHODS: This is a</p>	INT	JAN TO JUN	Plastic & Reconstructive Surgery	<p><b>PMID:30975508</b>  <b>PMC ID:6487458</b>  <b>Impact Factor: 0.62</b>  <b>(RG-2018)</b>  <b>H-Index: 23</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	retrospective analysis conducted on 25 patients with soft tissue and bony defects of distal third of lower leg and ankle, which were treated using distally based peroneus brevis muscle flap from January 2013 to January 2018. Information regarding patient demographics, etiology, size and location of defects and complications were collected. All patients were followed up for at least 3 months after surgery. RESULTS: There were 21 males and 4 females with the mean age of 39 (5-76) years. The most common cause of injuries was road traffic accident, followed by complicated open injury. The average size of defects was 20 (4-50) cm(2). The mean operating time was 75 (60-90) min for flap harvest and inset. We had no patient with complete loss of the flap. Five patients (20%) had marginal necrosis of the flap and two patients have graft loss due to underlying hematoma and required secondary split thickness skin grafting. CONCLUSION: The distally based peroneus brevis muscle flap is a safe option with reliable anatomy for small to moderate sized defects following low velocity injury around the ankle. The commonest complication encountered is skin graft loss which can be reduced by primary delayed grafting.				
539.	<p>Sajan, Sajil M., Ajayan, Neeraja, Nair, Gayatri Devi, Lionel, Karen Ruby and Hrishi, Ajay Prasad                      Anaesthetic Challenges in a Rare Syndrome: Perioperative Management of a Patient with POEMS Syndrome Who Underwent Umbilical Hernioplasty  <a href="#">Turk J Anaesthesiol Reanim</a>. 2019 Oct; 47(5): 420-422.</p> <p><b>Author information</b>                      1.Kaduvayil Thangal Charitable Trust Hospital, Kerala, India                      2.Sree Chitra Tirunal Institute For Medical Sciences, Kerala, India                      3.Albert Einstein College of Medicine, New York, USA                      4.<b>Christian Medical College, Vellore, India</b>                      Corresponding Author: Ajay Prasad Hrishi,                      E-mail: <a href="mailto:ni.ca.tsmitscs@yajard">ni.ca.tsmitscs@yajard</a></p> <p>Polyneuropathy, organomegaly, endocrinopathy, monoclonal gammopathy, and skin changes (POEMS) syndrome also known as 'Crow Fukase syndrome' is a rare paraneoplastic disorder, first described by Crow and Fukase with distinctive features of polyradiculoneuropathy, organomegaly, endocrinopathy, monoclonal gammopathy and skin changes. There is a paucity of literature about anaesthetic management of patients with POEMS syndrome with isolated case reports of surgery under general anaesthesia and central neuraxial blockade. We present here the</p>	INT	JUL TO DEC	Anesthesia	<p><b>PMID:31572995</b>  <b>PMCID: PMC6756301</b>  <b>Impact Factor: NA</b>  <b>H-Index: NA</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	anaesthetic management of a patient with POEMS syndrome posted for umbilical hernia repair, which was successfully managed with a transverse abdominis plane (TAP) block. Published online 2019 May 15. doi: <a href="https://doi.org/10.5152/TJAR.2019.53824">10.5152/TJAR.2019.53824</a>				
540.	Sakayanathan, P., Loganathan, C., Kandasamy, S., Ramanna, R. V., Poomani, K. and Thayumanavan, P. In vitro and in silico analysis of novel astaxanthin-s-allyl cysteine as an inhibitor of butyrylcholinesterase and various globular forms of acetylcholinesterases Int J Biol Macromol; 2019, 140 1147-1157 <b>Address:</b> Department of Biochemistry, Periyar University, Salem, Tamil Nadu 636011, India. Department of Physics, Periyar University, Salem, Tamil Nadu 636011, India. Neurophysiology Laboratory, Department of Neurological Sciences, <b>Christian Medical College and Hospital, Vellore</b> , Tamil Nadu 632004, India. Department of Biochemistry, Periyar University, Salem, Tamil Nadu 636011, India. Electronic <b>Address:</b> pal2912@yahoo.com. In Alzheimer's disease (AD) and diabetes-associated cognitive decline, the acetylcholinesterase (AChE) and butyrylcholinesterase (BChE) activity is increased. AChE exists as different globular molecular forms: tetramer (G4), dimer (G2) and monomer (G1). In adult brain, G4 form is abundant however in AD, the ratio of lower molecular forms (G1) to G4 form increased. Hence, the present study delineated the inhibition of novel astaxanthin-s-allyl cysteine (AST-SAC) against BChE and various molecular forms of AChE. Cobra venom, human erythrocyte and Electrophorus electricus was used as source of G1, G2 and G4 form of AChE. AST-SAC showed inhibition against G1 (IC <sub>50</sub> =0.72μM, competitive, K <sub>i</sub> =0.66μM), G2 (IC <sub>50</sub> =0.65μM, mixed, K <sub>i</sub> =0.50μM) and G4 (IC <sub>50</sub> =0.67μM, competitive, K <sub>i</sub> =0.67μM) form of AChE. AST-SAC inhibited human brain AChE (IC <sub>50</sub> =0.84μM, competitive, K <sub>i</sub> =0.53μM) and human serum BChE (IC <sub>50</sub> =0.80μM, competitive, K <sub>i</sub> =0.58μM). In silico analysis revealed the interaction of AST-SAC with the amino acids present in peripheral anionic and catalytic site of human AChE and BChE. Molecular dynamics simulation confirmed the stable interaction of AST-SAC in the active site gorge of AChE and BChE.	INT	JUL TO DEC	Neurological Sciences	<b>PMID:</b> 31442505 <b>Impact Factor:</b> 4.784 <b>(BIOXBIO - 2018)</b> <b>H-Index: 101</b>
541.	Sampath, R., Manipadam, M. T., Nair, S., Viswabandya, A. and Zachariah, A. HIV-associated lymphoma: A 5-year clinicopathologic study from India	NAT	JAN TO JUN	Pathology, Haematology, Medicine	<b>PMID:30706863</b> <b>PMC</b> <b>Impact Factor: 0.529</b> <b>(BIOXBIO-2018)</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Indian J Pathol Microbiol; 2019, 62 (1): 73-78</p> <p><b>Address:</b> Department of Pathology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Department of Haematology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Department of Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>Context: Relative risk of non-Hodgkin lymphoma (NHL) in people living with HIV is 60-200 times that of normal population. This is the largest series from India on lymphomas arising in HIV-infected individuals including workup for Epstein-Barr virus (EBV) and human herpesvirus-8 (HHV-8). Aims: This study aims to ascertain the distribution and detailed clinicopathologic features of lymphoma arising in HIV-infected persons in India. Settings and Design: The study was done during the period of 2007-2011 in the pathology department of a tertiary care center in South India. Subjects and Methods: All cases diagnosed as lymphoma in the department of pathology during the study period were identified, and patients with HIV positive by serology were included in the study. Clinical details were obtained from electronic records, slides were reviewed and tissue blocks retrieved, and immunohistochemistry for HHV-8 and in situ hybridization for EBV-encoded RNA was done. Statistical Analysis Used: Descriptive statistics were done using SPSS software. Kaplan-Meier curves were used to do survival analysis. Results: Of 3346 patients diagnosed with lymphoma, 73 (2%) were diagnosed to be positive for HIV. About 87.6% of the cases were NHL, of which diffuse large B-cell lymphoma was the most common and plasmablastic lymphoma was the second common subtype. Survival was uniformly poor in 36% of the cases where follow-up was available. Conclusions: The striking differences from world literature included higher frequency of plasmablastic lymphomas, lack of primary central nervous system lymphomas, and low association with HHV8.</p>				<b>H-Index: 28</b>
<b>542.</b>	<p>Sandeep Kumar Agarwal, Kripa Elizabeth Cherian, Nitin Kapoor, Felix Jebasingh, H. S. Asha, Nihal Thomas, T. V. Paul</p> <p>A study of trabecular bone score and bone density in subjects with hyperthyroidism</p> <p>Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, Tamil Nadu, India. E-mail: <a href="mailto:drskagarwal2k9@gmail.com">drskagarwal2k9@gmail.com</a></p>	<b>NAT</b>	<b>JUL TO DEC</b>	Endocrinology	<b>Impact Factor: 1.70 (resurchify.com)</b> <b>H-Index: 19</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Objectives: Hyperthyroidism may have a deleterious effect on bone and thus increases the risk of fractures. Trabecular bone score (TBS), a noninvasive indicator of bone microarchitecture, has not been studied in the Indian population with hyperthyroidism. The aim of this study was to look at the TBS and bone mineral density (BMD) in women diagnosed to have Graves' disease compared with age- and body mass index (BMI)-matched controls. Materials and Methods: This was a cross-sectional study conducted over a period of 6 months. The study population included 41 consecutive South Indian female patients diagnosed with Graves' disease and 74 age- and BMI-matched controls. Analysis of body composition and BMD at femoral neck, lumbar spine, and hip was done using a dual-energy X-ray absorptiometry scan. Thyroid function tests and parameters of bone health including calcium, phosphorus, parathormone, 25(OH) vitamin D, CTX, and P1NP were measured. Results: The mean (standard deviation [SD]) age of our study participants (cases vs. controls) was 34.5 (9.0) and 35.7 (5.0) years, and the mean (SD) BMI (cases vs. controls) was 23.2 (4.8) and 24.3 (4.8) kg/m<sup>2</sup>, respectively. The mean (SD) TBS was statistically significantly lower in cases when compared to controls (1.299 [0.111] vs. 1.346 [0.089]; P=0.035). The BMD(g/cm<sup>2</sup>) in the study participants, when compared with controls, was statistically significantly reduced at the femoral neck (0.737 [0.111] vs. 0.791 [0.117]) and lumbar spine (0.909 [0.100] vs. 0.975 [0.119]; P&lt; 0.01). There was a significant negative correlation between the duration of hyperthyroidism and TBS(r = -0.325; P=0.050). Conclusion: Hyperthyroidism was associated with a significant reduction in TBS (an indicator of bone microarchitecture) and bone density at the femoral neck and lumbar spine when compared to healthy, age- and BMI-matched controls. Keywords: Bone mineral density, bone turnover marker, hyperthyroidism, trabecular bone score</p>				
543.	<p>Sandhya, P., Janardana, R., Sudarsanam, T., Mahasampath, G., Prakash, J. A. J. and Danda, D.            Determinants of diagnosis and disease course in primary Sjogren's syndrome: Results from datamining of electronic health records            Int J Rheum Dis; 2019, 22 (9): 1768-1774  <b>Address:</b> St. Stephens Hospital, New Delhi, Delhi, India.            St. John's Medical College, Bengaluru, Karnataka, India.            Department of Medicine, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.            Department of Biostatistics, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.            Department of Clinical Microbiology, <b>Christian Medical College</b></p>	INT	JUL TO DEC	Medicine, Biostatistics, Clinical Microbiology, Clinical Immunology and Rheumatology.	<b>PMID:</b> 31328441 <b>Impact Factor:</b> 1.938 <b>(BIOXBIO - 2018)</b> <b>H-Index: 33</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>and Hospital, Vellore</b>, Tamil Nadu, India.                      Department of Clinical Immunology and Rheumatology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.                      BACKGROUND: Determinants of diagnosis in primary Sjogren's syndrome (pSS) in tertiary care settings is not well understood.                      METHODS: Patients were screened by tracing reports of anti-SSA (anti-Ro) antibody assays between January 2008 and October 2015. Electronic health records (EHR) were reviewed. Patients fulfilling the 2016 American College of Rheumatology/European League Against Rheumatism (EULAR) classification criteria were included. Variables including the specialties of first consultation, initial clinical presentations, investigations ordered at first consultation, number of hospital visits prior to reaching the final diagnosis of pSS and the baseline EULAR SS Disease Activity Index (ESSDAI) were noted.                      RESULTS: A total of 275 patients with pSS consulted 24 different specialties at first visit. Rheumatology accounted for 128 (46.55%) patients. At first consultation, initial suspicion for pSS was 48.4% for all specialties together and 64.84% for the rheumatologist. Median number of visits prior to arriving at the final diagnosis was 1 (1-6), when the initial impression was pSS and 3 (1-14), if the initial clinical impression was a non-SS differential (P &lt; 0.001). A first impression of pSS, enquiry about sicca symptoms and ordering anti-SSA (anti-Ro) antibody test at first consultation were strong predictors of early diagnosis with odds (95% CI) of 5.01 (1.72-14.55) P &lt; 0.001, 4.79 (1.16-19.84) P = 0.03 and 9.60 (3.0-30.67) P &lt; 0.0001, respectively. None of the clinical variables proved to be useful predictors of early diagnosis. CONCLUSIONS: Diagnosis of pSS is challenging even in tertiary care centers as patients present with myriad features to several specialties. Initial suspicion was limited to 48.4% for all specialties together and 64.84% for the rheumatologist. High suspicion of pSS along with ordering anti-SSA (anti-Ro) antibody could hasten diagnosis.</p>				
544.	<p>Sanjeevi, Rajesh, Chowdhury, Sudipta Dhar and Kurien, Reuben Thomas                      Antioxidant Therapy Decreases Frequency of Pain Episodes in Patients With Idiopathic Recurrent Acute Pancreatitis                      Journal of Gastroenterology and Hepatology; 2019, 34 821-821</p>	INT	JUL TO DEC	Gastroenterology, Hepatology	<p><b>PMID:</b>                      WOS:000495492606274  <b>Impact Factor:</b> 3.632  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 117</b></p>
545.	<p>Santosh, V., Sravya, P., Gupta, T., Muzumdar, D., Chacko, G., Suri, V., Epari, S., Balasubramaniam, A., Radotra, B. D., Chatterjee, S., Sarkar, C. and Jalali, R.                      ISNO consensus guidelines for practical adaptation of the WHO 2016 classification of adult diffuse gliomas                      Neurology India; 2019, 67 (1): 173-182</p>	NAT	JUL TO DEC	Neuropathology	<p><b>PMC Article</b>  <b>35425</b>  <b>Impact Factor: 0.45</b>  <b>(RG-2018)</b>  <b>H-Index: 43</b></p>



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> Departments of Neuropathology, Bangalore Karnataka, 560 029, India                      Clinical Neurosciences, National Institute of Mental Health and Neurosciences, Bangalore, Karnataka, India                      Departments of Radiation Oncology, India                      Department of Neurosurgery, King Edward Memorial Hospital, Mumbai, Maharashtra, India                      Department of Neuropathology, <b>Christian Medical College, Vellore, India</b>                      Department of Pathology, All India Institute of Medical Sciences, New Delhi, India                      Departments of Pathology, Tata Memorial Hospital, India                      Department of Neurosurgery, Yashoda Superspeciality Hospitals, Secunderabad, Telangana, India                      Department of Histopathology, Institute of Medical Education and Research, Chandigarh, India                      Department of Neurosurgery, Park Clinic, Kolkata, West Bengal, India                      Department of Radiation Oncology, Apollo Proton Cancer Centre, Chennai, Tamil Nadu, India</p>				
546.	<p>Sara KB, Thomas R, Manipadam MT, Lionel S.                      Haematolymphoid disorders of paranasal sinuses.                      Orissa journal of otolaryngology and head &amp; neck surgery. 2019 December; 13(2): 66-69.                      doi: 10.21176/ ojolhns.2019.13.2.5                      Affiliations:                      1. Assistant Professor, Department of ENT, Christian Medical College, Vellore. Mobile - +919488532588, Email: <a href="mailto:blessysarah@gmail.com">blessysarah@gmail.com</a>                      2. Professor, Department of ENT, Christian Medical College, Vellore. <a href="mailto:Email-reganupthomas@cmcvellore.ac.in">Email-reganupthomas@cmcvellore.ac.in</a> ; Mobile - 919894521054                      3. Professor, Department of Pathology, Christian Medical College, Vellore. <a href="mailto:Email-mtm2005@cmcvellore.ac.in">Email-mtm2005@cmcvellore.ac.in</a>                      4. Asst Professor, Department of Clinical Haematology, Christian Medical College, Vellore. Mobile - +919894521054; <a href="mailto:Email-sharonlionel@cmcvellore.ac.in">Email-sharonlionel@cmcvellore.ac.in</a>                      Corresponding Author                      Dr. Sharon Lionel, Assistant Professor, Department of Clinical Haematology, Christian Medical College, Vellore. Mobile - +919894521054; <a href="mailto:Email-sharonlionel@cmcvellore.ac.in">Email-sharonlionel@cmcvellore.ac.in</a>                      Background: Paranasal lymphomas are rare comprising about 0.17 to 1.5% of the lymphomas(1). Lymphomas of the paranasal sinuses</p>	NAT	JUL TO DEC	ENT, Pathology, Clinical Haematology	<b>Impact Factor: 4.555 (Cosmos:2019)</b> <b>H-Index: NA</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	may have poorer prognosis compared with other extra nodal lymphomas of the head and neck, and are not well defined as a particular clinicopathologic entity. Outcomes though depend primarily on the histological type of lymphoma, with T cell lymphomas performing traditionally worse than B cell origin lymphomas Methods: A retrospective analysis of consecutive patients presenting in ENT outpatient services and later admitted for biopsy and management between 2012-2019 at a tertiary Medical centre in South India was undertaken Results: A total of ten patients were included in this cohort out of which 7 were male and 3 were female. The mean age was 50 years ranging from 18-78 years. Epistaxis was the most common symptom and was present in 6 patients. Conclusion: Haematolymphoid disorders are a rare entity in nasal cavity and high index of suspicion is required for early diagnosis. Histology plays a major role in identifying the type of tumour and plan on specific mode of treatment. Chemotherapy and radiotherapy seem to be the main stay of treatment. The role of surgery remains unclear. Early diagnosis and treatment have an overall improved outcome.				
547.	Sarangi, P. K., Joseph, E., Irodi, A., Chacko, B. R. and Chase, D. An unusual childhood cardiomyopathy Eur Heart J Cardiovasc Imaging; 2019, 20 (8): 959  <b>Address:</b> Department of Radiodiagnosis, <b>Christian Medical College &amp; Hospital, Vellore, India.</b> Department of Cardiology, <b>Christian Medical College &amp; Hospital, Vellore, India</b>	INT	JAN TO JUN	Radiodiagnosis	<b>PMID:30753394</b> <b>PMC</b> <b>Impact Factor: 8.336</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 77</b>
548.	Saravanan, N., David, L. S., Vijayaselvi, R., Masih, D. and Beck, M. M. What is your diagnosis? J Turk Ger Gynecol Assoc; 2019, <b>Address:</b> Department of Obstetrics and Gynaecology, <b>Christian Medical College and Hospital, Vellore, South India</b> Department of Pathology, <b>Christian Medical College and Hospital, Vellore, South India</b>	INT	JAN TO JUN	Obstetrics and Gynaecology, Pathology	<b>PMID:31245967</b> <b>PMC</b> <b>Impact Factor: 0.51</b> <b>(RG-2018)</b> <b>H-Index: 11</b>
549.	Sardar, D., Mathews, N., Mammen, J., Nair, S. C., Jacob, S., Patel, L., Thomas, A., Jhanwar, S., Sharma, A., Sen, M., Vijayalekshmi, B., Balasubramanian, K. A., Subramani, K., Thomas, L., Abhilash, K. P. P., Zachariah, U., Elias, E., Goel, A. and Eapen, C. E. Rodenticidal hepatotoxicity: Raised plasma Von Willebrand factor levels predict in-hospital survival and preliminary report of the outcome of Von Willebrand factor reducing management protocol Indian Journal of Gastroenterology; 2019, 38 (6): 527-533	INT	JUL TO DEC	Hepatology, Transfusion Medicine, Nephrology, Forensic Medicine, Wellcome Trust Research Laboratory	<b>PMID: 32077040</b> <b>PMC Article</b> 22386 <b>Impact Factor: 0.74</b> <b>(RG-2018)</b> <b>H-Index: 37</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> Departments of Hepatology, <b>Christian Medical College, Vellore</b>, 632 004, India                      Transfusion Medicine, <b>Christian Medical College, Vellore</b>, 632 004, India                      Nephrology, <b>Christian Medical College, Vellore</b>, 632 004, India                      Forensic Medicine, <b>Christian Medical College, Vellore</b>, 632 004, India                      Wellcome Trust Research Laboratory (GI Sciences), <b>Christian Medical College, Vellore</b>, 632 004, India                      Critical Care, <b>Christian Medical College, Vellore</b>, 632 004, India                      Emergency Medicine, <b>Christian Medical College, Vellore</b>, 632 004, India                      Liver Unit, Universtiy Hospital Birmingham, Birmingham, United Kingdom</p> <p><b>Background:</b> High Von Willebrand factor (VWF) levels may predispose to multi-organ failure in acute liver failure (ALF). In rodenticide-induced hepatotoxicity patients, we analyzed if plasma VWF levels predicted survival and also the outcome of VWF lowering by N-acetyl cysteine (NAC), fresh frozen plasma (FFP) infusions, and plasma exchange (PLEX). <b>Methods:</b> We retrospectively analyzed prospectively collected data. Hepatotoxicity was classified as uncomplicated acute hepatitis (UAH), acute liver injury (ALI), and ALF. ALF patients, if not opting for liver transplantation, had PLEX and NAC; ALI patients received NAC ± FFP (PLEX, if worsening); UAH patients had NAC. Plasma VWF antigen was measured (normal, 50% to 150%). In-hospital survival was analyzed as discharged alive or died/discharged in a terminal condition (poor outcome). <b>Results:</b> Twenty-four consecutive rodenticide-induced hepatotoxicity patients (UAH in 1, ALI in 20, ALF in 3) from December 2017 to January 2019 were studied. Baseline VWF levels were 153%, 423 (146–890)% median (range), and 448 (414–555)% in UAH, ALI, ALF patients; model for end-stage liver disease (MELD) scores were 11, 24 (12–38), 36 (32–37) and in-hospital survival rates were 100%, 85%, 67%, respectively. VWF levels were higher in patients with poor outcome (555 [512–890]%) than in those discharged alive (414 [146–617]%) (p-value = 0.04). The area under the receiver operating curve of the VWF level, MELD score, and sequential organ failure assessment score to predict survival was 0.92, 0.84, and 0.66, respectively. Of 4 patients meeting criteria for liver transplantation (none had transplantation), 3 (75%) survived. <b>Conclusions:</b> High VWF levels predict poor outcome in rodenticide-induced hepatotoxicity. VWF reduction may be useful in</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Acute liver failure; Endothelium; Plasma exchange; Yellow phosphorus DOI: 10.1007/s12664-019-00989-w © 2020, Indian Society of Gastroenterology.				
550.	<p>Sathishkumar, D., Peter, D., Pulimood, S., Wiegmann, H., Valentin, F., Thomas, M., Hennies, H. C. and Oji, V. Bathing Suit Variant of Autosomal Recessive Congenital Ichthyosis (ARCI) in Two Indian Patients Case Rep Dermatol Med; 2018, 2018 3140473</p> <p><b>Address:</b> Department of Dermatology Venereology and Leprosy, <b>Christian Medical College, Vellore, India.</b> Department of Dermatology, University Hospital Muenster, Muenster, Germany. Center for Dermatogenetics, Division of Human Genetics, Medical University of Innsbruck, Innsbruck, Austria. Cologne Center for Genomics, Division of Dermatogenetics, University of Cologne, Germany. Cologne Excellence Cluster on Cellular Stress Responses in Aging-Associated Diseases (CECAD), University of Cologne, Cologne, Germany. Department of Biological and Geographical Sciences, University of Huddersfield, Huddersfield, UK.</p> <p>Bathing suit ichthyosis (BSI) is a rare variant of autosomal recessive congenital ichthyosis (ARCI) due to transglutaminase-1 gene (TGM1) mutations leading to a temperature sensitive phenotype. It is characterized by dark-grey or brownish scaling restricted to the "bathing suit" areas. We report two Indian girls with bathing suit ichthyosis and mutations in TGM1 (patient 1: homozygous for c.1147G&gt;A; patient 2: compound heterozygous for c.832G&gt;A, c.919C&gt;G).</p>	INT	JAN TO JUN	Dermatology and Leprosy Venereology	<p><b>PMID:30693114</b> <b>PMC ID:6332984</b> <b>Impact Factor: 0.51 (RG-2018)</b> <b>H-Index: NA</b></p>
551.	<p>Sathishkumar, D., Udhayakumar, P., Adhikari, D. D. and George, R. Pediatric Cutaneous Emergencies and their Outcome: Study from a Tertiary Care Center in South India Indian Dermatol Online J; 2019, 10 (6): 650-656</p> <p><b>Address:</b> Department of Dermatology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Pediatrics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Background: Skin problems are commonly encountered in the pediatric emergency department (PED). Although there are a few studies on the prevalence and spectrum of skin conditions in children attending the PED, only limited information is available on the</p>	NAT	JUL TO DEC	Dermatology, Pediatrics	<p><b>PMID:31807443</b> <b>PMC ID:6859774</b> <b>35311</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>outcome of the children with skin-related ailments requiring hospitalization. Aim: To study the clinical profile of skin manifestations in children presenting to the PED over a period of one year and assess the impact of skin lesions on the clinical outcome. Materials and Methods: All children &lt;16 years of age attending the PED were screened and children with skin lesions were referred to the dermatologist for further evaluation, and those admitted were followed up until discharge. Children with skin lesions were categorized into seven subsets based on their diagnosis. Outcomes evaluated were duration of hospital stay, associated systemic inflammatory response syndrome (SIRS), and mortality. Results: Of the 24,324 patients screened, 203 (0.83%) had skin lesions, of whom 158 (77.83%) were discharged from the PED. Forty five (22.16%) patients required admission of whom 2 (0.99%) died. Inflammatory disorders were the most common, 102 (50.24%), followed by infections in 91 (44.82%) patients. Among the hospitalized patients, 25 (55.6%) had SIRS, which included infections in 14 (56%), vasculitis in 5 (20%), and urticaria in 3 (12%) patients. Two patients with SIRS died and the causes were purpura fulminans and febrile exanthem of probable viral etiology. Conclusion: Our study highlights the spectrum of pediatric cutaneous emergencies and their outcome. A subset of patients can present with severe skin ailments and SIRS in whom early diagnosis and prompt treatment can impact the outcome.</p>				
552.	<p>Satyaraddi, A., Cherian, K. E., Kapoor, N., Kunjummen, A. T., Kamath, M. S., Thomas, N. and Paul, T. V.                      Body Composition, Metabolic Characteristics, and Insulin Resistance in Obese and Nonobese Women with Polycystic Ovary Syndrome                      J Hum Reprod Sci; 2019, 12 (2): 78-84  <b>Address:</b> Department of Endocrinology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.                      Department of Reproductive Medicine, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.                      Objectives: The objective was to compare body composition, metabolic characteristics, and insulin resistance between obese (body mass index [BMI] <math>\geq 25</math> kg/m<sup>2</sup>) polycystic ovary syndrome (PCOS) and nonobese PCOS (BMI &lt;25 kg/m<sup>2</sup>) women and their age- and BMI-matched controls. Materials and Methods: A total of 81 PCOS women (Rotterdam criteria) (obese - 42; nonobese - 39) and 86 controls (obese - 42; nonobese -44) were recruited in this cross-sectional study. All women underwent a detailed assessment of clinical, anthropometric, and metabolic parameters, insulin resistance indices, and body composition measurements with</p>	INT	JUL TO DEC	Endocrinology, Reproductive Medicine.	<p><b>PMID:</b> 31293320  <b>Impact Factor:</b> 1.19  <b>(RG - 2018)</b>  <b>H-Index:</b> 25</p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	visceral adipose tissue assessment (VAT) (dual-energy X-ray absorptiometry scan). Results: Of PCOS women, 27% (80% - obese PCOS; 20% - nonobese PCOS) were diagnosed with metabolic syndrome (International Diabetes Federation criteria), 35% of PCOS women (46% - obese PCOS; 54% - nonobese PCOS) had impaired glucose tolerance, and 7% of PCOS women (2/3(rd) - obese PCOS; 1/3(rd) - nonobese PCOS) had diabetes mellitus. Insulin resistance was seen in about 80% in obese PCOS women and 20% in nonobese PCOS women based on various insulin resistance indices such as fasting insulin ( $\geq 12.2$ $\mu\text{U/ml}$ ), Homeostasis Model Assessment-Insulin Resistance ( $\geq 2.5$ ), and Quantitative Insulin Sensitivity Check Index ( $< 0.33$ ). Total body fat, estimated (Est.) VAT, and corrected Est. VAT (corrected for body weight) were significantly increased ( $P = 0.0001$ ) in both obese and nonobese PCOS women when compared to those of their age- and BMI-matched controls. However, corrected Est. VAT (corrected for body weight) was not significantly different between obese and nonobese PCOS women. Conclusion: Both obese and nonobese PCOS women when compared with their age- and BMI-matched controls were metabolically worse and had more visceral adiposity. Nonobese PCOS poses similar risk as that of obese PCOS in having similar amount of VAT (corrected for body weight).				
553.	Savarimuthu, M. K. and Nair, A. K. A Case of Isolated Unilateral Glossopharyngeal Nerve Palsy Clin Med Res; 2019, <b>Address:</b> Christian Medical College and Hospital, Department of Psychiatry, Bagayam, Vellore, Tamil Nadu INDIA <a href="mailto:docmos22@gmail.com">docmos22@gmail.com</a> Chief of Neurology, Quincy Medical Center; and Director, Alzheimer's Disease Center, Quincy, Massachusetts, USA. Isolated palsy of the glossopharyngeal nerve is rare. We report the case of an elderly patient with unilateral right glossopharyngeal nerve palsy secondary to extra cranial ischemia. On examination there was no other deficit other than an absent right gag reflex. We diagnosed her with ischemic stroke of the ninth nerve clinically and increased her daily dose of Aspirin from 81 mg to 325 mg. The magnetic resonance imaging of the brain showed a normal brainstem and cerebellum with patent intracranial circulation. Total resolution of the paralysis was seen two months later. The possible mechanisms suspected are diabetic or hypertensive stenosis of the vasa nervorum or compression of the ninth nerve by an internal carotid artery dissection or aneurysm. This article discusses the various etiologies and mechanisms of this rare condition. It is unique because of the	INT	JUL TO DEC	Psychiatry	<b>PMID:</b> 31511240 <b>Impact Factor:</b> 0.40 <b>(RG - 2018)</b> <b>H-Index:</b> NA

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	nerve's location and relation to other structures.				
554.	Savarimuthu, Monisha K., Tsheringla, Sherab and Mammen, Priya Psychotic Symptoms of Hashimoto's Encephalopathy: A Diagnostic Challenge J Korean Acad Child Adolesc Psychiatry; 2019, 30 (1): 42-44 Psychotic Symptoms of Hashimoto's Encephalopathy: A Diagnostic Challenge	INT	JUL TO DEC	Psychiatry	<b>PMID:</b> KJD:ART002416285 <b>Impact Factor:NA</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: NA</b>
555.	Schmidt, W. P., Devamani, C. S., Rose, W., Alexander, N. and Prakash, J. A. J. Antibody response following scrub typhus infection: clinical cohort study Trop Med Int Health; 2019, <b>Address:</b> Department of Emergency Medicine, <b>Christian Medical College, Vellore, India.</b> Department for Disease Control, London School of Hygiene and Tropical Medicine, UK. Department of Rural Unit for Health and Social Affairs, <b>Christian Medical College, Vellore, India.</b> Department of Pediatrics and Pediatric Infectious Diseases, <b>Christian Medical College, Vellore, India.</b> MRC Tropical Epidemiology Group, London School of Hygiene and Tropical Medicine, London, UK. Department of Clinical Microbiology, <b>Christian Medical College, Vellore, India.</b> OBJECTIVE: Scrub typhus is a common cause of fever in Asia. The antibody response to infection and its effect on subsequent infection is unclear. We studied the IgM and IgG antibody response after infection, accounting for clinical severity. METHOD: We studied 197 scrub typhus patients for up to two years post-infection. Overall, 501 blood samples were analysed for scrub typhus antibodies using ELISA. IgM and IgG ELISA optical densities (OD) were analysed using quantile regression. OD values of 1.0 (IgM) and 1.5 (IgG) were used to define sero-positivity. RESULTS: IgM OD values fell rapidly from an initial peak after infection. 50% of cases were IgM sero-negative after 82 days. About 2 years after fever onset, 50% of cases had fitted IgG OD values of <1.5. Patients with high initial IgG OD values (>/=2.5, used as a proxy for probable previous scrub typhus infection) had a more sustained IgG response than those with a low initial IgG OD, and more often presented with complications (18/36= 50% vs. 28/91= 30.8%, risk ratio= 1.63, 95%CI 1.04, 2.55, p= 0.035). This association was robust to adjusting for age (risk ratio 1.50, 95%CI 0.96, 2.33, p= 0.072). CONCLUSION: Cross-sectional IgG sero-prevalence data substantially underestimate the proportion	INT	JUL TO DEC	Emergency Medicine, RUHSA, Pediatrics, Clinical Microbiology.	<b>PMID:</b> 31660667 <b>Impact Factor: 2.423</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 101</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	in a population ever infected with scrub typhus. A high initial IgG as a potential marker for previous scrub typhus infection may be associated with long-term IgG persistence and a higher risk of complicated scrub typhus.				
556.	<p>Schweitzer, L., Singh, B., Rupali, P. and Libman, M. Emerging concepts in the diagnosis, treatment, and prevention of travelers' diarrhea Curr Opin Infect Dis; 2019, 32 (5): 468-474 <b>Address:</b> McGill University Health Centre, Montreal, Quebec, Canada. <b>Christian Medical College, Vellore, India.</b></p> <p>PURPOSE OF REVIEW: Traveller's diarrhea, though not life-threatening. is often a vexing problem, which impacts overall function of the traveller while on holiday. Increasing data is available regarding molecular diagnostic techniques, which may help obtain an early etiologic diagnosis. Use of antibiotics for traveller's diarrhea is controversial in this era of multidrug resistance and microbiome disruption. RECENT FINDINGS: Travel to the tropics promotes gut colonization with drug-resistant bacteria and this risk increases after treatment with antibiotics, leading to potential ecological impacts in the country of residence. SUMMARY: Traveller's diarrhea is common and can impact a traveller's itinerary leading to significant inconvenience, and occasional longer term sequelae. Though bacterial causes predominate, recommended treatment is conservative in mild-to-moderate cases. Molecular techniques for early diagnosis of traveller's diarrhea may help with appropriate management. Treatment with antibiotics is sometimes required but is associated with gut colonization by multidrug-resistant bacteria.</p>	INT	JUL TO DEC	Infectious Diseases	<p><b>PMID:</b> 31361658 <b>Impact Factor:</b> 3.752 <b>(BIOXBIO - 2018)</b> <b>H-Index:</b> 94</p>
557.	<p>Sebastian, A. P., Dasgupta, R., Jebasingh, F., Saravanan, B., Chandy, B., Mahata, K. M., Naik, D., Paul, T. and Thomas, N. Clinical features, radiological characteristics and offloading modalities in stage 0 Acute Charcot's neuroarthropathy - A single centre experience from South India Diabetes Metab Syndr; 2019, 13 (2): 1081-1085 <b>Address:</b> Department of General Medicine, <b>Christian Medical College, Vellore,</b> 632 004, India. Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College, Vellore,</b> 632 004, India. Electronic <b>Address:</b> riddhi_dg@rediffmail.com. Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College, Vellore,</b> 632 004, India. Department of Physical Medicine and Rehabilitation, <b>Christian</b></p>	INT	JUL TO DEC	General Medicine, Endocrinology, Diabetes and Metabolism.	<p><b>PMID:</b> 31336448 <b>Impact Factor:</b> 2.361 <b>(BIOXBIO - 2018)</b> <b>H-Index:</b> 25</p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Medical College, Vellore,</b> 632 004, India.                      Department of Radiology, <b>Christian Medical College, Vellore,</b> 632 004, India.</p> <p>AIMS: Stage 0 Acute Charcot's Neuroarthropathy (ACN) in Type 2 Diabetes patients is a challenging diagnosis with subtle clinical features and normal appearing plain radiographs of the affected foot. Delay in diagnosis can lead to progression of disease and irreversible deformities. There is a paucity of data on Stage 0 ACN from India. The aim of this study was to assess clinical and radiological characteristics and treatment outcomes in Indian Type 2 Diabetes patients with Stage 0 ACN. MATERIALS AND METHODS: A comparative, case-control study was carried out amongst patients attending the Integrated Diabetes Foot Clinic at a tertiary care South Indian hospital. During the 3-year study period, a total of 1811 patients with Type 2 Diabetes Mellitus were screened. Of these, n=10 patients with stage 0 ACN Charcot's arthropathy were identified based on clinical features and MRI imaging of the foot for confirmation of diagnosis. These were compared with an age and duration of diabetes-matched group of n=50 patients without ACN as controls. RESULTS: Our study identified 10 patients (0.5%) with Stage 0 Acute charcot neuroarthropathy (ACN) in the study population. Those with ACN had higher BMI, poorer glycaemic control and greater degree of peripheral neuropathy (p&lt;0.05). Clinically relative lack of pain and infrared thermometric temperature difference &gt;2 degrees C in the affected foot were the most significant findings, while MRI foot was useful in early detection of active and severe stage 0 disease. Total contact cast was the preferred initial offloading modality, with delay in initiating complete immobilization leading to worse outcomes. CONCLUSIONS: This is the first study to highlight the characteristic features of Stage 0 ACN in Indian Type 2 Diabetes patients. Thorough clinical evaluation, infrared thermometry and radiological findings on MRI foot leads to early disease detection. Complete offloading, preferably with total contact casts can prevent disease progression and chronic deformities.</p>				
558.	<p>Sebastian, A., Raj, T. J. S., Yenuberi, H., Job, V., Varughese, S., L, J. and Regi, A.                      Angiogenic factors and uterine artery Doppler in predicting preeclampsia and associated adverse outcomes in a tertiary hospital in south India                      Pregnancy Hypertens; 2019, 16 26-30</p> <p><b>Address:</b> Department of Gynecologic Oncology, <b>Christian Medical College and Hospital, Vellore,</b> Tamil Nadu, India.</p>	INT	JAN TO JUN	Gynecologic Oncology, Obstetrics and Gynecology, Clinical Biochemistry, Nephrology, Biostatistics	<p><b>PMID:31056155</b>  <b>Impact Factor: 0.09</b>  <b>(RG-2018)</b>  <b>H-Index: 17</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Obstetrics and Gynecology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Department of Obstetrics and Gynecology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India. Electronic Address: og3@cmcvellore.ac.in.</p> <p>Department of Clinical Biochemistry, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Department of Nephrology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Department of Biostatistics, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p>				
559.	<p>Sebastian, T., Jeyaseelan, V., Jeyaseelan, L., Anandan, S., George, S. and Bangdiwala, S. I.</p> <p>Decoding and modelling of time series count data using Poisson hidden Markov model and Markov ordinal logistic regression models Stat Methods Med Res; 2019, 28 (5): 1552-1563</p> <p><b>Address:</b></p> <ol style="list-style-type: none"> <li>1. Department of Biostatistics, <b>Christian Medical College, Vellore, India.</b></li> <li>2. Department of Clinical Microbiology, <b>Christian Medical College, Vellore, India.</b></li> <li>3. Department of Statistics, St Thomas College, Pala, India.</li> <li>4. Department of Health Research Methods, Evidence and Impact, McMaster University, Hamilton, Canada.</li> </ol> <p>Hidden Markov models are stochastic models in which the observations are assumed to follow a mixture distribution, but the parameters of the components are governed by a Markov chain which is unobservable. The issues related to the estimation of Poisson-hidden Markov models in which the observations are coming from mixture of Poisson distributions and the parameters of the component Poisson distributions are governed by an m-state Markov chain with an unknown transition probability matrix are explained here. These methods were applied to the data on Vibrio cholerae counts reported every month for 11-year span at <b>Christian Medical College, Vellore, India</b>. Using Viterbi algorithm, the best estimate of the state sequence was obtained and hence the transition probability matrix. The mean passage time between the states were estimated. The 95% confidence interval for the mean passage time was estimated via Monte Carlo simulation. The three hidden states of the estimated Markov chain are labelled as 'Low', 'Moderate' and 'High' with the mean counts of 1.4, 6.6 and 20.2 and the estimated average duration of stay of 3, 3 and 4 months, respectively.</p>	INT	JUL TO DEC	Biostatistics, Microbiology  Clinical	<p><b>PMID:</b> 29616596</p> <p><b>Impact Factor:</b> 2.388 <b>(BIOXBIO - 2018)</b></p> <p><b>H-Index:</b> 71</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Environmental risk factors were studied using Markov ordinal logistic regression analysis. No significant association was found between disease severity levels and climate components.				
560.	<p>Sen, S., Cherian, A. J., Ramakant, P., Reka, K., Paul, M. J. and Abraham, D. T.                      Focused Parathyroidectomy Under Local Anesthesia - A Feasibility Study                      Indian J Endocrinol Metab; 2019, 23 (1): 67-71</p> <p><b>Address:</b> Department of Endocrine Surgery, CMC Hospital, Vellore, Tamil Nadu, India.                      Department of Endocrine Surgery, King George Medical University, Lucknow, Uttar Pradesh, India.                      Department of Biostatistics, CMC Hospital, Vellore, Tamil Nadu, India.</p> <p>Purpose: We conducted this study to evaluate the feasibility, patient satisfaction, and cost of performing focused parathyroidectomy under local anesthesia (LA) and mild sedation, administered and monitored by a surgeon. Materials and Methods: This was a prospective observational study of 30 patients with primary hyperparathyroidism (PHPT) undergoing a focused parathyroidectomy under LA and mild sedation at a single institution. The clinical features, gland weight, operating time, procedure time, postoperative pain scores, overall patient satisfaction, postoperative nausea and vomiting, analgesic requirements, complications, cost, and cure rates were documented. Data were analyzed using SPSS software version 17.0. Results: In two patients (6.7%), the procedure had to be completed under general anesthesia (GA). Postoperative temporary hypocalcemia was witnessed in 14 of 30 (46.7%), but only 1 required intravenous calcium infusion. About 21 of 30 (75%) were completely satisfied with LA, whereas 25 of 30 (89%) were completely satisfied with surgical procedure. Furthermore, all patients were keen to recommend this procedure under LA to their friends and family. Comparing the cost between performing the procedure under LA with that under GA, a significant difference was witnessed (P = 0.001). Among the 26 patients reviewed at 6 months, all had a normal serum calcium and parathyroid hormone levels indicating 100% cure rate. Conclusion: Performing focused parathyroidectomy under LA is feasible; additionally, this method can significantly reduce the cost of the procedure (P = 0.001).</p>	NAT	JAN TO JUN	Endocrine Surgery	<p><b>PMID:31016156</b>  <b>PMC ID:6446694</b>  <b>Impact Factor: 1.70</b>  <b>(resurchiefy.com)</b>  <b>H-Index: 19</b></p>
561.	Senthilraja, M., Chapla, A., Jebasingh, F. K., Naik, D., Paul, T. V. and	INT	JUL TO DEC	Endocrinology	<b>PMID:31781422</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Thomas, N. Parallel Multi-Gene Panel Testing for Diagnosis of Idiopathic Hypogonadotropic Hypogonadism/Kallmann Syndrome Case Rep Genet; 2019, 2019 4218514 <b>Address:</b> Department of Endocrinology, Diabetes &amp; Metabolism, <b>Christian Medical College</b>, 632 004 Vellore, India. Kallmann syndrome (KS)/Idiopathic hypogonadotropic hypogonadism (IHH) is characterized by hypogonadotropic hypogonadism and anosmia or hyposmia due to the abnormal migration of olfactory and gonadotropin releasing hormone producing neurons. Multiple genes have been implicated in KS/IHH. Sequential testing of these genes utilising Sanger sequencing is time consuming and not cost effective. The introduction of parallel multigene panel sequencing of small gene panels for the identification of causative gene variants has been shown to be a robust tool in the clinical setting. Utilizing multiplex PCR for the four gene KS/IHH panel followed by NGS, we describe herewith two cases of hypogonadotropic hypogonadism with a Prokineticin receptor 2 (PROKR2) gene and KAL1 gene mutation. The subject with a PROKR2 mutation had a normal perception of smell and normal olfactory bulbs on imaging. The subject with a KAL1 gene mutation had anosmia and a hypoplastic olfactory bulb.</p>				<b>PMC ID:6855064 35314</b>
<b>562.</b>	<p>Senthilraja, M., Cherian, K. E., Jebasingh, F. K., Kapoor, N., Paul, T. V. and Asha, H. S. Osteoporosis knowledge and beliefs among postmenopausal women: A cross-sectional study from a teaching hospital in southern India J Family Med Prim Care; 2019, 8 (4): 1374-1378 <b>Address:</b> Department of Endocrinology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.  Objectives: Osteoporosis continues to be underrecognized in many parts of India. This study was undertaken to assess the level of knowledge of osteoporosis among postmenopausal women referred for a dual-energy X-ray absorptiometry (DXA) scan in a teaching hospital in southern India. Methodology: This cross-sectional study assessed the state of awareness in consecutive postmenopausal women referred for a DXA scan using a validated questionnaire - Osteoporosis Knowledge Assessment Tool. The proportion of correct responses was expressed as percentages. The mean scores obtained were also compared between different educational groups. Results: A total of 302 consecutive postmenopausal women who were</p>	<b>NAT</b>	<b>JAN TO JUN</b>	Endocrinology	<b>PMID:31143724 PMID:6510091 Impact Factor: 0.21 (RG-2018) H-Index: NA</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	referred for DXA participated in this study. The mean (standard deviation) age of the postmenopausal women included in this study was 58.8 (6) years. Although most subjects were aware of the consequences of osteoporosis, there was generalized lack of awareness with regard to risk factors and available treatment options. Overall about 60% had poor awareness about osteoporosis. Conclusion: This study showed a gross deficit in awareness of osteoporosis in Indian postmenopausal women. There is a need to prioritize on designing appropriate awareness campaigns in subjects at risk, according to their level of literacy.				
563.	<p>Senthilraja, M., Rajan, R., Kapoor, N., Paul, T. V. and Cherian, K. E. An uncommon cause of dysphagia J Family Med Prim Care; 2019, 8 (3): 1282-1283</p> <p><b>Address:</b> Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Lingual thyroid is an abnormal mass of ectopic thyroid tissue seen in the base of tongue caused due to aberrant embryological development. It is often asymptomatic but may cause local symptoms, such as dysphagia, dysphonia, and upper airway obstruction. In this case, we report a 13-year-old girl who presented with dysphagia and breathing difficulty. Local examination revealed thyroid tissue in the posterior aspect of the tongue. Thyroid scintigraphy showed abnormal tracer uptake at base of tongue. Hormonal test showed subclinical hypothyroidism. She was treated with Levothyroxine.</p>	NAT	JAN TO JUN	Endocrinology, Diabetes and Metabolism	<p><b>PMID:31041293</b>  <b>PMC ID:6482789</b>  <b>Impact Factor:1.418</b>  <b>H-Index: NA</b></p>
564.	<p>Sethuraman, B., Rachana, A. and Kurian, S. Knowledge, Attitude, and Practice Regarding Contraception among Women with Schizophrenia: An Observational Study from South India Indian J Psychol Med; 2019, 41 (4): 323-330</p> <p><b>Address:</b> Department of Psychiatry, St. John's Medical College Hospital, Bengaluru, Karnataka, India. Department of Psychiatry, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>Background: Women with schizophrenia have needs beyond their mental health needs, such as those arising out of their gender, sexual, and reproductive functions. Very little is known about the knowledge, attitude, and practice regarding contraception among women with schizophrenia from India. Materials and Methods: Study among women with schizophrenia (in reproductive age group, having</p>	NAT	JUL TO DEC	Psychiatry	<p><b>PMID:</b> 31391664  <b>Impact Factor: 0.64</b>  <b>(RG - 2018)</b>  <b>H-Index: 17</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>at least one living child, and currently staying with husband) from south India explored their knowledge, attitude, and practice of contraception. Adhering to observational design and ethical principles, data were collected using a semi-structured questionnaire. Modified National Family Health Survey-3 questionnaire and Positive and Negative Symptom Scale of Schizophrenia were also used. Results: Ninety-six women with schizophrenia participated. The mean age was 33.5 years [standard deviation (SD): 6.8 years], and the mean age of onset of schizophrenia was 29.2 years (SD: 6.2 years). Although nearly 90% had knowledge on at least one method of contraception, the mean total number of methods known was mere two. Out of 65 women who were practising contraception, 86.2% adopted female sterilization. The common reasons for not using contraception were wish for another child/son, lack of awareness, and fear of side effects. Unmet need for family planning was 14%. Informed choice of contraception was below 3%. There was statistically significant association between those who were currently using contraception and variables such as age 31 years and above, undifferentiated subtype of schizophrenia, and greater severity of schizophrenia. Conclusion: Although the majority had some knowledge about contraception, decision-making largely rested with others, and informed choice regarding contraception was poor. These could pose an obstetric risk on women with schizophrenia. Sociocultural and illness-related factors influencing contraception need to be explored.</p>				
565.	<p>Sethuvel, D. P. M., Anandan, S., Michael, J. S., Murugan, D., Neeravi, A., Verghese, V. P., Walia, K. and Veeraraghavan, B. Virulence gene profiles of Shigella species isolated from stool specimens in India: its association with clinical manifestation and antimicrobial resistance Pathogens and Global Health; 2019, 113 (4): 173-179</p> <p><b>Address:</b> a Department of Clinical Microbiology, <b>Christian Medical College</b> , Vellore , India. b Department of Child Health , <b>Christian Medical College</b> , Vellore , India. c Division of Epidemiology and Communicable Diseases , Indian Council of Medical Research , New Delhi , India.</p> <p>Shigella is the major cause of bacillary dysentery worldwide, especially in developing countries. There are several virulence factors essential for the organism to be virulent which are generally present in the virulence plasmid and on chromosomal pathogenicity</p>	INT	JAN TO JUN	Clinical Microbiology, Child Health	<p><b>PMID:31221039</b> <b>Impact Factor: 1.703</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 63</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>islands. The present study was undertaken to determine the virulence gene profile of Shigella spp isolated from a clinical specimen and to study their significant association with common clinical symptoms and antimicrobial resistance. Sixty Shigella whole genome sequences, including 22 S. flexneri, 14 S. sonnei, 17 S. boydii and 7 S. dysenteriae were analyzed for the presence of virulence genes. The gene found predominantly in this study were ipaH (90%) followed by sigA (83%), and IpfA (78%) respectively. The virulence genes were significantly higher in S. flexneri, particularly in serotype 2 compared to S. sonnei. Interestingly, a significant association was observed between sigA gene and fever whereas sepA and sigA were found to be associated with diarrhea. Among the studied Shigella isolates, the presence of virulence genes was found higher in isolates resistant to more than three antibiotic classes. The present work revealed the varying incidence of virulence determinants among different Shigella serogroups and shows their contribution to disease severity.</p>				
566.	<p>Sethuvel, D. P. M., Perumalla, S., Anandan, S., Michael, J. S., Ragupathi, N. K. D., Gajendran, R., Walia, K. and Veeraraghavan, B. Antimicrobial resistance, virulence &amp; plasmid profiles among clinical isolates of Shigella serogroups Indian J Med Res; 2019, 149 (2): 247-256</p> <p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, India.</b> Division of Epidemiology &amp; Communicable Diseases, Indian Council of Medical Research, New Delhi, India.</p> <p>Background &amp; objectives: Bacillary dysentery caused by Shigella spp. remains an important cause of the crisis in low-income countries. It has been observed that Shigella species have become increasingly resistant to most widely used antimicrobials. In this study, the antimicrobial resistance, virulence and plasmid profile of clinical isolates of Shigella species were determined. Methods: Sixty clinical Shigella isolates were subjected to whole-genome sequencing using Ion Torrent platform and the genome sequences were analyzed for the presence of acquired resistance genes, virulence genes and plasmids using web-based software tools. Results: Genome analysis revealed more resistance genes in Shigella flexneri than in other serogroups. Among beta-lactamases, blaOXA-1was predominantly seen followed by the blaTEM-1B and blaEC genes. For quinolone resistance, the qnr S gene was widely seen. Novel mutations in gyr B, par C and par E genes were</p>	NAT	JAN TO JUN	Clinical Microbiology	<p><b>PMID:31219090</b> <b>PMC ID:6563743</b> <b>Impact Factor: 1.508</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 75</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	observed. Cephalosporins resistance gene, blaCTX-M-15 was identified and plasmid-mediated AmpC beta-lactamases genes were found among the isolates. Further, a co-trimoxazole resistance gene was identified in most of the isolates studied. Virulence genes such as ipaD, ipaH, virF, senB, iha, capU, lpfA, sigA, pic, sepA, celb and gad were identified. Plasmid analysis revealed that the IncFII was the most commonly seen plasmid type in the isolates. Interpretation & conclusions: The presence of quinolone and cephalosporin resistance genes in Shigella serogroups has serious implications for the further spread of this resistance to other enteric pathogens or commensal organisms. This suggests the need for continuous surveillance to understand the epidemiology of the resistance.				
567.	<p>Setty L N Mohan, Konduru Vidya, Janakiraman Rajinikanth, Amit Turkey</p> <p>ABS-098: The Submental Island Flap in Head and Neck Reconstruction: A Review of 40 Cases</p> <p>Journal of Head &amp; Neck Physicians and Surgeons; 2019, 7 (3):S56-57</p> <p>Department of Head and Neck Surgery, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India. E-mail: <a href="mailto:drsettylnchandramohan@gmail.com">drsettylnchandramohan@gmail.com</a></p> <p>Abstract :Journal of Head &amp; Neck Physicians and Surgeons ; October 2019 ; Volume 7 ; Supplement 1 S57. Background: The relatively novel submental island flap based on the submental artery is a reliable alternative to the technically demanding free tissue transfer in head and neck reconstruction. However, use of this flap for reconstruction following oral carcinoma is controversial due to the potential involvement of level 1a lymph nodes. We present a series of 40 cases of submental flap reconstruction to identify the oncologic safety and outcomes. Materials and Methods: 40 consecutive patients with clinically and radiologically insignificant level 1a nodes, who underwent reconstruction with submental flap from January 2017 to January 2019, were included in the study. Data pertaining to the subsite involved, clinical and pathological variables, and outcomes on follow-up, including recurrences, were collected and analyzed. Results: There were 26 male and 14 female patients with age ranging from 20 to 70 years. Most of the defects reconstructed were in the tongue (19), gingivobuccal complex (15), parotid (3) and the lip (1). Ipsilateral or bilateral neck dissection was performed for all patients. Pre-operative assessment and post-operative histopathology was negative for level 1a nodes in all patients. During a mean follow-up of 14 months, 3 regional recurrences outside the</p>	NAT	JUL TO DEC	Head and Neck Surgery	<b>Impact Factor: 0.472</b> <b>H-Index: NA</b>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	nodal levels dissected were noted. Conclusion: Submental flap is a satisfactory option for oral cavity reconstruction. However, preoperative.				
568.	<p>Shankar, C., Karunasree, S., Manesh, A. and Veeraraghavan, B. First Report of Whole-Genome Sequence of Colistin-Resistant <i>Klebsiella quasipneumoniae</i> subsp. <i>similipneumoniae</i> Producing KPC-9 in India  <i>Microb Drug Resist</i>; 2019, 25 (4): 489-493  <b>Address:</b>                      1. Department of Clinical Microbiology, <b>Christian Medical College, Vellore, India.</b>                      2. Department of Infectious Diseases, <b>Christian Medical College, Vellore, India.</b></p> <p>Aim: <i>Klebsiella pneumoniae</i> carbapenemase (KPC) is a class A carbapenemase endemic in the United States, China, South America, and Europe but is rarely reported from India. A single report of KPC-9 from <i>K. pneumoniae</i> in Israel has been published. <i>K. pneumoniae</i> has been classified into three phylogenetic groups: group 1 consists of <i>K. pneumoniae</i> and its subspecies, group 2 consists of <i>Klebsiella quasipneumoniae</i> and its subspecies, and group 3 consists of <i>Klebsiella variicola</i>. This is the first report of whole-genome sequencing of colistin-resistant <i>K. quasipneumoniae</i> subsp. <i>similipneumoniae</i> harboring blaKPC-9 gene. Results: The isolate was obtained from the culture of a respiratory catheter tip from a 41-year-old woman with traumatic brain injury. Whole-genome sequencing showed the presence of blaOKP-B-3 gene and hence it was identified as <i>K. quasipneumoniae</i> subsp. <i>similipneumoniae</i>. The isolate was resistant to all antimicrobials except tigecycline. Colistin resistance was chromosomally mediated; mcr-1 to mcr-5 genes and their variants were not identified. The isolate belonged to the novel clonal type ST2957. Conclusion: The isolation of KPC-9 from India, a nonendemic region, and in an isolate of <i>K. quasipneumoniae</i> highlights the importance of accurate identification of <i>Klebsiella</i> species and determination of mechanism of resistance. The novel sequence type obtained indicates evolution of the organism and acquisition of plasmid-mediated resistance. The occurrence of KPC in India is a potential public health threat.</p>	INT	JUL TO DEC	Clinical Microbiology, Infectious Diseases	<p><b>PMID:</b> 30427763  <b>Impact Factor: 2.344 (BIOXBIO - 2018)</b>  <b>H-Index: 62</b></p>
569.	<p>Shankar, C., Kumar, S., Venkatesan, M. and Veeraraghavan, B. Emergence of ST147 <i>Klebsiella pneumoniae</i> carrying blaNDM-7 on IncA/C2 with ompK35 and ompK36 mutations in India  <i>J Infect Public Health</i>; 2019,  <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, India.</b></p>	INT	JAN TO JUN	Clinical Paediatrics Microbiology,	<p><b>PMID:31003835</b>  <b>PMC</b>  <b>Impact Factor: 1.35 (RG-2018)</b>  <b>H-Index: 25</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Paediatrics, <b>Christian Medical College, Vellore, India.</b>                      Department of Clinical Microbiology, <b>Christian Medical College, Vellore, India.</b> Electronic <b>Address:</b> vbalaji@cmcvellore.ac.in.</p> <p>India is known to be endemic to NDM carbapenemases. However, NDM-7 among <i>Klebsiella pneumoniae</i> has not been described from India. Apart from carbapenemases, ompK35 and ompK36 also contribute to carbapenem resistance in <i>K. pneumoniae</i>. This study describes molecular mechanisms of antimicrobial resistance in an isolate from bacteraemia investigated through whole genome sequencing. blaNDM-7 was found on IncA/C2 plasmid which also carried sul-1, aadA2, rmtC, blaCMY-6 and ARR-2. ompK35 had mutations and changes from 39th amino acid. ompK36 was truncated to 248 amino acids. The isolate belonged to ST147. The patient was a known case systemic lupus erythematosus (SLE) and blood culture grew carbapenem resistant <i>K. pneumoniae</i>. Meropenem, colistin and ticoplanin were administered and the patient was discharged on improvement. Emergence of new resistance variants and porin mutations among clones such as ST147 which has been prevalent has potential for rapid spread and thus challenges infection control.</p>				
570.	<p>Shankar, C., Pragasam, A. K., Anandan, S. and Veeraraghavan, B. mgrB as Hotspot for Insertion Sequence Integration: Change Over from Multidrug-Resistant to Extensively Drug-Resistant <i>Klebsiella pneumoniae</i>?                      Microb Drug Resist; 2019,  <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, India.</b></p>	INT	JAN TO JUN	Clinical Microbiology	<p><b>PMID:30946628</b>  <b>PMC</b>  <b>Impact Factor: 2.344</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 62</b></p>
571.	<p>Shankar, C., Pragasam, A. K., Veeraraghavan, B. and Amladi, A. Bad bug, no test: Tigecycline susceptibility testing challenges and way forward                      Indian J Med Microbiol; 2019, 37 (1): 91-94  <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Tigecycline is a reserve antibiotic increasingly used for the treatment of multidrug-resistant bacteria, especially <i>Klebsiella pneumoniae</i> and <i>Acinetobacter baumannii</i>. At present, there are concerns regarding the testing and interpretation of tigecycline susceptibility to bugs such as <i>K. pneumoniae</i> and <i>A. baumannii</i>, which limit clinicians in appropriate usage. Use of appropriate method for testing such as broth microdilution is essential. In addition, tigecycline susceptibility testing is a challenge due to inconsistent results from various</p>	NAT	JUL TO DEC	Clinical Microbiology	<p><b>PMID: 31424015</b>  <b>Impact Factor: 0.950</b>  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 41</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	antimicrobial susceptibility testing automated platforms. There is a great need to define a suitable methodology along with interpretive criteria, especially for <i>K. pneumoniae</i> and <i>A. baumannii</i> . The European Committee on Antimicrobial Susceptibility Testing (EUCAST) and the Food and Drug Administration (FDA) breakpoints show wide variation and are defined for different set of organisms. Non-species-related pharmacokinetic/pharmacodynamic (PK/PD) breakpoints defined by the EUCAST can be used for organisms such as <i>K. pneumoniae</i> and <i>A. baumannii</i> .				
572.	<p>Shankar, C., Venkatesan, M., Rajan, R., Mani, D., Lal, B., Prakash, J. A. J., Anandan, S., Pragasam, A. K., Walia, K., Ohri, V. C. and Veeraraghavan, B.</p> <p>Molecular characterization of colistin-resistant <i>Klebsiella pneumoniae</i> &amp; its clonal relationship among Indian isolates  <i>Indian J Med Res</i>; 2019, 149 (2): 199-207</p> <p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, India.</b>                      Division of Epidemiology &amp; Communicable Diseases, Indian Council of Medical Research, New Delhi, India.</p> <p>Background &amp; objectives: <i>Klebsiella pneumoniae</i> (KP), a common cause of invasive infections, is often extensively drug resistant in India. At present, studies on resistance mechanism and clonal relationship of KP from India are limited. The present study was undertaken to determine the resistance mechanism and clonal relationship of colistin-resistant isolates obtained from various specimens. Carbapenemases were also determined since the isolates were carbapenem resistant. Methods: Sixty five isolates from blood, exudates and respiratory specimens collected between 2016 and 2017 were studied. Colistin minimum inhibitory concentration (MIC) was performed by broth-micro dilution method. Multiplex PCR was carried out to determine carbapenemases. Targeted sequencing was performed to determine mutations in <i>mgrB</i>, <i>phoP</i>, <i>phoQ</i> and multilocus sequence typing was performed to determine the prevalent clones. Results: Colistin MIC ranged from 4 to 256 µg/ml. SHV, TEM and CTX-M were co-produced in 60 per cent and OXA48-like in 71 per cent. Thirteen isolates had mutations in <i>mgrB</i>. Mutations included a premature stop codon at 21(st) amino acid, the presence of insertion sequences such as IS903, IS Kpn 14 and ISK pn 26; and elongation of <i>mgrB</i>. Novel mutations were also observed among <i>phoP</i> and <i>phoQ</i> genes. Colistin resistance due to <i>mcr</i> genes was absent. Fifteen clonal types were seen with ST231, ST14 and</p>	NAT	JAN TO JUN	Clinical Microbiology	<p><b>PMID:31219084</b>  <b>PMC ID:6563726</b>  <b>Impact Factor: 1.508</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 75</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	ST2096 being predominant. Interpretation & conclusions: This study revealed the changing trend of carbapenem resistance mechanism predominantly to OXA48-like from NDM. Known mgrB mutations and novel mutations in phoP and phoQ were detected. There was no plasmid-mediated colistin resistance. ST14 and ST231 were international clones associated with carbapenem resistance. Colistin-resistant KP was of diverse clones with predominantly ST231, ST14 and ST2096.				
573.	<p>Sharath Babu NM(1), Chacko ST(1), Chacko BR(2), Irodi A(2).                      Recurrent Takotsubo cardiomyopathy in a postmenopausal Indian lady: Is there a pattern?                      J Postgrad Med. 2019 Apr-Jun;65(2):112-115.                      doi: 10.4103/jpgm.JPGM_383_17.</p> <p><b>Author information:</b>                      (1)Department of Cardiology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      (2)Department of Radiology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>Takotsubo cardiomyopathy (TTC) is a syndrome of acute left ventricular dysfunction with a clinical presentation often mimicking acute coronary syndrome. Without a high index of suspicion, this clinical entity often goes unrecognized. Although initially categorized as a benign completely reversible condition, it is no longer considered to be so. Recurrence of this condition, though rare, has been reported in a non-Indian population. We present a case of recurrent TTC in a postmenopausal Indian lady who had a similar clinical presentation both at the index event and at recurrence. DOI: 10.4103/jpgm.JPGM_383_17. Conflict of interest statement: None</p>	NAT	JAN TO JUN	Cardiology, Radiology	<p><b>PMCID: PMC6515789</b>  <b>PMID: 30117480</b>  <b>WOS:000466840800011</b>  <b>Impact Factor: 0.60 (RG-2018)</b>  <b>H-Index: 49</b></p>
574.	<p>Sharma, Anand, Kumar, E. Santhosh, Thomas, Lovely, Subramani, K., Jacob, Shibu, Nair, Sukesh C., Mammen, Joy, Sen, Mousumi, Zachariah, Uday, Goel, Ashish, Vijayalekshmi, B., Balasubramanian, K. A., Abhilash, K. P. P., Elias, Elwyn and Eapen, C. E.                      Plasma Exchange to Treat Yellow Phosphorus Induced Liver Injury                      Journal of Gastroenterology and Hepatology; 2019, 34 757-757</p>	INT	JUL TO DEC	Gastroenterology, Hepatology	<p><b>PMID:</b>                      WOS:000495492606145  <b>Impact Factor: 3.632 (BIOXBIO - 2018)</b>  <b>H-Index: 117</b></p>
575.	<p>Sharma, Anand, Vijayalekshmi, B., Prabhu, Savit B., Nair, Sukesh C., Mammen, Joy, Jacob, Shibu, Goel, Ashish, Zachariah, Uday George, Balasubramanian, A. K., Elias, Elwyn and Eapen, E. C.                      Macrophage Activation In Liver Failure                      Journal of Gastroenterology and Hepatology; 2019, 34 262-262</p>	INT	JUL TO DEC	Gastroenterology, Hepatology	<p><b>PMID:</b>                      WOS:000495492601179  <b>Impact Factor: 3.632 (BIOXBIO - 2018)</b>  <b>H-Index: 117</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
576.	<p>Sharma, D., Sandhya, P., Vellarikkal, S. K., Surin, A. K., Jayarajan, R., Verma, A., Kumar, A., Ravi, R., Danda, D., Sivasubbu, S. and Scaria, V. Saliva microbiome in primary Sjögren's syndrome reveals distinct set of disease-associated microbes Oral Diseases; 2019,</p> <p><b>Address:</b> Informatics and Big Data, CSIR Institute of Genomics and Integrative Biology (CSIR-IGIB), New Delhi, India Academy of Scientific &amp; Innovative Research (AcSIR), CSIR-IGIB, New Delhi, India Department of Clinical Immunology and Rheumatology, <b>Christian Medical College Hospital, Vellore</b>, India Genomics and Molecular Medicine, CSIR Institute of Genomics and Integrative Biology, New Delhi, India</p>	INT	JUL TO DEC	Clinical Immunology and Rheumatology	<p>PMC Article 35566 <b>Impact Factor: 2.625 (BIOXBIO-2018)</b> <b>H-Index: 77</b></p>
577.	<p>Shivakumar, Harshini Alur, Aithala, Ramya, Jeyaseelan, L. and Danda, Debashish Association of Diet and Spices with Treatment Outcome in Asian Indian Patients with Rheumatoid Arthritis - A Cross Sectional Study Annals of the Rheumatic Diseases; 2019, 78 624-625</p>	INT	JUL TO DEC	Clinical Immunology and Rheumatology, Biostatistics	<p><b>PMID:</b> WOS:000472207101563 <b>Impact Factor: 14.299 (BIOXBIO - 2018)</b> <b>H-Index: 212</b></p>
578.	<p>Shivakumar, Harshini Alur, Jayakanthan, K., Gowri, Mahasampath, Mathew, John and Danda, Debashish Prevalence of IGA Anticardiolipin antibody and its association with pregnancy morbidity in Asian Indian patients with primary antiphospholipid antibody syndrome and systemic lupus erythematosus - a cross sectional study Annals of the Rheumatic Diseases; 2019, 78 1709-1710</p>	INT	JUL TO DEC	Clinical Immunology and Rheumatology, Biostatistics	<p><b>PMID:</b> WOS:000472207105186 <b>Impact Factor: 14.299 (BIOXBIO - 2018)</b> <b>H-Index: 212</b></p>
579.	<p>Shivendra Verma, Riddhi Dasgupta, Shajith Anoop, Nihal Thomas A study to evaluate the glucagon and incretin responses and identify the role of extrapancreatic glucagon in patients of fibrocalcific pancreatic diabetes. Indian J Endocrinol Metab; 2019, 23 (7): S6</p> <p>Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, Tamil Nadu, India. E-mail: nihal_thomas@yahoo.com</p> <p>ESICON 2019 Abstracts: Background: In tropical countries, one of the common causes for young-onset diabetes is "Fibro Calcific Pancreatic Diabetes" (FCPD). Despite widespread destruction of the pancreas in FCPD, glucagon has been found to be higher in various studies. We hypothesize that hyperglucagonemia in FCPD arises from gut. Aim: The aim of this</p>	NAT	JUL TO DEC	Endocrinology	ESICON 2019

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>study is to evaluate glucagon and incretin responses in patients with FCPD. Methods: Nine FCPD patients and six age- and body mass index-matched healthy controls were subjected to 75 g oral glucose tolerance test (OGTT) followed by isoglycemic intravenous glucose infusion (IIGI). Blood samples were analyzed for incretins and glucagon at nine pre-specified time-points over 3 h and the area under curve was calculated. Results: Glucagon was significantly higher during OGTT compared to IIGI in FCPD patients (<math>98.8 \pm 13</math> pg/ml vs. <math>63.4 \pm 7</math> pg/ml, <math>P = 0.03</math>) and was also higher when compared to controls (<math>98.8 \pm 13</math> pg/ml vs. <math>65.8 \pm 18</math> pg/ml, <math>P = ns</math>). FCPD patients showed very low basal and stimulated c-peptide (<math>0.43 \pm 0.14</math> ng/ml and <math>1.09 \pm 0.3</math> ng/ml, respectively) and pancreatic polypeptide (<math>12.3 \pm 0.0</math> pg/ml and <math>12.0 \pm 0.6</math> pg/ml, respectively) levels. Glucagon-like peptide-1 (GLP-1) was significantly higher in cases on OGTT when compared to controls (<math>44.5 \pm 9.2</math> pM vs. <math>12.8 \pm 7.5</math> pM, <math>P = 0.02</math>). Oxyntomodulin was also insignificantly higher in cases on OGTT when compared to controls (<math>1252 \pm 350</math> pg/ml vs. <math>859.8 \pm 165</math> pg/ml, <math>P = 0.43</math>). GIP was lower in cases on IIGI when compared to controls (<math>52.9 \pm 23.9</math> pg/ml vs. <math>144.5 \pm 36.1</math> pg/ml, <math>P = 0.045</math>) and there was blunted response on OGTT as well (<math>106.8 \pm 40.3</math> pg/ml vs. <math>557.8 \pm 96.4</math> pg/ml, <math>P = 0.003</math>). Discussion: We found hyperglucagonemia in FCPD on OGTT, which was suppressed on IIGI. Increase in L-cell products: GLP-1 and oxyntomodulin and a good correlation between glucagon and GLP-1 during OGTT were suggestive of extrapancreatic glucagon production probably from L-cell. The blunted GIP could probably be due to: inadequate pancreatic enzyme supplements, a selective PC-2 enzyme up-regulation or a negative feedback regulation from extrapancreatic glucagon. Conclusion: Extrapancreatic glucagon does exist in FCPD and may contribute to postprandial hyperglycemia and lower GIP levels. Keywords: Extra pancreatic glucagon, GIP, glucagon-like peptide -1, oxyntomodulin</p>				
580.	<p>Shyamasundar, L. G., Loganathan, L., Kumar, A., Selina, A. and Madhuri, V.            MATN3 Mutation Causing Spondyloepimetaphyseal Dysplasia            Indian J Pediatr. 2019 Nov 14.            doi: 10.1007/s12098-019-03100-5. [Epub ahead of print]<b>Address:</b>            Pediatric Orthopedic Unit, <b>Christian Medical College</b>, Ida Scudder Road, Vellore, Tamil Nadu, 632004, India.            Pediatric Orthopedic Unit, <b>Christian Medical College</b>, Ida Scudder Road, Vellore, Tamil Nadu, 632004, India.            madhuriwalter@cmcvellore.ac.in.</p>	NAT	JUL TO DEC	Pediatric Orthopedics	<p><b>PMID:</b> 31724101  <b>Impact Factor:</b> 1.136  <b>(BIOXBIO - 2018)</b>  <b>H-Index:</b> 43</p>
581.	<p>Simon Rajaratnam, Nihal Thomas, Thomas V. Paul, H. S. Asha, Nitin</p>	NAT	JUL TO DEC	Endocrinology, Neurological	<p><b>Impact Factor:</b> 1.70</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Kapoor, Ari George Chacko<sup>1</sup> , Bylis Vivek Joseph<sup>1</sup> , Vedantam Rajshekhar<sup>1</sup>                      Our experience with macroprolactinomas</p> <p>Departments of Endocrinology and 1 Neurological Sciences, Christian Medical College, Vellore, Tamil Nadu, India. E-mail: simonrajaratnam@yahoo.com</p> <p>ESICON 2019 Abstracts: Objective: The objective was to study the clinical profile and treatment response of macroprolactinomas. Methods: Between 2002 and 2018, 884 patients were diagnosed as prolactinomas and 373 had macroprolactinomas. Those coming for &gt;1 year were included in this study. Those who had surgery or radiation therapy (RT) elsewhere were excluded. Classification: macroadenomas (M): tumors 1–3 cm, not invading surrounding structures; invasive macroadenomas (IM): tumors &gt;3 cm, invading surrounding structures; and giant adenomas (GA): tumors &gt;4 cm, invading surrounding structures. Results: This study included 100 (M), 66 (IM), and 40 (GA) patients. These tumors occurred mostly in men in the third decade. Patients with large tumors (IM and GA) presented with headache (47.5% and 57.6%) and decreased vision (59% and 60%). The median tumor volume (cm<sup>3</sup> ) was 27 (M), 139 (IM), and 161 (GA). The median prolactin level (ng/ dL) was 1003 (M), 4980 (IM), and 5676 (GA). Hypogonadism was very common in 89% (M), 86% (IM), and 83% (GA). Hypothyroidism occurred in 20% (M and IA) and 21% (GA). Hypocortisolism was seen in 8% (M), 16% (IM), and 11% (GA). All patients were treated with cabergoline; the median dose was 2 mg/week (range, 1–4.5 mg/ week). Ten patients with M, 3 with IM, and 2 with GA underwent surgery as they could not afford medical treatment long term. Two patients with M also underwent RT. The median follow-up was for 4 years (range, 1–16 years). Median prolactin level (mg/dL) reduced to 6.9 (M), 12.2 (IM), and 13.9 (GA). Median tumor volume (cm<sup>3</sup>) decreased to 7 (M), 49 (IM), and 51 (GA). No tumor was seen in 28% (M), 20% (IM), and 21% (GA). Visual improvement occurred in 76% (M), 81% (IM), and 75% (GA). Hypogonadism improved in 63% of patients with (M), and 16/19 women with primary infertility conceived with treatment. Conclusion: Even large tumors (IM and GA) respond well to cabergoline, adjuvant treatment is usually not required. In patients with smaller noninvasive tumors (M), the gonadal axis usually recovers and fertility may be restored. Most patients will need to continue cabergoline long term. Keywords: Giant adenomas, invasive macroadenomas, macroadenomas</p>			Sciences	<b>(resurchify.com)</b> <b>H-Index: 19</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
582.	<p>Sindhu, K. N., Ramamurthy, P., Ramanujam, K., Henry, A., Bondu, J. D., John, S. M., Babji, S., Koshy, B., Bose, A., Kang, G. and Mohan, V. R.                      Low head circumference during early childhood and its predictors in a semi-urban settlement of Vellore, Southern India                      BMC Pediatr. 2019 Jun 6;19(1):182.                      doi: 10.1186/s12887-019-1553-0.</p> <p><b>Address:</b> Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.                      Rural Unit for Health and Social Affairs, <b>Christian Medical College, Vellore</b>, Tamil Nadu, 632 209, India.                      drprashanth@cmcvellore.ac.in.                      Department of Clinical Biochemistry, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.                      Low Cost Effective Care Unit, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.                      Developmental Pediatric Unit, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.                      Department of Community Health, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</p> <p>BACKGROUND: Stunting in developing countries continues to be a major public health problem. Measuring head circumference (HC) during clinical anthropometric assessment can help predict stunting. The aim of this study was to assess burden and determine the predictors of low HC (&lt; - 2 SD) at birth and during first 2 years of life in a semi- urban settlement of Vellore. METHODS: The study uses baseline data and serial HC measurements from the birth cohort of MAL-ED study, where 228 children from Vellore completed follow-up between March 2010 to February 2014. Analysis of baseline, maternal and paternal characteristics, micro-nutrient status and cognition with HC measurements was performed using STATA version 13.0 software. RESULTS: The mean HC (+/-SD) at 1st, 12th and 24th month were 33.37 (1.29) cm, 42.76 (1.23) cm and 44.9 (1.22) cm respectively. A third of the infants (75/228) had HC less than - 2 SD at first month of life, and on follow-up, 50% of the cohort had HC &lt; / = -2 SD both at 12th and 24th month. Low HC measurements at all three time-points were observed for 21.6% (46/222) infants. Low HC was significantly associated with stunting in 37.3% (OR = 10.8), 57.3% (OR = 3.1) and 44.4% (OR = 2.6) children at 1st, 12th and 24th month respectively. Bivariate analysis of low HC (&lt; - 2 SD) at 12th month showed a statistically significant</p>	INT	JAN TO JUN	Gastrointestinal Sciences, Clinical Biochemistry, Low Cost Effective Care Unit, Pediatric Unit, Community Health	<p><b>PMID:31170939</b>  <b>PMC ID:6552319</b>  <b>Impact Factor: 2.042</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 64</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	association with lower socioeconomic status, low paternal and maternal HC and low maternal IQ. Multivariable logistic regression analysis showed maternal (AOR = 0.759, 95% CI = 0.604 to 0.954) and paternal (AOR = 0.734, 95% CI = 0.581 to 0.930) HC to be significantly associated with HC attained by the infant at the end of 12 months. CONCLUSIONS: One-third of the children in our cohort had low head circumference (HC) at birth, with one-fifth recording low HC at all time-points until 2 years of age. Low HC was significantly associated with stunting. Paternal and maternal HC predicted HC in children. HC measurement, often less used, can be a simple tool that can be additionally used by clinicians as well as parents/caregivers to monitor child growth.				
583.	<p>Sindhu, K. N., Srinivasan, M., Subramaniam, S., David, A. S., Mohan, V. R., John, J. and Kang, G.</p> <p>Why do participants drop-out: findings from a prospective pediatric cohort for fever surveillance established at Vellore, southern India BMC Med Res Methodol; 2019, 19 (1): 244</p> <p><b>Address:</b> Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore,</b> 632004, India. Department of Community Health, <b>Christian Medical College, Vellore,</b> 632002, India. Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore,</b> 632004, India. gkang@cmcvellore.ac.in.</p> <p>BACKGROUND: Cohort studies are pivotal in understanding the natural history, and to thereby determine the incidence of a disease. The conduct of large-scale community-based cohort studies is challenging with reference to money, manpower and time. Further, attrition inherent to cohort studies can affect the power, and thereby the study's validity. Our objective was to estimate the percentage of participant withdrawal and to subsequently understand reasons for the same in the Vellore Typhoid Surveillance (VTS) cohort. METHODS: VTS study, a prospective community-based pediatric cohort, was established in a semi-urban settlement of Vellore to estimate the incidence rate of typhoid fever. An active weekly surveillance identified children with fever, and blood cultures were performed for fevers of <math>\geq 3</math> days. Reasons for participant drop-out in the cohort were documented. Nine focus group discussions (FGD), each with 5 to 7 parents/primary caregivers of former as well current participants were conducted separately, to understand reasons for consent withdrawal as well as the good aspects of the study that the</p>	INT	JUL TO DEC	Wellcome Trust Research Laboratory, Community Medicine	<p><b>PMID:31888513</b>  <b>PMC ID:6937945</b>  <b>35316</b>  <b>Impact Factor: 2.509</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index:97</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>current participants perceived. A descriptive, as well as an interpretative account of the themes that emerged from the FGDs were done. RESULTS: Of the 5639 children in the VTS cohort, 404 (7.2%) withdrew consent during the 12-month surveillance. Of these, 50% dropped out due to migration from study area; 18.1% as their parents were unhappy with the blood draws for blood culture; and 14.4% did not clearly put forth the reason for consent withdrawal. Being from an orthodox background, high socio-economic status and joint family were associated with a decision to drop-out. Frequent and voluminous blood draws, male field research assistants (FRA) making weekly home-visits, the perception that inquiring about fever made their child fall sick, and that the study clinic did not initiate antibiotics immediately, were the important themes that emerged from the FGDs conducted among drop-outs. CONCLUSION: Our study showed that specific beliefs and behaviours within the community influenced the drop-out rate of the VTS cohort. Background characteristics and perceptions that exist, along with attrition data from previous cohort studies in the specific community are important to be considered while implementing large-scale cohort studies.</p>				
584.	<p>Singh, H. R. and Rabi, S.            Study of morphological variations of liver in human            Translational Research in Anatomy; 2019, 14 1-5  <b>Address:</b> Department of Anatomy, <b>Christian Medical College, Vellore, India</b></p> <p>Introduction: Knowledge of variations in the external morphology of liver is essential during radiological in-vestigations and surgery. There are only a few studies which have dealt with the surface variations of the liver. The aim of the present study is to determine the gross anatomical variations of the liver in the South Indian population. Material and methods: The morphological variations of the liver such as changes in size and shape, presence of fissures, pons hepatis and accessory lobes were noted in 70 formalin fixed livers. Results: The morphological variations included fissures in the right, left, caudate and quadrate lobes of the liver (81.4%), elongated left lobe or Beaver's lobe or Netter's type 4 (12.86%), Netter type 2 liver (1.43%), pons hepatis (22.9%), conical shaped right lobe (18.57%), notched border (10%), accessory lobe (12.86%) and quadrate lobe with tongue like projection (7.14%). Variations in caudate lobe including underdeveloped and hypertrophied caudate and papillary process were noted. Conclusion: In this study, various morphological variations of</p>	INT	JUL TO DEC	Anatomy	<p><b>PMC Article</b>  <b>35359</b>  <b>Impact Factor: 0.48</b>  <b>(Journal Website)</b>  <b>H-Index:3</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>liver were observed. The awareness about this willaid the radiologists to make more accurate analysis of the radiological images and thereby aiding in the re-duction of the false reports.1. IntroductionThe knowledge of normal and variant anatomy of the liver is im-portant during radiological investigation and surgery. Variations in theliver morphology can be either congenital or acquired. The congenitalabnormalities of the liver include agenesis, atrophy or hypoplasia oflobes, accessory lobes, accessoryfissures etc. It has been found out inIndian population, that accessory lobes are present in 10% of the po-pulation [1]. The mini accessory lobe might be mistaken for a lymphnode due to its small size and removed during the surgeries [1]. Theaccessoryfissures are the potential sources of diagnostic errors duringimaging. It may be mistaken for a liver cyst, haematoma or abscesswhen there is a collection offluid in thesefissures. Metastatic tumourcells getting lodged into these spaces may mimic intrahepatic focal le-sions [2]. Various other anomalies like pons hepatis connecting the leftlobe with the quadrate lobe [1], hypoplasia of right lobe of the liver [3]have been reported. Acquired variations in liver could be due to thepressure given by diaphragm, peritoneal ligaments and other organs inrelation with liver so developed during lifetime of a person [4]. Netterclassified the morphological variations of liver into 7 types as describedin Table 1[5].Though variation in the branching pattern of the hepatobiliarysystem has been extensively studied, the morphological variations ofthe liver have not been studied at length. Knowledge of such variationsis also important as these do not always remain clinically latent thoughmost often it may be clinically asymptomatic. Awareness of these var-iations would help both the surgeons and radiologists to avoid mis-diagnosis of cases and unnecessary surgical complications. This studyaims to determine the gross anatomical variations of the liver in theSouth Indian population.2. Materials and methodThe study was conducted in the Department of Anatomy of ourinstitution after obtaining the ethical clearance from the InstitutionalReview Board. Seventy liver specimens available in the Departmentwere used for the study. The liver specimens were removed duringroutine dissection for medical undergraduate teaching and were pre-served in 10% formalin. The morphological variations of the liver suchas changes in size and shape, presence of pons hepatis, accessory lobesandfissures were noted. Photographs were taken to document thevariations. The results obtained were then tabulated.<a href="https://doi.org/10.1016/j.tria.2018.11.004">https://doi.org/10.1016/j.tria.2018.11.004</a> Received 6 September 2018; Received in revised form 9 November 2018; Accepted 9 November 2018</p>				

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Corresponding author. Department of Anatomy, <b>Christian Medical College, Vellore</b>, 632002, India.                      E-mail address: suganthyraabi@hotmail.com(S. Rabi).                      1Present <b>Address:</b> Dr. Haobam Rajajee Singh, Medical Officer, Manipal Health Service, Imphal, 795001. Translational Research in Anatomy 14 (2019) 1-5 Available online 19 November 2018 2214-854X/ © 2018 The Authors. Published by Elsevier GmbH. This is an open access article under the CC BY-NC-ND license (<a href="http://creativecommons.org/licenses/by-nc-nd/4.0/">http://creativecommons.org/licenses/by-nc-nd/4.0/</a>).T</p>				
585.	<p>Singh, R. and Kumar, S.                      Development, Dosimetric Evaluation and Applications of Complimentary Metal Oxide Semiconductor in Radiotherapy Medical Physics; 2019, 46 (6): E534-E534  <b>Author Information</b>  <b>Addresses:</b>                      [1]. <b>Christian Med Coll &amp; Hosp, Vellore</b>, Tamil Nadu, India</p>	NAT	JUL TO DEC	Radiotherapy	<p><b>WOS:000471277704134</b>  <b>Impact Factor: 3.177</b>  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 159</b></p>
586.	<p>Sinha, R. S., Cynthia, D. S., Kumar, P. V., Armstrong, L. J., Bose, A. and George, K.                      Admissions to a sick new born care unit in a secondary care hospital: Profile and outcomes                      Indian J Public Health; 2019, 63 (2): 128-132</p> <p><b>Address:</b> Field Research Officer - VL, CARE India, Patna, India.                      Assistant Professor, Department of Community Medicine, Government Vellore Medical College, Vellore, Tamil Nadu, India.                      Paediatric Infectious Diseases Fellow, Department of Child Health - Unit 3, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.                      Research Coordinator, Epidemiology and Research Department, Duncan Hospital, Raxaul, Bihar, India.                      Professor, Department of Community Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>Background: To reduce neonatal mortality in North Bihar, evidence is required about the impact of sick newborn care units (SNCUs) in secondary level hospitals on mortality at the end of the neonatal period. Objectives: The objective of the study is to assess the profile of neonates admitted to an SNCU and the outcome at the completion of neonatal period. Methods: A cohort of neonates admitted from March to June 2014 to an SNCU was assessed through family interviews and hospital records. Demographic details (age, sex, and socioeconomic status) and clinical details (antenatal care, birthplace, weight, diagnosis, and family history) were documented. Follow-up</p>	NAT	JAN TO JUN	Child Health, Community Medicine	<p><b>PMID:31219061</b>  <b>PMC</b>  <b>Impact Factor: 0.45</b>  <b>(RG-2018)</b>  <b>H-Index: 21</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>was done at discharge or death or referral and the completion of neonatal period. The primary outcome was survival at the completion of neonatal period. Secondary outcomes were case fatality rate at discharge and weight gain. Results: Of 210 neonates assessed, 87.6% (95% confidence interval [CI] 82.4-91.4) survived till the end of the neonatal period. The case fatality rate at the time of discharge was 0.9% (95% CI 0.3-3.4). Majority of the diagnoses were infections, hyperbilirubinemia, and infant of diabetic mother. Mean weight gain at the end of neonatal period (n = 157) was 706 g (P = 0.00). Sex ratio at admission was 567 girls to 1000 boys (95% CI 428/1000-751/1000). No neonate from lower socioeconomic families was admitted. Conclusions: SNCUs in remote areas can bring down neonatal mortality in North Bihar. Unequal access of SNCUs services to girls and lower socioeconomic groups highlighted the existing barriers which require attention.</p>				
587.	<p>Sinha, R., Vasudevan, A., Agarwal, I., Sethi, S. K., Saha, A., Pradhan, S., Ekambaram, S., Thaker, N., Matnani, M., Banerjee, S., Sharma, J., Singhal, J., Ashraf, S. and Mandal, K.                      Congenital nephrotic syndrome in India in the current era: A multicenter case series                      Nephron; 2019, <b>Address:</b> Division of Paediatric Nephrology, Institute of Child Health, 37G Bondel Road, Kolkata, 700019, India                      Department of Paediatrics, Apollo Gleneagles Hospital, Kolkata, India                      Department of Paediatric Nephrology, St. John's Medical College Hospital, Bengaluru, India                      Division of Paediatric Nephrology, Christian Medical College Hospital, Vellore, India                      Pediatric Nephrology, Kidney Institute, Medanta, the Medicity, Gurgaon, India                      Department of Paediatrics, Lady Hardinge Medical College, New Delhi, India                      Department of Paediatrics, SVPPGIP and SCB Medical College, Cuttack, India                      Mehta Multispeciality Hospitals India Pvt Ltd., Chennai, India                      Children Nephrology Center, Department of Paediatric Nephrology, Ahmedabad, India                      KEM Hospital and Jehangir Hospital, Pune, India                      Calcutta Medical Research Institute, Kolkata, India                      Department of Medical Genetics, KEM Hospital, Pune, India                      Boston Children's Hospital, Harvard Medical School, Boston, MA, United States                      Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, India</p>	INT	JUL TO DEC	Pediatric Nephrology	<b>PMC Article 35428</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
588.	<p>Sivadasan, A., Alexander, M., Aaron, S., Mathew, V., Nair, S., Muthusamy, K., Prabhakar, A. T., Benjamin, R. N., Shaikh, A. and Rynjah, G.</p> <p>Comorbidities and Long-Term Outcomes in a Cohort with Myasthenic Crisis: Experiences from a Tertiary Care Center Ann Indian Acad Neurol; 2019, 22 (4): 464-471</p> <p><b>Address:</b> Department of Neurological Sciences, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Introduction: There is scarce literature regarding the clinical course, comorbidities and long-term outcomes after myasthenic crisis (MC). The natural history of myasthenia gravis (MG) in this subset remains uncertain. Methods: The study included a cohort admitted with MC (2007-2017) in a tertiary care hospital. The comorbidities, outcomes after discharge, and prognostic factors were analyzed. Results: Sixty-two patients (89 episodes of MC) were included. Demographic data was comparable between the early- (&lt;50 years) and late-onset (&gt;/=50 years) groups. Comorbidities included stress cardiomyopathy (14.5%), arrhythmias (6.4%), neuropathy (17.7%), pancytopenia (12.9%), encephalopathy (11.2%), neuromyotonia (4.8%), myelopathy (3.2%), and myositis (3.2%). Pulmonary embolism (P &lt; 0.008), dysautonomia (P &lt; 0.002), sepsis (P &lt; 0.008), neuropathy (P &lt; 0.002), and phrenic dysfunction (P &lt; 0.016) were associated with prolonged ventilation. Majority of the patients (42, 67.7%) had a favorable outcome (disease status) as defined by remission/minimal manifestations at the time of last follow-up (median 36 months, IQR 15-66). Persistent bulbar weakness (P &lt; 0.001), neuropsychiatric illness (P &lt; 0.001), and comorbidities (P &lt; 0.017) were associated with refractory MG. Eighteen patients (29%) had recurrent crisis. Eleven patients succumbed in the cohort. The main predictors of mortality were tumor progression (P &lt; 0.001) and cardiac illness (P &lt; 0.004). Discussion: A comprehensive treatment approach in MC will translate to good short- and long-term outcomes. The main cornerstones of therapy will include (1) Identification of refractory MG with the implementation of phenotype-based therapy; (2) Addressing comorbidities including cardiac autonomic neuropathy, bulbar weakness, phrenic dysfunction; and (3) Meticulous tumor surveillance.</p>	NAT	JUL TO DEC	Neurological Sciences	<p><b>PMID:</b> 31736571  <b>Impact Factor:</b> 0.898  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 22</b></p>
589.	<p>Snyder, B. M., Montague, B. T., Anandan, S., Madabhushi, A. G., Pragasam, A. K., Verghese, V. P., Balaji, V. and Simoes, E. A. F.</p> <p>Risk factors and epidemiologic predictors of blood stream infections with New Delhi Metallo-b-lactamase (NDM-1) producing</p>	INT	JAN TO JUN	Clinical Microbiology	<p><b>PMID:</b>30869056  <b>PMC ID:</b>6518792  <b>Impact Factor: 1.74</b>  <b>(RG-2018)</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Enterobacteriaceae Epidemiol Infect; 2019, 147 e137</p> <p><b>Address:</b> University of Colorado School of Medicine,Aurora Colorado,USA. Department of Clinical Microbiology,<b>Christian Medical College Hospital,Vellore,India.</b> Department of Paediatrics,<b>Christian Medical College Hospital,Vellore,India.</b></p> <p>Carbapenem-resistant Enterobacteriaceae conferred by New Delhi metallo-b-lactamase (NDM-1) resistance mechanism are endemic in India and Southeast Asia. An understanding of risk factors for NDM-1 infections is necessary to guide prevention strategies. We performed a retrospective case-control study of patients admitted at <b>Christian Medical College Hospital, Vellore, India</b> between May 2010 and August 2014 with Klebsiella pneumoniae blood stream infection (BSI). We compared patients with BSI caused by NDM-1 producing strains to two control groups: BSI with other multidrug resistant (MDR) strains and BSI with pan-susceptible strains. The study groups were assessed for risk factors for the outcomes: (1) infection with any MDR strain compared to pan-susceptible; and, (2) infection with NDM-1 strain as compared with other MDR and (3) Mortality. A total of 101 patients with BSI with NDM-1 producing Klebsiella pneumoniae were matched to two groups of controls: 112 with non-NDM-1 MDR strains and 101 with pan-susceptible strains. Medical (OR 10.4) and neonatal (OR 0.7) ICU admission, central venous catheter placement (CVC, OR 7.4) predicted MDR BSI. Prior carbapenem use (OR 8.4) and CVC (OR 4.8) predicted acquisition of an NDM-1 strain. Significant predictors for mortality included ICU stay (OR 3.0), mechanical ventilation (OR 3.2), female gender (OR 2.2), diabetes (OR 0.4). CVC placement, prior carbapenem use and ICU admission were significantly associated with BSI with NDM-1 producing and other MDR strains.</p>				<b>H-Index: 99</b>
590.	<p>Solaimalai, D., Devanga Ragupathi, N. K., Ranjini, K., Paul, H., Verghese, V. P., Michael, J. S., Veeraraghavan, B. and James, E. J. Ultrasound gel as a source of hospital outbreaks: Indian experience and literature review Indian J Med Microbiol; 2019, 37 (2): 263-267</p> <p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Child Health, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p>	NAT	JUL TO DEC	Clinical Microbiology, Child Health	<b>PMID:</b> 31745029 <b>Impact Factor:</b> 0.950 <b>(BIOXBIO - 2018)</b> <b>H-Index: 41</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Hospital Infection Control Committee, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Department of Child Health; Hospital Infection Control Committee, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Department of Clinical Microbiology; Hospital Infection Control Committee, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Purpose: Hospital outbreaks are observed increasingly worldwide with various organisms from different sources such as contaminated ultrasound gel, intravenous (IV) fluids and IV medications. Among these, ultrasound gel is one of the most commonly reported sources for Burkholderia cepacia complex (Bcc) outbreaks. In this study, we describe our experience on investigation and the management of Bcc bacteraemia outbreak due to contaminated ultrasound gel from a tertiary care centre, South India. Materials and Methods: Over a 10-day period in October 2016, seven children in our Paediatric intensive care unit (ICU) were found to have bacteraemia with Bcc isolated from their blood culture. Repeated isolation of the same organism with similar antimicrobial susceptibility pattern over a short incubation period from the same location, confirmed the outbreak. An active outbreak investigation, including environmental surveillance, was carried out to find the source and control the outbreak. Isolates were subjected to multi-locus sequence typing (MLST) and global eBURST (goeBURST) analysis. Results: Environmental surveillance revealed contaminated ultrasound gel as the source of infection. MLST and goeBURST analysis confirmed that the outbreak was caused by a novel sequence type 1362 with the same clonal complex CC517. The outbreak was controlled by stringent infection control measures, withdrawal of contaminated ultrasound gel from regular usage and implementing the practice of using ultrasonogram (USG) probe cover for USG screening and guided procedures. Conclusion: This report highlights the importance of early identification of an outbreak, prompt response of the ICU and infection control teams, sound environmental and epidemiological surveillance methods to identify the source and stringent infection control measures to control the outbreak. Contaminated ultrasound gel can be a potential source for healthcare-associated infection, which cannot be overlooked.</p>				
591.	<p>Son, S., Thamlikitkul, V., Chokephaibulkit, K., Perera, J., Jayatilleke, K., Hsueh, P. R., Lu, C. Y., Balaji, V., Moriuchi, H., Nakashima, Y., Lu, M., Yang, Y., Yao, K., Kim, S. H., Song, J. H., Kim, S., Kim, M. J., Heininger, U., Chiu, C. H. and Kim, Y. J.</p> <p>Prospective multinational serosurveillance study of Bordetella</p>	INT	JUL TO DEC	Clinical Microbiology	<p><b>PMID:</b> 29689428  <b>Impact Factor:</b> 6.425  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 131</b></p>



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>pertussis infection among 10- to 18-year-old Asian children and adolescents  Clin Microbiol Infect; 2019, 25 (2): 250 e1-250 e7  <b>Address:</b> Samsung Medical Center, Sungkyunkwan University, Department of Pediatrics, Seoul, South Korea.  Faculty of Medicine Siriraj Hospital, Mahidol University, Department of Medicine, Bangkok, Thailand.  University of Colombo, Department of Microbiology, Colombo, Sri Lanka.  Sri Jayewardenepura General Hospital, Department of Microbiology, Nugegoda, Sri Lanka.  National Taiwan University Hospital, Departments of Laboratory Medicine and Internal Medicine, Taipei, Taiwan.  National Taiwan University Hospital, Department of Pediatrics, Taipei, Taiwan.  Christian Medical College &amp; Hospital, Department of Clinical Microbiology, Vellore, India.  Graduate School of Biomedical Sciences, Nagasaki University, Department of Molecular Microbiology and Immunology, Nagasaki, Japan.  Shanghai Children's Hospital, Department of Pulmonary Medicine, Shanghai, China.  Beijing Children's Hospital, Capital Medical University, Department of Microbiology and Immunology, Beijing, China.  Asia Pacific Foundation for Infectious Diseases (APFID), Division of Infectious Disease, Seoul, South Korea.  Samsung Medical Center, Statistics and Data Center, Seoul, South Korea.  University of Basel Children's Hospital, Pediatric Infectious Diseases and Vaccinology, Basel, Switzerland.  Chang Gung Children's Hospital, Chang Gung University, Department of Pediatrics, Taoyuan, Taiwan. Electronic <b>Address:</b> chchiu@cgmh.org.tw.  Samsung Medical Center, Sungkyunkwan University, Department of Pediatrics, Seoul, South Korea. Electronic <b>Address:</b> yaejeankim@skku.edu.  OBJECTIVES: Bordetella pertussis continues to cause outbreaks worldwide. To assess the role of children and adolescent in transmission of pertussis in Asia, we performed a multinational serosurveillance study. METHODS: From July 2013 to June 2016, individuals aged 10 to 18 years who had not received any pertussis-containing vaccine within the prior year were recruited in 10 centres in Asia. Serum anti-pertussis toxin (PT) IgG was</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>measured by ELISA. Demographic data and medical histories were obtained. In the absence of pertussis immunization, anti-PT IgG <math>\geq 62.5</math> IU/mL was interpreted as B. pertussis infection within 12 months prior, among them levels <math>\geq 125</math> IU/mL were further identified as infection within 6 months. RESULTS: A total of 1802 individuals were enrolled. Anti-PT IgG geometric mean concentration was 4.5, and 87 (4.8%) individuals had levels <math>\geq 62.5</math> IU/mL; among them, 73 (83.9%) had received three or more doses of pertussis vaccine before age 6 years. Of 30 participants with persistent cough during the past 6 months, one (3.3%) had level <math>\geq 125</math> IU/mL. There was no significant difference in proportions with anti-PT IgG <math>\geq 62.5</math> IU/mL among age groups (13-15 vs. 10-12 years, 16-18 vs. 10-12 years), between types of diphtheria, pertussis and tetanus (DTP; whole cell vs. acellular), number of doses before age 6 years within the DTP whole-cell pertussis vaccine (five vs. four doses) or acellular pertussis vaccine (five vs. four doses) and history of persistent cough during the past 6 months (yes vs. no). CONCLUSIONS: There is significant circulation of B. pertussis amongst Asian children and adolescents, with one in 20 having serologic evidence of recent infection regardless of vaccination background.</p>				
592.	<p>Song, Lan, Brezden-Masley, Christine, Ramanan, Venkat, Ghugre, Nilesh, Barfett, Joseph J., Chan, Kelvin K. W., Haq, Rashida, Petrella, Teresa, Dhir, Vinita, Jimenez-Juan, Laura, Chacko, Binita Riya, Kotha, Vamshi, Connelly, Kim A. and Yan, Andrew T.            Serial Measurements of Left Ventricular Systolic and Diastolic Function by Cardiac Magnetic Resonance Imaging in Patients with Early Stage Breast Cancer on Trastuzumab            American Journal of Cardiology; 2019, 123 (7): 1173-1179</p> <p><b>Author Information</b></p> <p><b>Reprint Address:</b> Yan, AT (reprint author)            St Michaels Hosp, Terrence Donnelly Heart Ctr, Toronto, ON, Canada.  <b>Reprint Address:</b> Yan, AT (reprint author)            Univ Toronto, Toronto, ON, Canada.</p> <p><b>Addresses:</b>            [1] St Michaels Hosp, Terrence Donnelly Heart Ctr, Toronto, ON, Canada            [2] Univ Toronto, Toronto, ON, Canada            [3] St Michaels Hosp, Div Hematol Oncol, Toronto, ON, Canada            [4] Univ Toronto, Sunnybrook Res Inst, Schulich Heart Res Program, Toronto, ON, Canada            [5] Univ Toronto, Dept Med Biophys, Toronto, ON, Canada</p>	INT	JUL TO DEC	Radiology	<p><b>PMID:</b>WOS:00046331090023  <b>Impact Factor:</b> 2.843  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 206</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>[6] St Michaels Hosp, Dept Med Imaging, Toronto, ON, Canada            [7] Canadian Ctr Appl Res Canc Control, Sunnybrook Odette Canc Ctr, Toronto, ON, Canada            [8] Sunnybrook Odette Canc Ctr, Toronto, ON, Canada            [9] Sunnybrook Hlth Sci Ctr, Dept Med Imaging, Toronto, ON, Canada            [10] <b>Christian Med Coll &amp; Hosp, Dept Radiol, Vellore</b>, Tamil Nadu, India            [11] Univ Calgary, Dept Radiol, Calgary, AB, Canada  <b>E-mail Addresses:</b><a href="mailto:yana@smh.ca">yana@smh.ca</a></p> <p>Our aim was to evaluate the temporal changes in left ventricular (LV) diastolic filling in relation to other LV parameters using cardiac MRI (CMR) in patients with HER2 positive breast cancer receiving trastuzumab therapy. Forty-one women with early stage HER2+ breast cancer underwent serial CMR (baseline, 6, 12, and 18 months) after initiation of trastuzumab therapy. A single, blinded observer measured LV parameters on de-identified CMRs in random order. Linear mixed models were used to investigate temporal changes. Compared to baseline, there were significant decreases in systolic function as measured by both left ventricular ejection fraction (LVEF) (<math>p &lt; 0.001</math> at 6 and 12 months) and peak ejection rate corrected for end-diastolic volume (PER/LVEDV) (<math>p = 0.008</math> at 6 months, <math>p = 0.01</math> at 12 months). However, these differences were no longer significant at 18 months. In contrast, significant reductions in diastolic function as measured by LV peak filling rate corrected for end-diastolic volume (PFR/LVEDV) were observed at 6 months (<math>p = 0.012</math>), 12 months (<math>p = 0.031</math>), and up to 18 months (<math>p = 0.034</math>). There were no significant temporal changes in the time to peak filling rate corrected for cardiac cycle (TPF/RR). The reduction in PFR/LVEDV at 18 months was no longer significant when corrected for heart rate. In conclusion, there were significant subclinical deleterious effects on both LV systolic and diastolic function among patients receiving trastuzumab. While there was recovery in LV systolic function after therapy cessation at 18 months, reduction in PFR/LVEDV appeared to persist. Thus, diastolic dysfunction may serve as a marker of trastuzumab-induced cardiotoxicity that needs to be confirmed in a larger study. (C) 2019 Elsevier Inc. All rights reserved.</p>				
<b>593.</b>	<p>Sooragonda, B., Cherian, K. E., Jebasingh, F. K., Dasgupta, R., Asha, H. S., Kapoor, N., Thomas, N. and Paul, T. V.            Longitudinal changes in bone mineral density and trabecular bone score following yearly zoledronic acid infusion in postmenopausal osteoporosis-a retrospective-prospective study from southern India</p>	<b>INT</b>	<b>JUL TO DEC</b>	Endocrinology	<b>PMID: 31321603</b> <b>Impact Factor: NA</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 23</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Arch Osteoporos; 2019, 14 (1): 79  <b>Address:</b> Department of Endocrinology, <b>Christian Medical College, Vellore, India.</b>                      Department of Endocrinology, <b>Christian Medical College, Vellore, India.</b> thomasvpaul@yahoo.com.</p> <p>This study from southern India showed that yearly administration of zoledronic acid demonstrated significant improvement in BMD at lumbar spine following two doses and no decline in BMD at femoral neck or hip and trabecular bone score (TBS) in postmenopausal women. PURPOSE: There is limited information available with regard to the impact of zoledronic acid treatment on bone mineral density (BMD) and trabecular bone score (TBS) in Indian postmenopausal women with osteoporosis. We studied the changes in BMD at femoral neck (FN), hip and lumbar spine (LS), and in TBS following yearly administration of zoledronic acid (ZA) in subjects with postmenopausal osteoporosis. MATERIAL AND METHODS: This was a prospective-retrospective study which included subjects on follow-up after administration of yearly zoledronic acid, over the past 6 years. Postmenopausal women with a T score of <math>\leq -2.5</math> at any site, assessed by dual energy X-ray absorptiometry (DXA), were included. RESULTS: A total of 620 subjects had received ZA during the study period, 197 postmenopausal women were eligible, and follow-up data were available in 164 and 103 at 1st and 2nd follow-up yearly visits respectively. The mean (SD) age and BMI of the women were 63.2 (8.5) years and 25.6 (4.5) kg/m<sup>2</sup> respectively. There was significant increment in LS BMD from baseline to the 1st and 2nd follow-up visits, respectively (mean (SD), 0.718 (0.116), 0.734 (0.104), 0.762 (0.127) g/cm<sup>2</sup>, <math>p = 0.024</math>). No decline in the BMD at FN and hip at first and second follow visit was found. The TBS scores (<math>n = 90</math>) on baseline and follow-up visits were 1.260 (+/-0.11), 1.256 (+/- 0.15), and 1.242 (+/- 0.17) (<math>p</math> value = 0.71). CONCLUSION: Lumbar spine BMD showed significant improvement with zoledronic acid treatment. No decline was noted in femoral neck BMD and TBS with treatment.</p>				
594.	<p>Soumya, S. L., Cherian, K. E., Gupta, R. D., Poonnoose, P. M., Hephzibah, J., Prabhu, A. J., Paul, T. V. and Kapoor, N.                      An uncommon cause of polyarthralgia                      J Family Med Prim Care; 2019, 8 (5): 1801-1803</p> <p><b>Address:</b> Department of Endocrinology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.                      Department of Orthopedics, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p>	NAT	JAN TO JUN	Endocrinology, Orthopedics, Nuclear Medicine, Pathology	<p><b>PMID:31198764</b>  <b>PMC ID:6559118</b></p> <p><b>Impact Factor: 0.21 (RG-2018)</b>  <b>H-Index: NA</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Nuclear Medicine, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.                      Department of Pathology, <b>Christian Medical College and Hospital, Vellore</b>, Tamil Nadu, India.</p> <p>Tumour induced osteomalacia (TIO) is a paraneoplastic syndrome characterized by renal phosphate wasting and hypophosphatemic osteomalacia, caused by FGF-23 (Fibroblast growth factor-23) producing mesenchymal tumours. Here, we report the case of a 40 year old lady referred by her family physician for multiple joint pains of 2 years duration. There was no evidence of inflammatory arthritis. Biochemical investigations revealed low phosphorus, with raised alkaline phosphatase and high levels of FGF-23. As a TIO was considered likely, functional imaging with a DOTATATE PET scan was done, which revealed a DOTA avid lesion in the right foot. Following surgical excision of the tumour, there was significant relief in symptoms and gradual recovery of phosphate to normal levels. It is relevant and important for family physicians as in subjects with symptom like polyarthralgia, a simple measurement of analytes like phosphate, calcium and alkaline phosphatase in primary care setting will help to arrive at a cause and referral for further evaluation as this condition is potentially treatable.</p>				
595.	<p>Soumya, S. L., Cherian, K. E., Kapoor, N. and Paul, T. V.                      Reversible Kallmann Syndrome: Rare Yet Real                      Indian J Endocrinol Metab; 2019, 23 (3): 382-383  <b>Address:</b> Department of Endocrinology and Diabetes, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p>	NAT	JUL TO DEC	Endocrinology	<p><b>PMID:</b> 31641646  <b>Impact Factor: 1.70</b>  <b>(resurchify.com)</b>  <b>H-Index: 19</b></p>
596.	<p>Srampickal, G. M., Jacob, K. M., Kandoth, J. J., Yadev, B. K., Palraj, T., Oommen, A. T., George, S. P. and Poonnoose, P. M.                      How effective is periarticular drug infiltration in providing pain relief and early functional outcome following total hip arthroplasty?                      J Clin Orthop Trauma; 2019, 10 (3): 550-554</p> <p><b>Address:</b> Department of Orthopedics Unit II, <b>Christian Medical College, Vellore</b>, TN, 632004, India.                      Department of Biostatistics, <b>Christian Medical College, Vellore</b>, 632004, India.                      Department of Physical Medicine and Rehabilitation, <b>Christian Medical College, Vellore</b>, 632004, India.                      Department of Anaesthesia, <b>Christian Medical College, Vellore</b>, TN, 632004, India.</p> <p>The aim of the study was to compare the efficacy of periarticular</p>	INT	JAN TO JUN	Orthopedics, Biostatistics, Physical Medicine and Rehabilitation, Anaesthesia	<p><b>PMID:31061588</b>  <b>PMC ID:6492212</b>  <b>Impact Factor: 0.35</b>  <b>(RG-2018)</b>  <b>H-Index: 12</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>injection of a cocktail of analgesic drugs (PIC) with epidural infiltration (EA), in providing postoperative pain relief and early functional improvement following Total Hip Arthroplasty (THA). Methods: 50 patients undergoing unilateral THA were randomized to receive either EA or PIC for postoperative pain control. Postoperative pain relief, as determined by the visual analogue scale (VAS), functional recovery and side effects related to EA and PIC were assessed. Results: PIC resulted in significantly lower VAS scores [0.48(0.71) vs 3.04(2.07)] in the first 24h after surgery [mean (SD)], when compared to EA. The pain relief continued to be significantly lower even on the 10th postoperative day. Functional recovery was significantly better in the PIC group, with patients being able to walk longer distances and climb steps more quickly following THA. EA, unlike PIC was associated with side effects like nausea, vomiting, motor weakness, back pain and urinary retention. The overall satisfaction rate with treatment was significantly better in PIC group (9.04/10) than those who received EA (7.76/10). Conclusion: PIC provides significantly better pain control and functional recovery in the early postoperative period, with less side effects when compared with EA. PIC should be the choice for pain control following THA.</p>				
597.	<p>Sravan Chava<sup>1</sup>, Sharad Nair<sup>2</sup>, Vidya Konduru<sup>3</sup>, Amit Tirkey<sup>3</sup>, Rajinikanth Janakiraman<sup>3</sup>            ABS-007: Infra-Red Thermography in Planning and Monitoring of Micro-Vascular Free Flaps in Head and Neck Reconstruction            Journal of Head &amp; Neck Physicians and Surgeons; 2019, 7 (3):S4-S5            1.Department of Head and Neck Surgery, Basavatarakam Indo American Cancer Hospital and Research Institute, Hyderabad, Telangana,            2.Department of Head and Neck Surgery, Apollo Hospital, New Delhi,            3.Department of Head and Neck Surgery, <b>CMC, Vellore</b>, Tamil Nadu, India.E-mail: <a href="mailto:gmcscravan@gmail.com">gmcscravan@gmail.com</a></p> <p>Background: Microvascular free flap transfer has become the standard of care in head and neck reconstruction and has been established as a reliable technique with success rate of more than 95%. The key to success includes appropriate pre-operative planning, adequate intra-operative re-vascularization of the flap and early detection of flap compromise and salvage. The use of Infra-red Thermography (IRT) has been described in all the aspects of free flap; planning, intra-op use and postoperative monitoring. Herein, we present a feasibility study using IRT. IRT uses infrared radiation</p>	NAT	JUL TO DEC	Head and Neck Surgery	<b>Impact Factor: 0.472</b> <b>H-Index: NA</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	waves from objects and quantifies them according to their temperature and presents the findings as a visual image. Methods: A prospective, observational, pilot study of 20 patients undergoing microvascular reconstruction was conducted and IRT was used preoperatively for perforator marking, intra-operatively for detecting revascularization and post-operatively for flap monitoring. Results: Of the 20 cases studied, 6 were Radial artery forearm free flaps, 10 were Fibula free flaps and 4 were Antero-lateral thigh flaps. IRT provided accurate locations of perforators in pre-operative planning, showed variations of temperature gradients during surgery and helped in identifying flap compromise early in postoperative period. Discussion and Conclusion: IRT provides a simple and reliable imaging solution to a surgeon, which can be used pre-operatively for perforator marking and flap designing, Abstract: Journal of Head & Neck Physicians and Surgeons   October 2019   Volume 7   Supplement 1 S5 intra-operatively and post-operatively for checking the perfusion of the flap and patency of the vascular anastomoses. It provides real-time information on flap perfusion during intra-operative and post-operative phases. It is non-invasive, contactless and needs low maintenance cost.				
598.	Sridharan, K., Cherian, K. E., Kapoor, N. and Paul, T. V. A curious case of bony streaks and stripes due to osteopathia striata Postgrad Med J; 2019, <b>Address:</b> Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College and Hospital, Vellore, India.</b> Department of Endocrinology, Diabetes and Metabolism, <b>Christian Medical College and Hospital, Vellore, India</b> kripaec@gmail.com.	NAT	JUL TO DEC	Endocrinology, Diabetes and Metabolism.	<b>PMID:</b> 31653668 <b>Impact Factor: 2.078 (BIOXBIO - 2018)</b> <b>H-Index: 88</b>
599.	Sridharan, K., Kapoor, N. and Paul, T. V. Low Bone Mass and Klinefelter Syndrome Indian J Endocrinol Metab; 2019, 23 (1): 167-168 <b>Address:</b> Department of Endocrinology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>	NAT	JAN TO JUN	Endocrinology	<b>PMID:31016174</b> <b>PMC ID:6446686</b> <b>Impact Factor: 1.70 (resurchify.com)</b> <b>H-Index: 19</b>
600.	Srinivas, R., Thomas, R. J., Sebastian, T. and Kurian, J. J. Testicular Volume in a Cohort of Prepubertal Indian Children J Indian Assoc Pediatr Surg; 2019, 24 (3): 192-196 <b>Address:</b> Department of Paediatric Surgery, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Context: There are orchidometer-based testicular volume nomograms for Indian children; however, accurate and reliable values measured by ultrasound are lacking. Aims: The aim of this	NAT	JUL TO DEC	Paediatric Surgery, Biostatistics	<b>PMID:</b> 31258269 <b>Impact Factor: 0.23 (RG - 2018)</b> <b>H-Index: 14</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>study was to (1) measure the testicular volumes of boys from birth to 8 years and generate reference values and (2) to identify factors if any that may influence variation in testicular volumes. Settings and Design: This was a prospective observational study conducted on 320 children in the Department of Pediatric Surgery, <b>Christian Medical College, Vellore, India</b>. Subjects and Methods: A total of 320 boys without any genital abnormalities were studied. The testes were scanned using a linear transducer, and the length, width, and depth of each testis were recorded. Testicular volume was calculated using Lambert's equation - length x width x depth x 0.71. Statistical Analysis Used: Mean testicular volumes and standard deviation for every year of age were calculated. The centile values for testicular volume were computed using R software. Results: Age-specific nomogram of each testis was created separately. Interobserver variability of the measurement was shown to be up to 0.3 ml. No difference was demonstrated in the testicular volumes between the right and left testis. No correlation was found between body weight and body mass index with testicular volume. From the data on differences in size between the two sides, a volume differential index of 27% corresponds to the 95(th) centile. Conclusions: Reference values have been created for testicular volumes in prepubertal Indian children that could be used to assess the effects of disease and surgical interventions in this age group.</p>				
601.	<p>Srinivasan, M., Sindhu, K. N., John, J. and Kang, G.                      Opportunities for Typhoid Vaccination in India                      Indian Pediatr; 2019, 56 (6): 453-458  <b>Address:</b> Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore, India</b>.                      Department of Community Health, <b>Christian Medical College, Vellore, India</b>.                      Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore, India</b>. Correspondence to: Dr Gagandeep Kang, The Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore 632 002, Tamil Nadu, India</b>. gkang@cmcvellore.ac.in.</p> <p>Typhoid fever, an infection with potentially life threatening complications, is responsible for 11 to 21 million illness episodes and 145,000 to 161,000 deaths each year globally. India is a high burden country and also faces the challenge of antimicrobial resistance, which further narrows treatment options. This review analyzes the need for typhoid vaccination in India, and appraises the evidence on efficacy, immunogenicity and cost-effectiveness of currently available typhoid vaccines. In 2018, WHO prequalified the first</p>	NAT	JUL TO DEC	Gastrointestinal Sciences, Community Health.	<p><b>PMID:</b> 31278221  <b>Impact Factor:</b> 1.163  <b>(BIOXBIO - 2018)</b>  <b>H-Index:</b> 46</p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	typhoid conjugate vaccine Vi-TT and recommended it for children aged 6-23 months, along with measles vaccine at 9 or 15 months of age through the expanded programme on immunization. With the high endemicity of typhoid in India and the proven cost-effectiveness of the conjugate vaccine, a roll-out of typhoid vaccine should be considered at the earliest.				
602.	<p>Srinivasan, R., Ganesan, S. K., Premkumar, P. S. and Kang, G. Influence of publicly funded conditional cash transfer programmes on utilization patterns of healthcare services for acute childhood illness Int Health; 2019, <b>Address:</b> Wellcome Trust Research Laboratory, Division of Gastrointestinal Sciences, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India.</p> <p>BACKGROUND: Conditional cash transfers are widespread and effective for utilization of targeted health services, but there is little evidence of their influence on the utilization of non-targeted or extended general healthcare services. Using data from a population-based health utilization survey, we evaluated the influence of conditional cash transfers for maternal and immunization services on the utilization of healthcare services for acute childhood illnesses. METHODS: Participants included mothers or primary caretakers of children &lt;2 y of age residing in 2407 households in urban Vellore, Tamil Nadu, India. Mothers of children with illness in the preceding month were interviewed on presenting symptoms, provider choice and beneficiary status of maternal and immunization-based conditional cash transfer programs. RESULTS: Of 2407 children &lt;2 y of age, about 48% reported being beneficiaries of maternal and immunization-based conditional cash transfers. Beneficiary status was associated with an increased use of public services (adjusted relative risk [aRR] 3.14 [95% confidence interval {CI} 1.96 -- 5.02]) but not the use of private services (aRR 1.42 [95% CI 0.97 -- 2.08]) relative to home or informal care. CONCLUSIONS: Our findings indicate financial incentives for use of maternal and immunization services could have an indirect, non-targeted effect on utilization of formal healthcare for acute childhood illnesses.</p>	INT	JUL TO DEC	Wellcome Trust Research Laboratory,	<b>PMID:31867626</b> <b>PMC 35319</b>
603.	<p>Srivastava, Vivi M., Patel, Bidish, Kamath, Vandana, Chacko, Mary P., George, Renu E., Regi, Annie, Koshy, Beena and Danda, Sumita Cytogenomic and clinical profile of balanced sex chromosome autosome translocations Molecular Cytogenetics; 2019, 12</p>	INT	JUL TO DEC	Clinical Cytogenetics	<b>PMID:</b> WOS:000474609600091 <b>Impact Factor: 1.331</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 26</b>
604.	<p>Sundaramurthy, S., Joseph Thomas, R., Herle, K., Jeyaseelan, Mathai, J. and Jacob Kurian, J.</p>	INT	JUL TO DEC	Pediatric Surgery, Biostatistics	<b>PMID:</b> 31586540 <b>Impact Factor:</b> 1.736

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Double J stent removal in paediatric patients by Vellore Catheter Snare technique: a randomised control trial Journal of Pediatric Urology 2019 vol: 15 (6) pp: 661.e1-661.e8</p> <p><b>Address:</b> Department of Pediatric Surgery, <b>Christian Medical College, Vellore</b>, India. Department of Pediatric Surgery, <b>Christian Medical College, Vellore</b>, India. Electronic <b>Address:</b> <a href="mailto:paedsur@cmcvellore.ac.in">paedsur@cmcvellore.ac.in</a> 10.1016/J.JPUROL.2019.08.009</p> <p>BACKGROUND: Double J (DJ) stents placed at the end of paediatric urological procedures require another cystoscopy under general anaesthesia for removal. The second author developed a reproducible technique for snaring the DJ stent using an infant feeding tube (6-Fr or 8-Fr) and a 3-0 polypropylene suture per urethra. Having demonstrated the proof of concept, ethical clearance was obtained for an institutional randomised controlled trial. OBJECTIVE: The aim of the study was (1) to describe the Vellore Catheter Snare (VeCS) technique for DJ stent removal, (2) to study the efficacy of the technique and (3) to compare the costs of VeCS technique with cystoscopy on an intention-to-treat basis. STUDY DESIGN: The study design was that of a randomised control trial with parallel groups as a non-inferiority study. RESULTS: Forty children with unilateral indwelling DJ stents were enrolled from January to August 2018. They were randomised by unequal allocation (1:3) to cystoscopic and VeCS technique removal arms. The VeCS technique and cystoscopy were successful in 86.67% (26/30) and in 100% (10/10) cases, respectively, with no statistically significant difference in the outcome (p = 0.223). The average cost for cystoscopic removal of the stent was INR 14,579 and was INR 5636.5 for the VeCS technique (on an intention-to-treat basis). DISCUSSION: While per-urethral catheterisation is an outpatient/ward procedure in children, cystoscopy is not. Other techniques such as extraction strings and magnetic stents with their extraction device were found to have certain disadvantages. The VeCS technique, using common disposables, circumvented the need for inpatient admission, disinfected equipment usage and operation theatre time in 87% children, thereby reducing the costs incurred by the patient. CONCLUSION: The VeCS technique for DJ stent removal is a practical low-cost safe alternative to cystoscopic removal of DJ stents in children. Although the technique has a high success rate, it still needs the backup option of cystoscopy under general anaesthesia.</p>				(BIOXBIO - 2018) H-Index: 37

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
605.	Sundaresan, Santhosh, Garg, S., Dudeja, V., Dawra, R. and Saluja, A. Role of Bile Acid Receptor and Transporters in Human Pancreatic Acinar Cell Injury Journal of Gastroenterology and Hepatology; 2019, 34 295-295	INT	JUL TO DEC	Gastroenterology, Hepatology	<b>PMID:</b> WOS:000495492602044 <b>Impact Factor:</b> 3.632 <b>(BIOXBIO - 2018)</b> <b>H-Index: 117</b>
606.	Sunkara, S. K., Antonisamy, B. and Kamath, M. S. Monozygotic splitting and multiple births following embryo biopsy: analysis of 149 182 single embryo transfers Human Reproduction; 2019, 34 95-95	INT	JUL TO DEC	Reproduction Medicine Unit	<b>PMID:</b> WOS:000484057200187 <b>Impact Factor:</b> 5.506 <b>(BIOXBIO - 2018)</b> <b>H-Index: 209</b>
607.	Sunkara, S. K., Chinta, P. and Kamath, M. S. Perinatal Outcomes Following Assisted Reproductive Technology J Hum Reprod Sci; 2019, 12 (3): 177-181 <b>Address:</b> Division of Women's Health, Faculty of Life Sciences and Medicine, King's College London, London, UK. Department of Reproductive Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India. As the use of routine assisted reproductive technology (ART) becomes widespread along with the extended applications such as ART with donor gametes, surrogacy, and preimplantation genetic testing (PGT), it becomes more pertinent to evaluate risks associated with them. Perinatal outcomes and long-term safety for the women and children are paramount. In this review, we aimed to detail the perinatal outcomes in relation to the ART procedures routinely applied as the extended applications of ART with a focus on singleton pregnancies. While there seems to be a higher risk of adverse perinatal outcomes with some of the ART procedures, the absolute risk increase is generally low. It is important for clinicians to have this knowledge to better counsel and care for their patients.	INT	JUL TO DEC	Reproduction Medicine Unit	<b>PMID:</b> 31576073 <b>Impact Factor:</b> 1.19 <b>(RG - 2018)</b> <b>H-Index: 25</b>
608.	Sunny, A. P., Arunachal, G. and Danda, S. Van der Woude Syndrome: IRF6 Mutations Indian J Pediatr; 2019, 86 (11): 1070-1071 <b>Address:</b> Department of Clinical Genetics, OT Block 5th Floor, <b>Christian Medical College, Vellore</b> , Tamilnadu, 632004, India. Department of Clinical Genetics, OT Block 5th Floor, <b>Christian Medical College, Vellore</b> , Tamilnadu, 632004, India. sdanda@cmcvellore.ac.in.	NAT	JUL TO DEC	Clinical Genetics	<b>PMID:</b> 31468312 <b>Impact Factor:</b> 1.136 <b>(BIOXBIO - 2018)</b> <b>H-Index: 43</b>
609.	Suresh Mani, Rajiv Michael ABS-078: Atypia of Undetermined Significance in Thyroid Nodules: Can Ultrasonography Solve The Mystery? Journal of Head & Neck Physicians and Surgeons; 2019, 7(3):S44-45 Department of Head and Neck Surgery, <b>Christian Medical College,</b>	NAT	JUL TO DEC	Head and Neck Surgery	<b>Impact Factor:</b> 0.472 <b>H-Index: NA</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Vellore</b>, Tamil Nadu, India. E-mail: <a href="mailto:msuresh.doc@gmail.com">msuresh.doc@gmail.com</a></p> <p>Background: The risk of malignancy from "atypia of undetermined significance (AUS) is estimated to lie between 5% and 15%. The malignancy risk is different by multiple factors and subsequent management strategy is challenging. This was a retrospective study which aimed to determine the incidence and risk of thyroid malignancy based upon selected US and clinical features from patients with thyroid nodules classified as AUS. Materials and Methods: A total of 29 patients with thyroid nodules who underwent surgery that had been initially diagnosed as AUS were retrospectively reviewed between Jan 2018 to July 2019. Ultrasonic features and clinical features were compared according to the histology confirmed by surgery. Results: Out of 29 patients, 16 (55%) had malignancy while 13 (45%) had benign disease. Most common tumor was follicular variant of papillary carcinoma thyroid (56%), followed by classic papillary carcinoma (44%). On analysis the significant predictors identified in our study for thyroid malignancy including US features of microcalcifications, hypoechogenicity and irregular margins. Age, sex, size and number of nodules were not significantly associated with malignancy. Conclusion: Microcalcification was a significant and independent predictive factor for the malignancy in patients with AUS. The concept of repeat cytology and follow up protocol of AUS thyroid nodules should be relooked in view of the high incidence of malignancy. Even though ultrasound is very good imaging tools in predicting the risks factors and follow up assessment, the role in AUS needs to be studied with larger study population in view of high incidence of malignancy.</p>				
<b>610.</b>	<p>Sutcliffe, C. G., Shet, A., Varghese, R., Veeraraghavan, B., Manoharan, A., Wahl, B., Chandy, S., Sternal, J., Khan, R., Singh, R. K., Santosham, M. and Arora, N. K.</p> <p>Nasopharyngeal carriage of Streptococcus pneumoniae serotypes among children in India prior to the introduction of pneumococcal conjugate vaccines: a cross-sectional study BMC Infect Dis; 2019, 19 (1): 605</p> <p><b>Address:</b> Johns Hopkins Bloomberg School of Public Health, 615 N. Wolfe Street, Baltimore, MD, 21205, USA. <a href="mailto:csutcli1@jhu.edu">csutcli1@jhu.edu</a>. Johns Hopkins Bloomberg School of Public Health, 615 N. Wolfe Street, Baltimore, MD, 21205, USA.</p> <p><b>Christian Medical College, Ida Scudder Road, Vellore</b>, Tamil Nadu, 632004, India. The CHILDS Trust Medical Research Foundation, 12-A Nageswara Road, Nungambakkam, Chennai, 600034, India. The INCLIN Trust International, F-1/5, 2nd Floor, Okhla Industrial</p>	<b>INT</b>	<b>JUL TO DEC</b>	Clinical Microbiology	<p><b>PMID:</b> 31291902 <b>Impact Factor:</b> 2.565 <b>(BIOXBIO – 2018)</b> <b>H-Index: 88</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Area Phase - 1, New Delhi, 110020, India.                      The INCLEN Trust International, F-1/5, 2nd Floor, Okhla Industrial Area Phase - 1, New Delhi, 110020, India. nkarora@inclentrust.org.                      BACKGROUND: Streptococcus pneumoniae is a major cause of pneumonia, meningitis, and other serious infections among children in India. India introduced the 13-valent pneumococcal conjugate vaccine (PCV) in several states in 2017, and is expected to expand to nationwide coverage in the near future. To establish a baseline for measuring the impact of PCV in India, we assessed overall and serotype-specific nasopharyngeal carriage in two pediatric populations. METHODS: A cross-sectional study was conducted in Palwal District, Haryana, from December 2016 to July 2017, prior to vaccine introduction. Children 2-59 months of age with clinical pneumonia seeking healthcare and those in the community with no clear illness were targeted for enrollment. A nasopharyngeal swab was collected and tested for pneumococcus using conventional culture and sequential multiplex PCR. Isolates were tested for antimicrobial resistance using an E test. Children were considered colonized if pneumococcus was isolated by culture or PCR. The prevalence of pneumococcal and serotype-specific colonization was compared between groups of children using log-binomial regression. RESULTS: Among 601 children enrolled, 91 had clinical pneumonia and 510 were community children. The proportion colonized with S. pneumoniae was 74.7 and 54.5% among children with clinical pneumonia and community children, respectively (adjusted prevalence ratio: 1.38; 95% confidence interval: 1.19, 1.60). The prevalence of PCV13 vaccine-type colonization was similar between children with clinical pneumonia (31.9%) and community children (28.0%; p = 0.46). The most common colonizing serotypes were 6A, 6B, 14, 19A, 19F, and 23F, all of which are included in the PCV13 vaccine product. Antimicrobial resistance to at least one drug was similar between isolates from children with clinical pneumonia (66.1%) and community children (61.5%; p = 0.49); while resistance to at least two drugs was more common among isolates from children with clinical pneumonia (25.8% vs. 16.4%; p = 0.08). Resistance for all drugs was consistently higher for PCV13 vaccine-type serotypes compared to non-vaccine serotypes in both groups. CONCLUSION: This study provides baseline information on the prevalence of serotype-specific pneumococcal colonization among children prior to the introduction of PCV in India. Our results suggest a role for pneumococcal vaccines in reducing pneumococcal colonization and antimicrobial resistant isolates circulating in India.</p>				
<b>611.</b>	Syed, K. A., Naina, P., Pokharel, A., John, M. and Varghese, A. M.	<b>INT</b>	<b>JUL TO DEC</b>	ENT, Pediatric	<b>PMID: 30578997</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Paediatric tracheostomy: A modified technique and its outcomes, results from a South Indian tertiary care Int J Pediatr Otorhinolaryngol; 2019, 118 6-10 <b>Address:</b> Department of ENT, <b>Christian Medical College, Vellore, India.</b> Department of ENT, <b>Christian Medical College, Vellore, India.</b> Electronic <b>Address:</b> drp.naina@hotmail.com. Former Fellow in Pediatric Otolaryngology, <b>Christian Medical College, Vellore, India.</b></p> <p>STUDY OBJECTIVES: To review the key parameters related to the proposed modified pediatric tracheostomy technique with to determine the efficacy, safety and outcomes in a tertiary hospital in south India. Patients and Methods A retrospective chart review of all children aged below 16 years who underwent tracheostomy at a tertiary hospital in south India during the period of August 2014 to August 2016. Data on age, gender, indication for tracheostomy, primary disease condition, duration of intubation, complications and decannulation rate were recorded. RESULTS: Fifty children aged below 16 years underwent tracheostomy between August 2014 and August 2016. The average of the children was 5.35 years. (Range 14 days to 14 years). The male female ratio was 1.6:1. In our study prolonged intubation was the most common indication (62%). None of the children had early post-operative complications such as bleeding, pneumothorax, surgical emphysema or accidental decannulation. Peristomal granulations (24%) was the most common complication although none was severe to warrant operative intervention. One child had a lifethreatening tube block requiring cardiopulmonary resuscitation. None of the children had accidental decannulation during the period of the study. Tracheocutaneous fistula was seen in 2 children (4%) and was the only long-term complication. These children required surgical decannulation. There was no clinical evidence of tracheal stenosis or tracheomalacia in any child. CONCLUSION: Pediatric tracheostomy is challenging for both the surgeon and the care-giver specially in the early post-operative period. Our proposed modified technique addresses these concerns and without any significant complications.</p>			Otolaryngology	<b>Impact Factor:</b> 1.225 <b>(BIOXBIO - 2018)</b> <b>H-Index: 69</b>
612.	<p>Syed, K. A., Naina, P., Sebastian, S. and Varghese, A. M. A Case-Control Study on the Association Between Endoscopic ACE Grade of Adenoid Hypertrophy and Hearing Loss in Children and Its Impact on Speech and Language Development Indian J Otolaryngol Head Neck Surg; 2019, 71 (2): 150-154 <b>Address:</b> 1Department of ENT - Unit 2, <b>Christian Medical College,</b></p>	NAT	JUL TO DEC	ENT, Audiology, Speech and Language.	<b>PMID:</b> 31275821 <b>Impact Factor: 0.11</b> <b>(RG - 2018)</b> <b>H-Index: 16</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Vellore,</b> Tamil Nadu 632 004 India.0000 0004 1767 8969grid.11586.3b                      2Department of Audiology, Speech and Language, <b>Christian Medical College, Vellore,</b> Tamil Nadu 632 004 India.0000 0004 1767 8969grid.11586.3b                      To establish an association between adenoid hypertrophy and hearing loss and its impact on speech and language in pediatric age group. A prospective case control study done in a tertiary hospital in South India. Twenty children with hearing loss were recruited in the study group and twenty-four children as controls. These groups underwent at detailed otorhinolaryngologic examination, hearing and speech evaluation. The size of the adenoids was graded endoscopically. Findings between the two groups were compared and analysed. Our study found statistically significant association between adenoid hypertrophy with choanal obstruction and abutment of eustachian tube opening seen on endoscopy with hearing loss (p = 0.025). The children with hearing loss also had speech and language delay (p = 0.004). Children with enlarged adenoids obstructing the &gt; 50% of the choanae or abutting the eustachian tube opening are more likely to have hearing loss and may develop speech and language delay. The ACE endoscopic adenoid grading system is consistent and reliable in evaluation of adenoids.</p>				
<b>613.</b>	<p>Syed, Kamran Asif, Naina, P., Pokharel, Apar, John, Mary and Varghese, Ajoy Mathew                      Paediatric tracheostomy: A modified technique from a South Indian tertiary care                      International Journal of Pediatric Otorhinolaryngology; 2019, 118 6-10                      Study objectives: To review the key parameters related to the proposed modified pediatric tracheostomy technique with to determine the efficacy, safety and outcomes in a tertiary hospital in south India. Patients and Methods A retrospective chart review of all children aged below 16 years who underwent tracheostomy at a tertiary hospital in south India during the period of August 2014 to August 2016. Data on age, gender, indication for tracheostomy, primary disease condition, duration of intubation, complications and decannulation rate were recorded. Results: Fifty children aged below 16 years underwent tracheostomy between August 2014 and August 2016. The average of the children was 5.35 years. (Range 14 days to 14 years). The male female ratio was 1.6:1. In our study prolonged intubation was the most common indication (62%). None of the children had early post-operative complications such as bleeding,</p>	<b>INT</b>	<b>JUL TO DEC</b>	ENT, Otolaryngology          Pediatric	<p><b>PMID:</b>                      WOS:000461410900002  <b>Impact Factor: 1.225</b>  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 69</b></p>

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	pneumothorax, surgical emphysema or accidental decannulation. Peristomal granulations (24%) was the most common complication although none was severe to warrant operative intervention. One child had a lifethreatening tube block requiring cardiopulmonary resuscitation. None of the children had accidental decannulation during the period of the study. Tracheocutaneous fistula was seen in 2 children (4%) and was the only long-term complication. These children required surgical decannulation. There was no clinical evidence of tracheal stenosis or tracheomalacia in any child. Conclusion: Pediatric tracheostomy is challenging for both the surgeon and the care-giver specially in the early post-operative period. Our proposed modified technique addresses these concerns and without any significant complications.				
614.	<p>Taub, J. M., Coats, H., Coats, C., Doorenbos, A., Siva, R., Sadan, V., Alexander, G., Immanuel, S., Ravindran, V., Chacko, S. T. and Nolet, R.</p> <p>Palliative care delivery: descriptions of community-based services in Vellore, India, and Seattle, Washington Int J Palliat Nurs; 2019, 25 (1): 39-45</p> <p><b>Address:</b> Nurse Practitioner, University of Washington Medical Center, Seattle, Washington, USA. Assistant Professor, College of Nursing, University of Colorado Denver, Anschutz Medical Campus, Aurora, CO, USA. Co-owner, Groundwork Communication, Denver, CO, USA. Professor, Department of Biobehavioral Nursing and Health Informatics, School of Nursing, University of Washington, Seattle, WA, USA. Professor, College of Nursing, <b>Christian Medical College, Vellore, India.</b> Dean, College of Nursing, <b>Christian Medical College, Vellore, India.</b> Director, College of Nursing, <b>Christian Medical College, Vellore, India.</b></p> <p>BACKGROUND:: A public health approach to palliative care supports community-dwelling adults with advanced illness. A better understanding of successful community-based palliative care programmes and partnerships is needed to expand community-based services for ageing populations. AIMS:: This study describes two organisations in two different countries that provide health and social services to community-dwelling adults with advanced illness. METHODS:: Unstructured key-informant</p>	INT	JAN TO JUN	College of Nursing	<p><b>PMID:30676155</b></p> <p><b>PMC</b></p> <p><b>Impact Factor: 0.43</b></p> <p><b>(RG-2018)</b></p> <p><b>H-Index: 35</b></p>



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	interviews and observational data were collected at the <b>Christian Medical College's</b> College of Nursing Community Health Programme (Vellore, India) and at Phinney Neighborhood Association Village (Seattle, Washington, USA). FINDINGS:: College of Nursing Community Health Programme nurses work with volunteer community health workers to identify and provide client-focused support to ensure quality-of-life. The Phinney Neighborhood Association Village is a volunteer-led organisation that provides social support. Both serve community-dwelling adults with advanced illness. CONCLUSION:: Partnerships between healthcare organisations and community volunteers support a public health approach to community-based palliative care.				
615.	<p>Thakkar, P., B. P. N., Yoganathan, S., John, J. A. and Thomas, M. Status dystonicus: Diagnosis and management of a rare and challenging entity J Pediatr Rehabil Med; 2019, 12 (1): 71-74</p> <p><b>Address:</b> Department of Physical Medicine and Rehabilitation, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Neurological Sciences, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>We report the case of a six-year-old girl with Moyamoya disease who presented with bilateral internal carotid artery malignant infarct following encephaloduroarteriosynangiosis (EDAS). During her neurorehabilitation, she developed gradually worsening dystonic spasms with opisthotonic posturing, tachycardia, tachypnea and desaturation. This rare life threatening movement disorder was diagnosed as status dystonicus based on the history and clinical presentation. Status Dystonicus occurs commonly in children and the etiology is often diverse. It occurs in patients with preexisting dystonia or following an acute central nervous system insult of varied etiology. Status dystonicus is usually precipitated by one or more triggering factors. Rarity and lack of objective criteria for diagnosis often delays the management thereby increasing the risk of mortality and morbidity. Here, we discuss the challenges faced in the diagnosis and management of a child with denovo status dystonicus.</p>	INT	JAN TO JUN	Physical Medicine and Rehabilitation, Neurological Sciences	<p><b>PMID:30883367</b> <b>PMC</b></p> <p><b>Impact Factor: 0.63</b> <b>(RG-2018)</b> <b>H-Index: 19</b></p>
616.	<p>Thakkar, P., Prakash, N. B., Tharion, G., Shetty, S., Paul, T. V., Bondu, J. and Yadav, B. Evaluating Bone Loss with Bone Turnover Markers Following Acute Spinal Cord Injury Asian Spine J; 2019, <b>Address:</b> Department of Physical Medicine and</p>	INT	JUL TO DEC	Physical Medicine and Rehabilitation, Endocrinology, Clinical Biochemistry, Biostatistics	<p><b>PMID: 31679327</b> <b>Impact Factor: 0.82</b> <b>(RG - 2018)</b> <b>H-Index: 20</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Rehabilitation, <b>Christian Medical College, Vellore, India.</b>                      Department of Endocrinology, <b>Christian Medical College, Vellore, India.</b>                      Department of Clinical Biochemistry, <b>Christian Medical College, Vellore, India.</b>                      Department of Biostatistics, <b>Christian Medical College, Vellore, India.</b></p> <p>Study Design: Prospective observational study. Purpose: To evaluate bone turnover markers (BTMs) in individuals with acute spinal cord injury (SCI) and to compare the results with those of healthy controls and postmenopausal females. Overview of Literature: SCI significantly impacts bone health. Change in bone mineral density appears 6 months after SCI and rapid bone loss during the acute phase is often underestimated, resulting in osteoporosis and a high risk of sublesional fractures. However, few studies have evaluated BTMs in the Indian SCI population. Despite a high risk of fracture, there are no guidelines for the diagnosis, monitoring, and management of SCI-induced osteoporosis. Methods: Twenty patients within 1 month of traumatic SCI who had been admitted to a tertiary care rehabilitation center were included in this study. Serum BTMs, C telopeptide (CTX) as a bone resorption marker, and osteocalcin as a bone formation marker, were serially measured at baseline, and 3 and 6 months after SCI. BTMs of SCI patients were compared with those of a control group of age-matched healthy males, premenopausal females, and a vulnerable group of postmenopausal females. Results: BTMs were significantly elevated in patients with SCI, with maximum levels observed at the 3rd month of injury. At baseline, the bone resorption marker CTX was approximately 3 times higher in SCI patients than in the control male population and premenopausal females, and about double that of postmenopausal females. The rise in the bone formation marker was marginal in comparison to that of the bone resorption marker. BTMs were persistently elevated and did not reach the normative range until the 6th month of SCI. Conclusions: Raised bone resorption markers in comparison to bone formation markers indicate hyper-resorption-related bone loss following acute SCI. Markedly elevated bone resorption markers in the SCI population, compared with those in control and vulnerable groups, emphasize the need for early bone health monitoring and management.</p>				
617.	Thakur, P., Kuriakose, C., Cherian, K. E., Asha, H. S., Kapoor, N. and Paul, T. V. Knowledge gap regarding osteoporosis among medical professionals in Southern India	INT	JAN TO JUN	Endocrinology	PMID:31062414 PMC Impact Factor: 1.483 (BIOXBIO-2018)

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>J Eval Clin Pract; 2019,  <b>Address:</b> Department of Endocrinology, <b>Christian Medical College, Vellore, India.</b></p> <p>RATIONALE, AIMS, AND OBJECTIVES: Osteoporosis is a common health problem in India, which leads to significant morbidity and mortality in elderly individuals. Lack of knowledge and awareness among medical professionals is one of the important barriers in management of these patients. Therefore, this study was conducted to assess knowledge pertaining to diagnosis and treatment of osteoporosis among a group of Indian medical practitioners. METHODS: The study participants included 222 allopathic medical professionals, either graduate or postgraduate working in primary or secondary health care levels. They were assessed using a previously validated Fogelman's multiple choice questionnaire. Out of a total of 18 questions, four questions pertained to knowledge of diagnosis, three questions to treatment decisions, one question to assess knowledge regarding recommended dosage of vitamin D and calcium supplementation, five questions concerned medication use, and the rest to assess attitude and practices. The correct answers were converted into scores and expressed as percentages with a maximum of 100. RESULTS: The mean total score among them was 22.5%, which was quite low. Almost all of them had a score of less than 50%. Medical practitioners performed better in diagnosis-related questions, (19.4% answered all options correctly) than in medication knowledge (no correct response regarding side effects and 2% regarding contraindications). In treatment-related decisions, 37.4% answered correctly for duration of treatment, and 59% answered correctly for treatment goal. Only 1.4% of them were able to answer correctly regarding recommended calcium and vitamin D intake. Professional literature, conferences, and Continuing Medical Education (CME's) were regarded as the main sources of information on the subject by 40% of practitioners. CONCLUSION: This study showed suboptimal knowledge among a group of medical professionals regarding various aspects of diagnosis and management of osteoporosis, and it stipulates the need for escalating the efforts to improve their knowledge regarding various aspects of osteoporosis.</p>				<b>H-Index: 65</b>
<b>618.</b>	Thangakunam, B. and Christopher, D. J. The Audio Study: Thoracoscopic Pleural Biopsy May Be Even Better Chest; 2019, 155 (3): 649-650	<b>INT</b>	<b>JAN TO JUN</b>	Pulmonary Medicine	<b>PMID:30846072</b> <b>PMC</b> <b>Impact Factor: 7.652</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> Department of Pulmonary Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India. <b>Electronic Address:</b> drbalamugesh@yahoo.com.</p> <p>Department of Pulmonary Medicine, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p>				<b>(BIOXBIO-2018)</b> <b>H-Index: 267</b>
619.	<p>Thomas, H. M. T., Zeng, J., Lee, H. J., Jr., Sasidharan, B. K., Kinahan, P. E., Miyaoka, R. S., Vesselle, H. J., Rengan, R. and Bowen, S. R.</p> <p>Comparison of regional lung perfusion response on longitudinal MAA SPECT/CT in lung cancer patients treated with and without functional tissue-avoidance radiation therapy Br J Radiol; 2019, 92 (1103): 20190174</p> <p><b>Author Information</b>  <b>Reprint Address:</b> Bowen, SR (reprint author)                      Univ Washington, Sch Med, Dept Radiat Oncol, Seattle, WA 98195 USA.  <b>Reprint Address:</b> Bowen, SR (reprint author)                      Univ Washington, Sch Med, Dept Radiol, Seattle, WA 98195 USA.  <b>Addresses:</b>                      [1] Univ Washington, Sch Med, Dept Radiat Oncol, Seattle, WA 98195 USA                      [2] <b>Christian Med Coll &amp; Hosp, Dept Radiat Oncol, Vellore, Tamil Nadu, India</b>                      [3] Univ Washington, Sch Med, Dept Radiol, Seattle, WA 98195 USA  <b>E-mail Addresses:</b> <a href="mailto:srbowen@uw.edu">srbowen@uw.edu</a></p> <p>OBJECTIVE: The effect of functional lung avoidance planning on radiation dose-dependent changes in regional lung perfusion is unknown. We characterized dose-perfusion response on longitudinal perfusion single photon emission computed tomography (SPECT)/CT in two cohorts of lung cancer patients treated with and without functional lung avoidance techniques. METHODS: The study included 28 primary lung cancer patients: 20 from interventional (NCT02773238) (FLARE-RT) and eight from observational (NCT01982123) (LUNG-RT) clinical trials. FLARE-RT treatment plans included perfused lung dose constraints while LUNG-RT plans adhered to clinical standards. Pre- and 3 month post-treatment macro-aggregated albumin (MAA) SPECT/CT scans were rigidly co-registered to planning four-dimensional CT scans. Tumour-subtracted lung dose was converted to EQD2 and sorted into 5 Gy bins. Mean dose and percent change between pre/post-RT MAA-SPECT uptake (%DeltaPERF), normalized to total</p>	INT	JUL TO DEC	Radiation Oncology	<b>PMID:</b> 31364397 WOS:000492686100008 <b>Impact Factor:</b> 1.939 <b>(BIOXBIO - 2018)</b> <b>H-Index: 96</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>tumour-subtracted lung uptake, were calculated in each binned dose region. Perfusion frequency histograms of pre/post-RT MAA-SPECT were analyzed. Dose-response data were parameterized by sigmoid logistic functions to estimate maximum perfusion increase (%DeltaPERFmaxincrease), maximum perfusion decrease (%DeltaPERFmaxdecrease), dose midpoint (Dmid), and dose-response slope (k). RESULTS: Differences in MAA perfusion frequency distribution shape between time points were observed in 11/20 (55%) FLARE-RT and 2/8 (25%) LUNG-RT patients (<math>p &lt; 0.05</math>). FLARE-RT dose response was characterized by &gt;10% perfusion increase in the 0-5 Gy dose bin for 8/20 patients (%DeltaPERFmaxincrease = 10-40%), which was not observed in any LUNG-RT patients (<math>p = 0.03</math>). The dose midpoint Dmid at which relative perfusion declined by 50% trended higher in FLARE-RT compared to LUNG-RT cohorts (35 GyEQD2 vs 21 GyEQD2, <math>p = 0.09</math>), while the dose-response slope k was similar between FLARE-RT and LUNG-RT cohorts (3.1-3.2, <math>p = 0.86</math>). CONCLUSION: Functional lung avoidance planning may promote increased post-treatment perfusion in low dose regions for select patients, though inter-patient variability remains high in unbalanced cohorts. These preliminary findings form testable hypotheses that warrant subsequent validation in larger cohorts within randomized or case-matched control investigations. ADVANCES IN KNOWLEDGE: This novel preliminary study reports differences in dose-response relationships between patients receiving functional lung avoidance radiation therapy (FLARE-RT) and those receiving conventionally planned radiation therapy (LUNG-RT). Following further validation and testing of these effects in larger patient populations, individualized estimation of regional lung perfusion dose-response may help refine future risk-adaptive strategies to minimize lung function deficits and toxicity incidence.</p>				
620.	<p>Thomas, L., Devi Krishnamoorthy, S. D. and Ramasami, P.                      Assessment of inpatient diabetes knowledge among healthcare professionals in a district general hospital                      Diabetes Metab Syndr; 2019, 13 (2): 1657-1660  <b>Address:</b> Dr Gray's Hospital, NHS Grampian, Elgin, IV30 1SN, UK.                      Electronic <b>Address:</b> lydiya.thomas@nhs.net.                      Dr Gray's Hospital, NHS Grampian, Elgin, IV30 1SN, UK.                      Department of Biostatistics, <b>Christian Medical College, Vellore,</b>                      632 002, India.                      AIMS: Diabetes mellitus is a commonly encountered diagnosis in hospitalised patients that is associated with prolonged admissions and mortality. One in six hospital beds in the UK are occupied by</p>	INT	JUL TO DEC	Biostatistics	<p><b>PMID:</b> 31336537  <b>Impact Factor:</b> 2.361  <b>(BIOXBIO - 2018)</b>  <b>H-Index:</b> 25</p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	diabetes patients. Therefore, healthcare providers need to have a sound knowledge in managing in-patients with diabetes. Thus the aim of this clinical survey was to assess the diabetes-related knowledge of healthcare professionals in a district general hospital. METHODS: A 24-item questionnaire, based on the 'Think Check Act (TCA)' diabetes modules implemented by the Healthcare Improvement Scotland was issued to the medical and nursing staff. Simple statistics were used for data collation and analysis. RESULTS: 30 questionnaires were completed by 10 doctors at varying stages of training, 17 nurses, 1 physician associate and 2 healthcare assistants. The mean percentage score of the participants were 57.4%. 22 (73.3%) correctly defined hypoglycaemia and 27 (90%) knew the location of hypo box and 7 (23.3%) were aware of TCA. Responses to other management related to diabetes emergencies were average. The responses between doctors and nurses were insignificant except for hypo box location (p=0.0413). CONCLUSION: Knowledge about managing inpatient diabetes problems amongst healthcare professional at a district general hospital appears mediocre. Significant gaps have been identified which would be targeted for future educational events.				
621.	Thomas, R. and Tharion, G. Rehabilitation in South India Phys Med Rehabil Clin N Am; 2019, 30 (4): 817-833 <b>Address:</b> Department of Physical Medicine and Rehabilitation, Christian Medical College Vellore, Vellore, Tamil Nadu, India. Electronic <b>Address:</b> rajithomas@cmcvellore.ac.in. Department of Physical Medicine and Rehabilitation, Christian Medical College Vellore, Vellore, Tamil Nadu, India. The article describes the rehabilitation services provided at Christian Medical College Vellore, a tertiary care medical college hospital in South India. The department was started by Dr Mary Verghese, who on completion of her medical training sustained spinal cord injury with resulting paraplegia. Following a section on the initial beginnings of the department, the current status of the department offering comprehensive rehabilitation by the multidisciplinary team is highlighted. The article ends with the challenges faced, including limitations in providing affordable solutions, architectural and attitudinal barriers, and inadequate number of rehabilitation physicians and comprehensive rehabilitation centers in the country.	INT	JUL TO DEC	Physical Medicine and Rehabilitation	<b>PMID:</b> 31563173 <b>Impact Factor:</b> 1.30 <b>(RG - 2018)</b> <b>H-Index:</b> 50
622.	Thomas, S., Sebastain, T., Karthikeyan, M., Mangalaraj, A. M., Kunjummen, A. T. and Kamath, M. S. Effectiveness of spontaneous ovulation as monitored by urinary luteinizing hormone versus induced ovulation by administration of	INT	JAN TO JUN	Reproductive Medicine, Biostatistics	<b>PMID:</b> 31169952 <b>PMC</b> <b>Impact Factor:</b> 5.193 <b>(BIOXBIO-2018)</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>human chorionic gonadotropin in couples undergoing gonadotropin stimulated intrauterine insemination (IUI): a randomized controlled trial BJOG; 2019, 126 Suppl 4 58-65 <b>Address:</b> Department of Reproductive Medicine, <b>Christian Medical College, Vellore, India.</b> Department of Biostatistics, <b>Christian Medical College, Vellore, India.</b></p> <p>OBJECTIVE: To compare effectiveness of spontaneous ovulation monitored by urinary luteinizing hormone (LH) versus induced ovulation by administration of human chorionic gonadotropin (hCG) in couples undergoing gonadotropin stimulated IUI. DESIGN: Randomized controlled trial. SETTING: University level infertility unit. POPULATION: Couples with unexplained infertility, mild endometriosis, mild male factor and polycystic ovarian syndrome (PCOS). METHODS: Couples were randomized to LH group (Group A) where urinary LH was done daily to detect spontaneous ovulation or hCG group (Group B) where urinary hCG was administered as a trigger. MAIN OUTCOME MEASURES: Clinical pregnancy rate. Secondary outcomes - ongoing pregnancy, live birth, multiple pregnancy and miscarriage rates. RESULTS: A total of 392 couples were randomized with 196 in each arm. The clinical pregnancy rate per woman randomised was 14/196 (7.1%) in the LH arm vs. 15/196 (7.6%) in the hCG arm; P = 0.847 which was not statistically significant. Similarly, the ongoing pregnancy rates (13/196 (6.6%) vs. 14/196 (7.1%); P = 0.84) and the live birth rates (13/196 (6.6%) vs. 14/196 (7.1%); P = 0.84) between the two groups did not show any significant difference. The duration of stimulation and gonadotrophin dosage also did not differ significantly between the two methods. CONCLUSION: There was no significant difference in clinical pregnancy rates when urinary LH and hCG trigger as methods to time insemination were compared in women undergoing gonadotropin stimulated IUI. This article is protected by copyright. All rights reserved.</p>				<b>H-Index: 148</b>
623.	<p>Thomas, V., Thomas, D., Sebastian, A., Thomas, A., Chandy, R., Peedicayil, A., Samuel, T. R. and Kumar, R. M. TREATMENT OUTCOMES OF EARLY CARCINOMA CERVIX BEFORE AND AFTER SUBSPECIALISATION International Journal of Gynecological Cancer; 2019, 29 A93-A94</p>	INT	JUL TO DEC	Gynaecology Biostatistics Oncology,	<p><b>PMID:</b> WOS:000491998200216 <b>Impact Factor: 1.746</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 79</b></p>
624.	<p>Thomson, V. S., Varghese, L. and Joseph, G. Type 3 Coronary Perforation on Optical Coherence Imaging J Invasive Cardiol; 2019, 31 (11): E337-E338</p>	INT	JUL TO DEC	Cardiology	<p><b>PMID:</b> 31671065 <b>Impact Factor: 1.363</b> <b>(BIOXBIO - 2018)</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> Dept. of Cardiology, <b>Christian Medical College and Hospital, Vellore, India 632 004.</b> vijisamuel1970@gmail.com.                      OCT imaging revealed a 1.5 mm-long transmural breach in a segment of the artery devoid of calcium or eccentric plaque burden. Focal negative remodeling identified on OCT was deemed the reason for this otherwise unexplained cause of coronary rupture.</p>				<b>H-Index: 53</b>
625.	<p>Toms, A. S. and Rai, E.                      Operative fasting guidelines and postoperative feeding in paediatric anaesthesia-current concepts                      Indian J Anaesth; 2019, 63 (9): 707-712  <b>Address:</b> Department of Anesthesia, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Preoperative fasting period is the prescribed time prior to any procedure done either under general anaesthesia, regional anaesthesia or sedation, when oral intake of liquids or solids are not allowed. This mandatory fasting is a safety precaution that helps to protect from pulmonary aspiration of gastric contents which may occur any time during anaesthesia. We searched PUBMED for English language articles using keywords including child, paediatric, anaesthesia, fasting, preoperative, gastric emptying. We also hand searched references from relevant review articles and major society guidelines. Association of Paediatric Anaesthesiologists of Great Britain and Ireland (APAGBI), the French Language Society of Paediatric Anaesthesiologists and the European Society of Paediatric Anesthetists recommends clear fluid intake upto one hour prior to elective surgery unless specific contraindications exists. Current guidelines recommend fasting duration of 4 hours for breastmilk, 6 hours for milk and light meals and 8 hours for fatty meals. The European Society for Clinical Nutrition and Metabolism (ESPEN) guidelines recommend that oral intake can be initiated within hours of surgery in most patients. While fluids can be started almost immediately, the introduction of solids should be done more cautiously.</p>	NAT	JUL TO DEC	Anesthesia	<p><b>PMID:</b> 31571683  <b>Impact Factor: 0.17 (RG - 2018)</b>  <b>H-Index: 22</b></p>
626.	<p>Turaka, Vijay, Nair, Roshini, Sebastian, Tunny, Kannangai, Rajesh, Michael, Joy and Varghese, George                      Risk factors for active tuberculosis in human immunodeficiency virus-infected individuals                      CHRISMED Journal of Health and Research; 2019, 6 (3): 167-171</p> <p><b>Address for correspondence:</b>                      Dr. Vijay Prakash Turaka, Department of General Medicine, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> E-mail:</p>	NAT	JUL TO DEC	General Medicine, Infectious Diseases, Biostatistics, Clinical Virology, Microbiology	



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><a href="mailto:vijay2971@cmcvellore.ac.in">vijay2971@cmcvellore.ac.in</a></p> <ol style="list-style-type: none"> <li>1. Department of General Medicine, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India</li> <li>2. Department of Infectious Diseases, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India</li> <li>3. Department of Biostatistics, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India</li> <li>4. Department of Clinical Virology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India</li> <li>5. Department of Microbiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India</li> </ol> <p>Abstract Context: Tuberculosis (TB) has become the most common opportunistic infection among individuals with human immunodeficiency virus (HIV) infection worldwide and continues to be a major killer resulting in 0.4 million deaths every year. While some of the risk factors for developing TB in HIV-infected individuals are known, identifying other risk factors will help in screening strategies to pick out those at higher risk for closer follow-up. Aims: The aim of this study was to identify the risk factors related to the development of active TB in HIV-infected individuals. Settings and Design: This case-control study among the HIV-infected individuals was carried out at a HIV clinic in a large tertiary care hospital in South India. Methods: HIV-infected individuals &gt;18 years of age with confirmed TB were chosen as cases. For each case, two age- and sex-matched controls, diagnosed to have HIV infection without active TB or history of TB, were included. The potential risk factors for the development of active TB were evaluated using the odds ratios (ORs) and logistic regression analysis. Results: A total of 150 patients, 50 cases (mean age: 39.3 ± 7.2 years) and 100 controls (mean age: 40.2 ± 7.1 years) were included. On univariate analysis, smoking (OR 8.14, 95% confidence interval [CI]: 3.13-21.21; P &lt; 0.001), low body mass index (OR 6.31, 95% CI: 2.75-14.48; P &lt; 0.001), chronic obstructive pulmonary disease (P = 0.013), ethanol consumption (OR 8.61, 95% CI: 3.57-20.81; P &lt; 0.001), CD4 cell count &lt; 200 cells/μL (OR 13.12, 95% CI: 5.64-30.50; P &lt; 0.001), and not on antiretroviral treatment (ART) (13.34, 95% CI: 5.85-30.41; P &lt; 0.001) were associated with active TB. The risk factors found to be independently associated were CD4 counts &lt; 200 cells/μL (OR 5.75, 95% CI: 1.81-18.20; P = 0.003), smoking (OR 7.40, 95% CI: 1.47-37.15; P = 0.015), and not being on ART (OR 13.94, 95% CI: 3.84-50.61; P &lt; 0.001). Conclusion: Initiating ART</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	as soon as possible and patient education on modifiable risk factors including counseling for smoking cessation for HIV-infected individuals are warranted.				
627.	<p>Valmiki, R. R., Venkatesalu, S., Chacko, A. G., Prabhu, K., Thomas, M. M., Mathew, V., Yoganathan, S., Muthusamy, K., Chacko, G., Vanjare, H. A. and Krothapalli, S. B.</p> <p>Phosphoproteomic analysis reveals Akt isoform-specific regulation of cytoskeleton proteins in human temporal lobe epilepsy with hippocampal sclerosis                      Neurochem Int; 2019, 134 104654</p> <p><b>Address:</b> Neurophysiology Laboratory, Department of Neurological Sciences, <b>Christian Medical College, Vellore,</b> 632004, Tamilnadu, India. <b>Electronic Address:</b> rajeshvalmiki@cmcvellore.ac.in.</p> <p>Neurophysiology Laboratory, Department of Neurological Sciences, <b>Christian Medical College, Vellore,</b> 632004, Tamilnadu, India.</p> <p>Neurosurgery, Department of Neurological Sciences, <b>Christian Medical College, Vellore,</b> 632004, Tamilnadu, India.</p> <p>Department of Pediatric Neurology, <b>Christian Medical College, Vellore,</b> 632004, Tamilnadu, India.</p> <p>Neurology, Department of Neurological Sciences, <b>Christian Medical College, Vellore,</b> 632004, Tamilnadu, India.</p> <p>Neuropathology, Department of General Pathology, <b>Christian Medical College, Vellore,</b> 632004, Tamilnadu, India.</p> <p>Department of Radiology, <b>Christian Medical College, Vellore,</b> 632004, Tamilnadu, India.</p> <p>Akt is one of the most important downstream effectors of phosphatidylinositol 3-kinase/mTOR pathway. Hyperactivation and expression of this pathway are seen in a variety of neurological disorders including human temporal lobe epilepsy with hippocampal sclerosis (TLE-HS). Nevertheless, the expression and activation profiles of the Akt isoforms, Akt1, Akt2, and Akt3 and their functional roles in human TLE-HS have not been studied. We examined the protein expression and activation (phosphorylation) patterns of Akt and its isoforms in human hippocampal tissue from TLE and non-TLE patients. A phosphoproteomic approach followed by interactome analysis of each Akt isoform was used to understand protein-protein interactions and their role in TLE-HS pathology. Our results demonstrated activation of the Akt/mTOR pathway as well as activation of Akt downstream substrates like GSK3beta, mTOR, and S6 in TLE-HS samples. Akt1 isoform levels were significantly increased in the TLE-HS samples as compared to the non-TLE samples. Most importantly, different isoforms were activated in</p>	INT	JUL TO DEC	Neurophysiology, Neurosurgery, Pediatric Neurology, General Pathology, Radiology	<b>PMID:31884041</b> <b>PMC 35326</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

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	different TLE-HS samples, Akt2 was activated in three samples, Akt2 and Akt1 were simultaneously activated in one sample and Akt3 was activated in two samples. Our phosphoproteomic screen across six TLE-HS samples identified 183 proteins phosphorylated by Akt isoforms, 29 of these proteins belong to cytoskeletal modification. Also, we were able to identify proteins of several other classes involved in glycolysis, neuronal development, protein folding and excitatory amino acid transport functions as Akt substrates. Taken together, our data offer clues to understand the role of Akt and its isoforms in underlying the pathology of TLE-HS and further, modulation of Akt/mTOR pathway using Akt isoforms specific inhibitors may offer a new therapeutic window for treatment of human TLE-HS.				
628.	<p>Varghese CM(1), Jesija JS(2), Prasad JH(3), Pricilla RA(4). Prevalence of oral diseases and risks to oral health in an urban community aged above 14 years. Indian J Dent Res. 2019 Nov-Dec;30(6):844-850. doi: 10.4103/ijdr.IJDR_42_18.</p> <p><b>Author information:</b> (1)Public Health Foundation of India, Gurugram, Haryana; Department of Community Medicine, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. (2)Department of Dental and Oral Surgery, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. (3)Department of Community Medicine, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. (4)Department of Community Medicine, LCECU, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India.</p> <p>Introduction: Oral health is a requisite to general health and quality of life. The public health problems associated with oral diseases are a serious burden in every nation around the globe. Aims: The aim of this study is to assess the prevalence of dental problems and the oral health seeking behavior of an urban south Indian population aged &gt;14 years. Materials and Methods: In this population-based cross-sectional study, 101 households were selected through systematic random sampling. About 419 participants were interviewed and information on sociodemographic characteristics, personal, and dental history was obtained and a complete oral cavity examination was performed. Results: The prevalence of dental caries, periodontal problems, and tooth wear were 78.75%, 74.7%,</p>	NAT	JUL TO DEC	Community Medicine, Dental and Oral Surgery, LCECU	<p><b>PMID:</b> 31939358 <b>Impact Factor: 0.37 (RG - 2018)</b> <b>H-Index: 33</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>and 72.3%, respectively. The mean number of overall affected teeth in the population by one dental problem is <math>16 \pm 8.13</math>. The mean Decayed, Missing and Filled Teeth (DMFT) score was 4.5. The risk factors that were significantly associated with the poor oral health status were age &gt;31 years (Odds Ratio (OR), 2.88), education less than eighth grade (OR, 2.35), inadequate oral hygiene practices (OR, 1.61), use of any form of tobacco (OR, 2.08), and alcohol consumption (OR, 2.02). Only 185 (44.1%) participants perceived that they had a dental problem at the point of the survey and only 20 of them (10.81%) visited a dentist. Conclusion: This study showed a high prevalence of dental caries, periodontal problem, and tooth wear. This emphasizes the need for community-based awareness program on dental health and recommends periodic dental health screening program at the community level for early diagnosis and better treatment. DOI: 10.4103/ijdr.IJDR_42_18; Conflict of interest statement: None</p>				
629.	<p>Varghese, A. P., Prasad, J. and Jacob, K. S. Mild cognitive impairment and dementia in older patients attending a general hospital in south India: DSM-5 standards and correlates Int Psychogeriatr; 2019, 31 (1): 133-138 <b>Address:</b> Department of Psychiatry, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Community Health, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> ABSTRACT Background and Aims: The changes in DSM-5 diagnostic criteria for dementia (Major neurocognitive disorder (NCD)) and mild cognitive impairment (mild NCD) mandate a re-evaluation of screening instruments. This study attempted to validate screening instruments, identify optimum threshold, and describe their indices of efficacy. METHOD: Consecutive people above the age of 65 years attending the outpatient department of a general hospital were recruited. They were assessed using the Mini-Mental State Examination and the Vellore Screening Instruments for Dementia and were evaluated against the DSM-5 standard. Bivariate and multivariate statistics were obtained. Receiver-operating-characteristic curves were drawn, optimum thresholds obtained, sensitivity, specificity, and predictive values calculated. RESULTS: One hundred and thirty four older people were recruited. The majority were women, married, with low levels of education, not employed, living with family, and had medical co-morbidity. A minority satisfied DSM-5 criteria for major (1.5%) and mild NCD (36.5%). The factors associated with NCD were older age, fewer years of education, and lower socio-economic status.</p>	INT	JUL TO DEC	Psychiatry, Health                      Community	<p><b>PMID:</b> 29798738 <b>Impact Factor:</b> 2.478 <b>(BIOXBIO - 2018)</b> <b>H-Index: 84</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	MMSE, VSID patient, and VSID informant scores were significantly associated with NCD. The indices of efficacy for the MMSE and VSID patient version were modest for identifying Mild NCD. However, their performance in identifying major NCD was better. Nevertheless, optimal thresholds for recognition differed markedly from their originally recommended cut-offs. CONCLUSIONS: The DSM-5 standards, with new and different cognitive domains, mandate a reevaluation and recalibration of existing screening instruments. Ideally, new screening instruments, which match the cognitive domains and DSM-5 standard should be developed.				
630.	Varghese, A., Keshava, S. N., Moses, V., Koshy, G., Mammen, S., Ahmed, M. and Livingstone, R. S. Radiation dose reference card for interventional radiology procedures: Experience in a tertiary referral centre Indian J Radiol Imaging; 2019, 29 (3): 247-252 <b>Address:</b> Department of Radiology, <b>Christian Medical College and Hospital, Vellore</b> , Tamil Nadu, India. Background: Fluoroscopy-guided interventions can potentially increase radiation risk to patients, if awareness on angiographic imaging technique and radiation dose is neglected. Aim: To develop patient radiation dose reference card from standardized imaging techniques for various radiology interventions performed using flat detector based angiography system. Materials and Methods: Real-time monitoring of angiographic exposure parameters and radiation dose were performed for 16 types of radiological interventions. Effective dose (ED) was estimated from dose area product (DAP) using PCXMC Monte Carlo simulation software. Radiation risk levels were estimated based on Biological Effects of Ionising radiation (BEIR) report VII predictive models for an Asian population. Results: Pulse rates of 7.5 pps and 0.6 mm Copper filtration during fluoroscopy and 4 frames per second (fps) and 0.1-0.3 mm Cu filtration during image acquisitions were found to reduce radiation dose. Owing to increased number of image acquisitions, DAP was highest during diagnostic spinal angiography 186.7 Gy <sub>cm</sub> (2) (44.0-377.5). This resulted in highest ED of 59.4 mSv with moderate risk levels (1 in 1000 to 1 in 500). Most of the radiological interventions had low radiation risk levels (1 in 10,000 to 1 in 1000). Conclusion: The patient radiation dose reference card is valuable to the medical community and can aid in patient counselling on radiation induced risk from radiological interventions.	NAT	JUL TO DEC	Radiology	<b>PMID:</b> 31741591 <b>Impact Factor: 0.33 (RG - 2018)</b> <b>H-Index: 21</b>
631.	Varghese, G. M., Turaka, V. P., Janardhanan, J., Yadav, S., Lakshmi, K. M., S, V. T. and Cherayil, B. Serum siderocalin levels in patients with tuberculosis and HIV	INT	JAN TO JUN	Infectious Diseases, Medicine, Haematology, Nephrology	<b>PMID:31112763</b> <b>PMC</b> <b>Impact Factor: 0.81</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>infection Int J Infect Dis; 2019, 85 132-134</p> <p><b>Address:</b> Department of Infectious Diseases, <b>Christian Medical College, Vellore, India.</b> Electronic <b>Address:</b> georgemvarghese@hotmail.com. Department of Medicine, <b>Christian Medical College, Vellore, India.</b> Department of Infectious Diseases, <b>Christian Medical College, Vellore, India.</b> Department of Haematology, <b>Christian Medical College, Vellore, India.</b> Department of Nephrology, <b>Christian Medical College, Vellore, India.</b> Mucosal Immunology and Biology Research Center, Massachusetts General Hospital, Charlestown, Massachusetts, USA.</p> <p>OBJECTIVES: Mycobacterium tuberculosis produces high-affinity siderophores that play essential roles in iron acquisition and tuberculosis (TB) pathogenesis. In response, host cells secrete a siderophore-binding protein, siderocalin, to limit the bacteria's access to iron. The objective of the present study was to evaluate the levels of siderocalin in patients with TB with or without HIV infection compared to controls. METHODS: Siderocalin levels were tested using a neutrophil gelatinase-associated lipocalin (NGAL) ELISA kit in four populations: HIV-infected patients with TB (HIV (pos), TB(pos)), non-HIV-infected patients with TB (HIV(neg), TB(pos)), HIV-infected patients without TB (HIV(pos), TB(neg)), and healthy controls (HIV(neg), TB(neg)). RESULTS: Serum siderocalin levels were significantly elevated in patients with TB regardless of their HIV status (HIV(neg), TB(pos) 920 (480-1050) pg/ml; HIV(pos), TB(pos) 494 (166-1050) pg/ml), whereas lower levels of siderocalin were seen in HIV-positive patients (HIV(pos), TB(neg) 268 (77-937) pg/ml; HIV(neg), TB(neg) 453 (193-994) pg/ml). CONCLUSIONS: The results indicate that active TB leads to an up-regulation of serum siderocalin regardless of HIV status, whereas HIV infection leads to a down-regulation of serum siderocalin levels in both TB-negative and TB-positive individuals. Further studies are needed to evaluate siderocalin as a potential marker of active TB and to clarify its role in the pathogenesis of HIV-associated TB.</p>				(RG-2018) H-Index: 73
632.	Varghese, J., Varghese James, J., Karthikeyan, M., Rasalkar, K., Raghavan, R., Sukumaran, A., Premkumar, P. S., Eapen, C. E. and Jacob, M.	INT	JUL TO DEC	Biochemistry, Biostatistics, Wellcome Trust Research Laboratory,	PMID:31835128 PMC 35328 Impact Factor: 2.895

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Iron homeostasis is dysregulated, but the iron-hepcidin axis is functional, in chronic liver disease                      J Trace Elem Med Biol; 2019, 58 126442  <b>Address:</b> Department of Biochemistry, <b>Christian Medical College, Vellore</b>, 632002, India.                      Department of Biostatistics, <b>Christian Medical College, Vellore</b>, 632002, India; Wellcome Trust Research Laboratory, <b>Christian Medical College, Vellore</b>, 632002, India.                      Department of Gastroenterology and Hepatology, <b>Christian Medical College, Vellore</b>, 632002, India.                      Department of Biochemistry, <b>Christian Medical College, Vellore</b>, 632002, India. Electronic <b>Address:</b> mjacob@cmcvellore.ac.in.</p> <p>BACKGROUND: Perturbations in iron homeostasis have been reported to be associated with irreversible liver injury in chronic liver disease (CLD). However, it is not clear whether liver dysfunction per se underlies such dysregulation or whether other factors also contribute to it. This study attempted to examine the issues involved.</p> <p>METHODS: Patients diagnosed to have chronic liver disease (n = 63), who underwent a medically-indicated upper gastrointestinal endoscopy, were the subjects of this study. Patients with dyspepsia, who underwent such a procedure, and were found to have no endoscopic abnormalities, were used as control subjects (n = 49). Duodenal mucosal samples were obtained to study mRNA and protein levels of duodenal proteins involved in iron absorption. A blood sample was also obtained for estimation of hematological, iron-related, inflammatory and liver function-related parameters.</p> <p>RESULTS: Patients with CLD had impaired liver function, anemia of inflammation and lower serum levels of hepcidin than control subjects. Gene (mRNA) expression levels of duodenal ferroportin and duodenal cytochrome b (proteins involved in iron absorption) were decreased, while that of divalent metal transporter-1 (DMT-1) was unchanged. Protein expression of DMT-1 was, however, decreased while that of ferroportin was unchanged. In the CLD group, serum hepcidin was predicted independently by serum ferritin and hemoglobin, but not by C-reactive protein (a marker of inflammation). CLD patients with serum ferritin greater than 300 mug/dL had significantly greater liver dysfunction (as indicated by significantly higher serum concentrations of bilirubin, AST and ALT, and MELD scores), higher serum concentrations of CRP and hepcidin, and higher ferroportin protein expression, than those with serum ferritin &lt;= 300 mug/dL. CONCLUSIONS: In patients with CLD, anemia of inflammation and low serum hepcidin levels were found to paradoxically co-exist. Expressions of duodenal proteins involved in</p>			Gastroenterology and Hepatology	<b>(BIOXBIO - 2018)</b> <b>H-Index: 61</b>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	iron absorption were either decreased or unaltered in these patients. The hepcidin response to higher body iron levels and/or inflammation appeared to be functional in these patients, despite the presence of liver disease.				
633.	<p>Varghese, L., Mukhopadhyay, S., Mehan, R., Kurien, R., Thomas, M. and Rupa, V.                      Sinonasal organising haematoma - a little known entity                      Braz J Otorhinolaryngol; 2019, 85 (6): 698-704  <b>Address: Christian Medical College,</b> Department of Otorhinolaryngology, Vellore, India. <b>Electronic Address:</b> laleevarghese@yahoo.co.in.  <b>Christian Medical College,</b> Department of Pathology, Vellore, India.  <b>Christian Medical College,</b> Department of Otorhinolaryngology, Vellore, India.</p> <p>INTRODUCTION: Sinonasal organising haematoma is a recently described, rare, benign inflammatory condition, which closely resembles malignancy in its clinical presentation. OBJECTIVE: To describe the clinical features of organising haematoma and to review the evolution of surgical options successfully used. METHODS: A retrospective review of charts of all patients with a histopathological diagnosis of sinonasal organising haematoma was performed. RESULTS: Six (60%) of the 10 patients were male with a mean age of 47.4 years. All patients had unilateral disease with recurrent epistaxis as the presenting symptom. Maxillary sinus was the most commonly involved sinus. There was no history of trauma in any of the patients. Hypertension (80%) was the most commonly associated comorbidity. Contrast-enhanced CT scan of the paranasal sinuses showed heterogeneous sinus opacification with/without bone erosion. Histopathological examination was diagnostic. Complete endoscopic excision was done in all patients resulting in resolution of the disease. CONCLUSION: Awareness of this relatively new clinical entity and its evaluation and treatment is important for otolaryngologists, maxillofacial surgeons and pathologists alike. Despite the clinical picture of malignancy, histopathological features of benign disease can safely dispel such a diagnosis.</p>	INT	JUL TO DEC	Otorhinolaryngology, Pathology	<p><b>PMID:</b> 30060926  <b>Impact Factor:</b> 1.603  <b>(BIOXBIO - 2018)</b>  <b>H-Index: NA</b></p>
634.	<p>Varghese, R., Neeravi, A., Subramanian, N., Pavithra, B., Kavipriya, A., Kumar, J. L., Girish Kumar, C. P., Jeyraman, Y., Karthik, G., Verghese, V. P. and Veeraraghavan, B.                      Clonal similarities and sequence-type diversity of invasive and carriage Streptococcus pneumoniae in India among children under 5 Years                      Indian Journal of Medical Microbiology; 2019, 37 (3): 358-362</p>	NAT	JUL TO DEC	Clinical Microbiology, Pediatrics, Medicine	<p><b>PMC Article</b> 35614  <b>Impact Factor:</b> 0.950  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 41</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India                      Department of Paediatrics, <b>Christian Medical College, Chennai, Tamil Nadu</b>, India                      ICMR, National Institute of Epidemiology, Chennai, Tamil Nadu, India                      Department of Medicine, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India</p>				
635.	<p>Varghese, R., Veeraraghavan, B., Jeyaraman, Y., Kumar, G., Arora, N. K. and Balasubramanian, S.                      Pneumococcal conjugate vaccine rollout in India: Expectations and challenges                      Indian Journal of Medical Microbiology; 2019, 37 (2): 141-146                      Address: [Varghese, Rosemol; Veeraraghavan, Balaji] <b>Christian Med Coll &amp; Hosp</b>, Dept Clin Microbiol, Vellore, Tamil Nadu, India. [Jeyaraman, Yuvraj; Kumar, Girish] Natl Inst Epidemiol, ICMR, Chennai, Tamil Nadu, India. [Arora, Narendra Kumar] Kanchi Kamakoti CHILDS Trust Hosp, Chennai, Tamil Nadu, India. [Balasubramanian, S.] INCLIN Trust Int, New Delhi, India.                      Balasubramanian, S (reprint author), Kanchi Kamakoti CHILDS Trust Hosp, Dept Paediat, 12-A Nageswara Rd, Chennai 600034, Tamil Nadu, India. <a href="mailto:sbsped@gmail.com">sbsped@gmail.com</a></p> <p>India is one among the four Asian countries with the greatest number of deaths due to pneumococcal infection among children under 5 years. pneumococcal conjugate vaccine (PCV) has been introduced in a phased manner in five major Indian states. Ambiguity remains in choosing the appropriate type of PCV and optimum schedule with maximum effectiveness specific for each country. Here, we discuss the evidences with respect to serotype coverage, immunogenicity, reactogenicity and dosage schedule for introduction of PCV13 in India. In addition, the expected PCV impact and the challenges are detailed. PCV13 is expected to provide &gt;75% serotype coverage for invasive pneumococcal disease (IPD) serotypes in Indian children combined with the replacement by nonvaccine serotypes which is unpredictable due to lack of complete data. Nasopharyngeal (NP) surveillance is easy, feasible and can replace IPD surveillance in resource-poor settings. Continuous IPD as well as NP surveillance in all the regions are necessary to assess the impact of PCV in India.</p>	NAT	JUL TO DEC	Clinical Microbiology	<p><b>WOS:</b>000509536200002                      PMC Article – 35596  <b>Impact Factor:</b> 0.950  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 41</b></p>
636.	<p>Varghese, V., Krishnan, V. and Kumar, G. S.                      Comparison of pullout strength of pedicle screws following revision using larger diameter screws                      Medical Engineering and Physics; 2019, 74 180-185  <b>Address:</b> Department of Engineering Design, Indian Institute of</p>	INT	JUL TO DEC	Orthopedics	<p><b>PMC Article 22389</b>  <b>PMID: 31543439</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Technology Madras, Chennai, India Spinal Disorder Surgery Unit, Department of Orthopedics, <b>Christian Medical College, Vellore, India</b></p> <p>Pedicle screw fixation and fusion are the gold standard for the treatment of spinal instability. Screw failures such as pullout and breakages have been reported during the past several years of research and development in this field. Further, the rate of revision surgeries due to failed pedicle screws is around 2–12%. This creates unavoidable hardship to the patients. Improper screw size for revision surgery can lead to complications such as pedicle fractures, screw pullout, or reduced stability of the fusion construct. We performed pullout strength studies on five osteoporotic lumbar vertebra and a rigid polyurethane foam block to find the effect of the outer diameter of revision screws as per American Standards for Testing of Materials (ASTM) 543–07 protocol. The present study revealed that whereas the use of revision screws that were one millimeter greater in diameter than the original screws decreased the pullout strength by 79% in the foam model, the pullout strength increased by 121% when the original index screws were replaced with screws that were two millimeters greater in diameter. The effect of revision screw diameter on pullout strength was significant (<math>p &lt; 0.05</math>). Cadaveric testing reveals a trend that agrees with the foam model tests. © 2019 DOI: 10.1016/j.medengphy.2019.09.008</p>				
637.	<p>Varkki, S. and Rose, W. Multi-use Hypertonic Saline Packets for Nebulization - A Threat for Patients with Cystic Fibrosis in India Indian Pediatr; 2019, 56 (12): 1068-1069 <b>Address:</b> Department of Paediatrics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> <a href="mailto:snehatitus85@yahoo.com">snehatitus85@yahoo.com</a> Department of Paediatrics, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p>	NAT	JUL TO DEC	Paediatrics	<p><b>PMID:31884452</b> <b>PMC 35329</b> <b>Impact Factor: 1.163</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 46</b></p>
638.	<p>Varsha, A. V., George, G., Pillai, R. and Sahajanandan, R. Comparative evaluation of hemodynamic responses and ease of intubation with airtraq video laryngoscope versus macintosh laryngoscope in patients with ischemic heart disease Ann Card Anaesth; 2019, 22 (4): 365-371 <b>Address:</b> Department of Cardiothoracic Surgery, <b>Christian Medical College and Hospital, Vellore, Tamil Nadu, India.</b> Department of Anaesthesia, <b>Christian Medical College and Hospital, Vellore, Tamil Nadu, India.</b> Introduction: Hemodynamic responses during laryngoscopy can</p>	INT	JUL TO DEC	Cardiothoracic Surgery, Anaesthesia	<p><b>PMID: 31621670</b> <b>Impact Factor: 0.66</b> <b>(RG - 2018)</b> <b>H-Index: 22</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>potentially precipitate ischemia in patients with coronary artery disease. There are conflicting reports regarding the hemodynamic stress responses between the conventional Macintosh and video laryngoscopes. There is a paucity of studies regarding the same in cardiac surgical patients. Materials and Methods: A prospective, randomized control study to compare the hemodynamic responses and ease of intubation using Airtraq video laryngoscope and Macintosh laryngoscope in patients with ischemic heart disease. Results: Seventy patients were randomized into two groups. Baseline variables including age, weight, Mallampati score, and comorbidities were comparable between the two groups. There was statistically significant elevation in mean heart rate in the Macintosh group at 2(nd)-min (P = 0.02) and 3(rd)-min (P = 0.05) postintubation. Similarly, there was a significant increase in mean arterial pressure at 2(nd) (P = 0.06), 3(rd) (P = 0.03), and 4(th) (P = 0.03) in the Macintosh group. The time for laryngoscopy and Intubation Difficulty Scale was significantly better in the Airtraq group (P = 0.001 and 0.001). However, the median time to intubation was longer in the Airtraq group (13 s vs. 11 s, P = 0.05). Laryngoscopy view was better with Airtraq even in patients with Mallampati score 3 (ten patients). The incidence of trauma was same in both the groups. Conclusion: Airtraq provides the better hemodynamic stability and ease of intubation and may be considered superior to conventional Macintosh laryngoscope for intubation in patients with ischemic heart disease.</p>				
639.	<p>Vasan, S. K., Noordam, R., Gowri, M. S., Neville, M. J., Karpe, F. and Christodoulides, C.                      The proposed systemic thermogenic metabolites succinate and 12,13-diHOME are inversely associated with adiposity and related metabolic traits: evidence from a large human cross-sectional study                      Diabetologia; 2019, 62 (11): 2079-2087  <b>Address:</b> Oxford Centre for Diabetes, Endocrinology and Metabolism, Radcliffe Department of Medicine, University of Oxford, Churchill Hospital, Oxford, OX3 7LE, UK.                      MRC Lifecourse Epidemiology Unit, University of Southampton, Southampton General Hospital, Hampshire, UK.                      Department of Internal Medicine, Section of Gerontology and Geriatrics, Leiden University Medical Center, Leiden, the Netherlands.                      Department of Biostatistics, <b>Christian Medical College, Vellore, Tamil Nadu</b>, 632001, India.                      NIHR Oxford Biomedical Research Centre, OUH Foundation Trust, Oxford, UK.</p>	INT	JUL TO DEC	Biostatistics	<p><b>PMID:</b> 31309263  <b>Impact Factor:</b> 7.113  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 207</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Oxford Centre for Diabetes, Endocrinology and Metabolism, Radcliffe Department of Medicine, University of Oxford, Churchill Hospital, Oxford, OX3 7LE, UK. fredrik.karpe@ocdem.ox.ac.uk.  NIHR Oxford Biomedical Research Centre, OUH Foundation Trust, Oxford, UK. fredrik.karpe@ocdem.ox.ac.uk.  Oxford Centre for Diabetes, Endocrinology and Metabolism, Radcliffe Department of Medicine, University of Oxford, Churchill Hospital, Oxford, OX3 7LE, UK. costas.christodoulides@ocdem.ox.ac.uk.</p> <p>AIMS/HYPOTHESIS: Circulating succinate and 12,13-dihydroxy-9Z-octadecenoic acid (12,13-diHOME) were recently shown to promote brown adipocyte thermogenesis and protect against metabolic disorders in rodents. This study aimed to evaluate the associations between plasma levels of these metabolites and adiposity and metabolic profile in humans. METHODS: Fasting plasma succinate and 12,13-diHOME levels were quantified using ultra HPLC-tandem MS in 2248 individuals (50% female, mean age 41.3 +/- 5.9 years, mean BMI 26.1 +/- 4.6 kg/m(2)) in addition to fasting plasma biochemistry. Total and regional adiposity were assessed with dual-energy x-ray absorptiometry. An age- and sex-adjusted linear regression model was used to determine the associations between succinate and 12,13-diHOME levels and body composition and metabolic profile. Two-sample Mendelian randomisation was used to assess the associations between genetically determined BMI and metabolic traits with circulating plasma succinate and 12,13-diHOME. RESULTS: A one-SD higher plasma succinate and 12,13-diHOME concentration was associated with a 0.15 SD (95% CI 0.28, 0.03) and 0.08 SD (0.15, 0.01) lower total fat mass respectively. Additionally, a one-SD higher plasma 12,13-diHOME level was associated with a 0.09 SD (0.16, 0.02) lower fasting plasma insulin and 0.10 SD (0.17, 0.04) lower plasma triacylglycerol. In Mendelian randomisation analyses, genetically determined higher BMI, fasting hyperinsulinaemia and elevated lipid levels were not associated with changes in either plasma succinate or plasma 12,13-diHOME concentrations. No indications of bias due to directional pleiotropy were detected in the Mendelian randomisation analyses. CONCLUSIONS/INTERPRETATION: Our findings tentatively suggest that plasma succinate and 12,13-diHOME may play a role in the regulation of energy metabolism and brown adipose tissue activation in humans. Further studies encompassing direct assessment of brown adipose tissue activity and dietary supplementation are necessary to investigate the potential beneficial effects of these metabolites on systemic metabolism.</p>				

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
640.	<p>Vasudevan, K., Devanga Ragupathi, N. K., Jacob, J. J. and Veeraraghavan, B. Highly accurate-single chromosomal complete genomes using IonTorrent and MinION sequencing of clinical pathogens Genomics; 2019, <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India. Department of Clinical Microbiology, <b>Christian Medical College, Vellore</b> 632004, Tamil Nadu, India. Electronic <b>Address:</b> vbalaji@cmcvellore.ac.in.</p> <p>Oxford Nanopore MinION sequencing technology has been gaining immense importance in identification of pathogen and antimicrobial resistance, though with 10-15% error rate. Short read technologies generates high accurate genome but with multiple fragments of genome. This study proposes a novel workflow to reduce the indels resulted from MinION long read sequencing by overlaying short read sequences from IonTorrent in the clinical isolates. Best of both techniques were employed which generated highly accurate-single chromosomal microbial genomes with increase in completeness of genomes from 44.5%, 30% and 43% to 98.6%, 98.6% and 96.6% for P. aeruginosa, A. veronii and B. pertussis respectively. To the best of our knowledge, this is the first study to generate a hybrid of IonTorrent and MinION reads to obtain single chromosomal genomes. This would enable to precisely infer both structural arrangement of genes and SNP based analysis for phylogenetic information.</p>	INT	JAN TO JUN	Clinical Microbiology	<p><b>PMID:30978388</b> <b>PMC</b> <b>Impact Factor: 2.910</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 135</b></p>
641.	<p>Veeraraghavan, B. and Walia, K. Antimicrobial susceptibility profile &amp; resistance mechanisms of Global Antimicrobial Resistance Surveillance System (GLASS) priority pathogens from India Indian J Med Res; 2019, 149 (2): 87-96 <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, India.</b> Division of Epidemiology &amp; Communicable Diseases, Indian Council of Medical Research, New Delhi, India.</p> <p>Antimicrobial resistance is a major concern globally. Infections due to drug-resistant pathogens are becoming difficult and a challenge to treat. As treatment choices are limited due to the high-drug resistance rates, there is an increase in the health care cost, duration of hospital stay, morbidity and mortality rates. Understanding the</p>	NAT	JAN TO JUN	Clinical Microbiology	<p><b>PMID:31219073</b> <b>PMC ID:6563747</b> <b>Impact Factor: 1.508</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 75</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>true burden of antimicrobial resistance for a geographical location is important to guide effective empirical therapy. To have a national data, it is imperative to have a systemic data capturing across the country through surveillance studies. Very few surveillance studies have been conducted in India to generate national data on antimicrobial resistance. This review aims to report the cumulative antibiogram and the resistance mechanisms of Global Antimicrobial Resistance Surveillance System (GLASS) priority pathogens from India.</p>				
642.	<p>Veeraraghavan, B., Jacob, J. J., Prakash, J. A. J., Pragasam, A. K., Neeravi, A., Narasimman, V. and Anandan, S.                      Extensive drug resistant Salmonella enterica serovar Senftenberg carrying bla<sub>NDM</sub> encoding plasmid p5558 (IncA/C) from India                      Pathog Glob Health; 2019, 113 (1): 20-26</p> <p><b>Address:</b> a Department of Clinical Microbiology ,<b>Christian Medical College</b> and Hospital , Vellore , India.</p> <p>Non-typhoidal Salmonella (NTS) are foodborne pathogens that are responsible for self-limiting gastroenteritis in humans. The present study aims at the molecular characterisation and comparative genomics of Salmonella enterica serovar Senftenberg strain P5558 isolated from the pus samples of a patient suffering from stump infection. The isolate was subjected to serotyping and antimicrobial susceptibility test to understand the phenotypical characteristics. Whole genome sequencing (WGS) was carried out and comparative genomics using computational tools showed the antimicrobial resistance and virulence gene profile of the isolates from the genome sequence data. Typing experiments confirmed that the isolate belong to S. Senftenberg with sequence type ST14. Resistance against beta-lactams is associated with the presence of bla<sub>TEM</sub>-1, bla<sub>OXA</sub>-9, bla<sub>CMY</sub>-2 and bla<sub>NDM</sub>-1 genes. Similarly resistance to aminoglycoside was associated with five aminoglycoside modifying enzymes aac(6')-Ia, aac(6')-Ib, aph(3')-Ib, aph(6')-Ib and ant(3'')-Ia, sulfonamide with sul-1 and sul-2 and chloramphenicol with florR gene. Substitutions in gyrA (S83Y, D87G) and parC (S80I) genes found to be the reason for fluoroquinolone resistance. The plasmid profiling showed the isolate has four resistance plasmids in which plasmid p5558-NDM (IncA/C) harbours major resistance genes including bla<sub>NDM</sub>-1 and bla<sub>CMY</sub>-2. Determination of virulence gene profile revealed that the genome carries all major Salmonella pathogenicity islands and virulence factors. From our findings it is clear that the isolate possess characteristic pathogenicity islands</p>	INT	JAN TO JUN	Clinical Microbiology	<p><b>PMID:30722761</b>  <b>PMC ID:6427686</b>  <b>Impact Factor: 1.703</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 63</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	(SPI 1-6, 13, 14), major virulence factors and acquired resistance genes. Comparative analysis suggests the evolution and distribution of the MDR gene encoding plasmids in NTS.				
643.	Veeraraghavan, B., Jacob, J. J., Prakash, J. A. J., Pragasam, A. K., Neeravi, A., Narasimman, V. and Anandan, S. Extensive drug resistant Salmonella enterica serovar Senftenberg carrying bla NDM encoding plasmid p5558 (IncA/C) from India Pathogens and Global Health; 2019, 113 (1): 20-26 <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College and Hospital, Vellore, India</b>	INT	JUL TO DEC	Clinical Microbiology	PMC Article 35565 <b>Impact Factor: 1.703</b> <b>(BIOXBIO-2018)</b> <b>H-Index: 63</b>
644.	Veeraraghavan, B., Pragasam, A. K., Bakthavatchalam, Y. D., Anandan, S., Swaminathan, S. and Sundaram, B. Colistin-sparing approaches with newer antimicrobials to treat carbapenem-resistant organisms: Current evidence and future prospects Indian J Med Microbiol; 2019, 37 (1): 72-90 <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Infectious Diseases, Global Hospital, Chennai, Tamil Nadu, India. Department of Pediatrics, Kanchi Kamakoti Childs Trust Hospital, Chennai, Tamil Nadu, India. Antimicrobial resistance is on the rise across the globe. Increasing incidence of infections due to carbapenem resistance organisms is becoming difficult to treat, due to the limited availability of therapeutic agents. Very few agents such as colistin, fosfomycin, tigecycline and minocycline are widely used, despite its toxicity. However, with the availability of novel antimicrobials, beta-lactam/beta-lactamase inhibitor-based and non-beta-lactam-based agents could be of great relief. This review covers three important aspects which include (i) current management of carbapenem-resistant infections, (ii) determination of specific types of carbapenemases produced by multidrug-resistant and extensively drug-resistant Gram-negative pathogens and (iii) the currently available novel beta-lactam/beta-lactamase inhibitors and non-beta-lactam-based agents' laboratory findings, clinical outcome and implications.	NAT	JUL TO DEC	Clinical Microbiology	PMID: 31424014 <b>Impact Factor: 0.950</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 41</b>
645.	Veeraraghavan, B., Vijayakumar, S., Pragasam, A. K., Bakthavachalam, Y. D. and Prakash, J. A. J. Antimicrobial Susceptibility Testing Methods for Acinetobacter spp Methods Mol Biol; 2019, 1946 23-37	INT	JAN TO JUN	Clinical Microbiology	PMID:30798541 <b>PMC</b> <b>Impact Factor: 0.38</b> <b>(RG-2018)</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India. vbalaji@cmcvellore.ac.in. Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu</b>, India.</p> <p>Serial twofold dilution methods are most commonly used to identify the antimicrobial activities of antibiotics. This can be achieved by different methods like broth dilution or agar dilution. Though these methods are simple, they can be influenced by various experimental factors and result in discrepancy. The following protocol has been validated for Acinetobacter species, including A. baumannii. It is important to include appropriate control strains to determine the minimum inhibitory concentration values and to compare the experiment results.</p>				<b>H-Index: 126</b>
646.	<p>Veeraraghavan, Balaji, Poojary, Aruna, Shankar, Chaitra, Bari, Anurag Kumar, Kukreja, Seema, Thukkaram, Bhuvanewari, Neethimohan, Ramya Gajaraj, Bakhtavachalam, Yamuna Devi and Kamat, Shweta</p> <p>In-vitro activity of tigecycline and comparator agents against common pathogens: Indian experience Journal of Infection in Developing Countries; 2019, 13 (3): 245-250</p> <p>Introduction: Tigecycline Evaluation and Surveillance Trail (TEST) study is an on-going global surveillance. The study was performed to determine the susceptibility of common pathogens to tigecycline and comparator antibiotics by broth microdilution (BMD) at two tertiary care centres in India from 2015 to 2017. Methodology: Total of 989 isolates collected from various clinical specimens between January 2015 and September 2017 from two centres in India were included. BMD was performed to determine the minimum inhibitory concentration (MIC) for tigecycline and comparator antibiotics. Results: Among Gram-negative bacteria, susceptibility to tigecycline was lowest among Klebsiella spp. being 84% while others such as E. coli, Enterobacter spp., Serratia spp. and H. influenzae showed susceptibility of 98%, 95%, 98% and 100% respectively. Overall, 99 isolates among Enterobacteriaceae (E. coli, Klebsiella spp. and Enterobacter spp.) were ESBL producers, susceptible to tigecycline. Among the 101 meropenem resistant Enterobacteriaceae, 85 were susceptible to tigecycline (84%). Among the Gram-positive bacteria, S. aureus and Enterococcus spp. were 99% and 98% susceptible to tigecycline respectively. Among 68 MRSA isolates in the study, 66 (97%) were susceptible to tigecycline. Seven vancomycin resistant E. faecalis were isolated and all were susceptible to tigecycline.</p>	INT	JUL TO DEC	Clinical Microbiology	<p><b>PMID:</b> WOS:000462753600010 <b>Impact Factor: 1.175</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 40</b></p>



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	Conclusion: Tigecycline has retained activity over both Gram-positive and Gram-negative organisms with MIC values comparable to global reports. About 98% of the MDR Gram-positive and Gram-negative bacteria in the study are susceptible to tigecycline. With increased incidence of extensively drug resistant organisms, tigecycline is a potential reserve drug.				
647.	Velavan, Jachin, Anbarasi, Sahaya, Sither, Adeline and Arun, Sheela Cost-effective primary health care training using a blended learning model Medical Education; 2019, 53 (5): 511-511	INT	JUL TO DEC	Distance Education Unit	<b>PMID:</b> WOS:000465085700027 <b>Impact Factor:</b> 4.619 <b>(BIOXBIO - 2018)</b> <b>H-Index: 120</b>
648.	Velayutham, P., Cherian, V. T., Rajshekhar, V. and Babu, K. S. The effects of propofol and isoflurane on intraoperative motor evoked potentials during spinal cord tumour removal surgery - A prospective randomised trial Indian J Anaesth; 2019, 63 (2): 92-99  <b>Address:</b> Division of Neurosurgery, Department of Surgical Oncology, Tata Memorial Centre, Advanced Centre for Treatment, Research and Education in Cancer, Sector-22, Kharghar, Navi Mumbai, Maharashtra, India. Department of Anaesthesiology, Penn State College of Medicine, Milton S. Hershey Medical Center, 500 University Drive, H187, Hershey, PA, USA. Department of Neurological Sciences, <b>Christian Medical College</b> , Ida Scudder Road, Vellore, Tamil Nadu, India.  Background and Aims: Transcranial electrical stimulation (TES) elicited intraoperative motor evoked potentials (iMEPs), are suppressed by most anaesthetic agents. This prospective randomised study was carried out to compare the effects of Isoflurane and Propofol on iMEPs during surgery for spinal cord tumours. Methods: A total of 110 patients were randomly divided into two groups. In group P, anaesthesia was maintained with intravenous propofol (6.6 +/- 1.5 mg/kg/hr) and in group I anaesthesia was maintained with isoflurane (0.8 +/- 0.1% minimal alveolar concentration (MAC). An Oxygen- air mixture (FiO2-0.3) was used in both groups. TES-iMEPs were recorded from tibialis anterior, quadriceps, soleus and external anal sphincter muscles in 60 of 90 patients. Statistical analysis was performed with Pearson correlation and Paired 't' tests. Results: Successful baseline iMEPs were recorded in 74% of patients in Group P and in 50% of patients in Group I. Age and duration of symptoms influenced the elicitation of	NAT	JAN TO JUN	Neurological Sciences	<b>PMID:30814745</b> <b>PMC ID:6383481</b>  <b>Impact Factor: 0.17</b> <b>(RG-2018)</b> <b>H-Index: 22</b>

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	baseline iMEPs under isoflurane ( $r = -0.71, -0.66$ respectively, $P < 0.01$ ) as compared to propofol ( $r = -0.60, -0.50$ respectively, $P < 0.01$ ). The mean stimulus strength required to elicit the baseline iMEPs were lesser in propofol (205 +/- 55Volts) as compared to isoflurane (274 +/- 60 Volts). Suppression of the iMEP responses was less under propofol (7.3%) as compared to isoflurane anaesthesia (11.3%) in patients with no preoperative neurological deficits. Conclusion: iMEPs are better maintained under propofol anaesthesia (6-8 mg/kg/hr) when compared with isoflurane (0.7-0.9 MAC). in patients undergoing surgery for excision of spinal cord tumours.				
649.	<p>Velayutham, P., Murthy, M. and Babu, K. S.                      Time-Dependent Bidirectional Neuroprotection by Adenosine 2A Receptor in Experimental Traumatic Brain Injury                      World Neurosurgery; 2019, 125 e743-e753</p> <p><b>Address:</b> Neurophysiology Unit, Department of Neurological Sciences, <b>Christian Medical College, Vellore, India.</b> Electronic Address: parthibanus@gmail.com.                      Neurophysiology Unit, Department of Neurological Sciences, <b>Christian Medical College, Vellore, India.</b></p> <p>BACKGROUND: Traumatic brain injury (TBI) results in both focal and diffuse brain pathological features that become severely exacerbated after the initial injury. Owing to this disease complexity, no effective therapeutic measure has yet been devised aimed directly at these pathological processes. We developed a clinically relevant model of TBI and tested the bidirectional neuroprotective role of adenosine 2A receptors (A2ARs) at different times. METHODS: Wistar rats were divided into 4 treatment groups (sham, TBI, A2AR agonist [CGS-21680], and A2AR antagonist [SCH-58261]) and 4 post-TBI intervals (15 minutes and 1, 12, and 24 hours). A2AR agonist and antagonist effects were tested by the neurological functional score (NFS) and levels of cyclic adenosine monophosphate, interleukin-1beta, oxidative stress antioxidant markers, and caspase-3. RESULTS: The A2AR agonist-treated group showed significant NFS improvement at 15 minutes and 1 hour after TBI compared with the TBI group. However, no improvement was observed at 12 and 24 hours. The A2AR antagonists resulted in no NFS improvement at 15 minutes and 1 hour, and significant improvement observed at 12 and 24 hours. Significant neuroprotective effect with an A2AR agonist were observed with cyclic adenosine monophosphate, interleukin-1beta, oxidative stress markers, catalase, and caspase-3 levels at 15 minutes and 1 hour</p>	INT	JAN TO JUN	Neurophysiology	<p><b>PMID:30735877</b>  <b>PMC</b>  <b>Impact Factor: 1.924</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 85</b></p>

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	after TBI. The A2AR antagonist showed no effect at these intervals but showed a protective effect at 12 and 24 hours after TBI. CONCLUSIONS: The A2AR agonist showed a beneficial neuroprotective effect at the early stages after TBI, and the A2AR antagonist showed a benefit at the later stages after TBI. These findings suggest that A2AR agonists and antagonists should be used in accordance with the point at which the TBI occurred.				
650.	<p>Venkat, A., Falconi, T. M. A., Cruz, M., Hartwick, M. A., Anandan, S., Kumar, N., Ward, H., Veeraraghavan, B. and Naumova, E. N. Spatiotemporal Patterns of Cholera Hospitalization in Vellore, India Int J Environ Res Public Health; 2019, 16 (21):</p> <p><b>Address:</b> Friedman School of Nutrition Science and Policy, Tufts University, Boston, MA 02111, USA. Aishwarya.Venkat@tufts.edu. Friedman School of Nutrition Science and Policy, Tufts University, Boston, MA 02111, USA. Tania.Alarcon_Falconi@tufts.edu. Sackler School of Graduate Biomedical Sciences, Tufts University, Boston, MA 02111, USA. melissa.e.cruz@gmail.com. School of Marine Science and Ocean Engineering, University of New Hampshire, Durham, NH 03824, USA. mah2002@wildcats.unh.edu.</p> <p><b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India. shalinianandan@cmcvellore.ac.in.</p> <p><b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India. speed.naveen1@gmail.com.</p> <p>Sackler School of Graduate Biomedical Sciences, Tufts University, Boston, MA 02111, USA. hward@tuftsmedicalcenter.org.</p> <p><b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India. hward@tuftsmedicalcenter.org.</p> <p>Tufts Medical Center, Boston, MA 02111, USA. hward@tuftsmedicalcenter.org.</p> <p><b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India. vbalaji@cmcvellore.ac.in.</p> <p>Friedman School of Nutrition Science and Policy, Tufts University, Boston, MA 02111, USA. Elena.Naumova@tufts.edu.</p> <p><b>Christian Medical College, Vellore,</b> Tamil Nadu 632004, India. Elena.Naumova@tufts.edu.</p> <p>Systematically collected hospitalization records provide valuable insight into disease patterns and support comprehensive national infectious disease surveillance networks. Hospitalization records detailing patient's place of residence (PoR) can be utilized to better understand a hospital's case load and strengthen surveillance among mobile populations. This study examined geographic patterns of patients treated for cholera at a major hospital in south India. We abstracted 1401 laboratory-confirmed cases of cholera between</p>	INT	JUL TO DEC	Clinical Microbiology	<p><b>PMID:</b> 31684018</p> <p><b>Impact Factor: 2.468</b></p> <p><b>(BIOXBIO - 2018)</b></p> <p><b>H-Index: 78</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>2000-2014 from logbooks and electronic health records (EHRs) maintained by the Christian Medical College (CMC) in Vellore, Tamil Nadu, India. We constructed spatial trend models and identified two distinct clusters of patient residence-one around Vellore (836 records (61.2%)) and one in Bengal (294 records (21.5%)). We further characterized differences in peak timing and disease trend among these clusters to identify differences in cholera exposure among local and visiting populations. We found that the two clusters differ by their patient profiles, with patients in the Bengal cluster being most likely older males traveling to Vellore. Both clusters show well-aligned seasonal peaks in mid-July, only one week apart, with similar downward trend and proportion of predominant O1 serotype. Large hospitals can thus harness EHRs for surveillance by utilizing patients' PoRs to study disease patterns among resident and visitor populations.</p>				
651.	<p>Vidya Konduru, D Kiran Kumar, J Rajinikanth, Amit Tirkey            ABS-028: Bipaddled Pectoralis Major Myocutaneous Flap for Reconstruction of Complex Defects in the Head and Neck Region: A Series of 44 Cases            Journal of Head &amp; Neck Physicians and Surgeons; 2019, 7 (3):S16            Head and Neck Surgery Unit 2, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India. E-mail: <a href="mailto:vidya5feb@gmail.com">vidya5feb@gmail.com</a>            Background: Cancer of the head and neck region is one of the most common cancers in India, often presenting at an advanced stage and requiring extensive resection and complex reconstruction. The defects may require technically demanding and expensive free tissue transfers or multiple pedicled flaps as staged reconstructive procedures. We present a series of patients who underwent reconstruction for complex head and neck defects with a single-stage PMMC flap, which was bipaddled to serve as both lining and cover.            Methods: 44 patients with extensive mucosal and cutaneous defects following extirpation of head and neck cancer were selected to undergo bipaddled PMMC flap reconstruction. The relevant pre- and post-operative data was compiled and analyzed. Outcomes on follow up were included. Results: Of the 44 patients in the series, 13 were female and 31 were male. Most of the defects followed composite resection for carcinoma of the buccal mucosa, lower gingivobuccal sulcus and the lower alveolus. The size of skin paddle harvested ranged from 8-15 cm in the horizontal axis to about 6 to 22 cm in the vertical axis. Five patients suffered partial loss of the flap. Discussion and Conclusion: Reconstruction of complex head and neck defects can be achieved with a single stage, bipaddled PMMC flap, a robust and easily learned alternative to more complicated reconstructive</p>	NAT	JUL TO DEC	Head and Neck Surgery	<p><b>Impact Factor: 0.472</b>  <b>H-Index: NA</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	surgeries. The complication rate observed in our series is remarkably low, even in females, where a PMMC flap was traditionally considered unreliable. PMMC continues to be a valuable tool in the reconstructive toolbox.				
652.	<p>Vigashini A, Reddy M, John A, Moray KV, Geetha R, Kalipatnapu S, Alexander AM, Muliyl D, Chase S. Prevalence of fecal incontinence among women in a rural community in Southern India. Int J Med Sci Public Health 2019;8(7):539-542.</p> <p><b>Address:</b> 1.Department of Community Medicine, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India, 2.Regional Resource Hub of Health Technology Assessment, National Institute of Research in Reproductive health, Indian Council of Medical Research, Mumbai, Maharashtra, India, 3.Department of Community Medicine, K.A.P.V. Medical College, Tiruchirappalli, Tamil Nadu, India, 4.Department of General Surgery, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India, 5.Department of Community Health, <b>Christian Medical College, Vellore</b>, Tamil Nadu, India Correspondence to: Kusum V Moray, E-mail: kukimoray@gmail.com</p> <p>Background: The prevalence of fecal incontinence (FI) in the community is usually grossly underreported. There are very few studies done in the Asian population to assess FI. Objective: Our study aimed to assess the prevalence and the factors associated with FI in adult females aged 30–60 years in a rural community in south India. Materials and Methods: We conducted a community-based cross-sectional study among 200 people in three villages (Allivaram, Thoppanthangal, and Veppampet) in Kaniyambadi block, Vellore district, Tamil Nadu. Participants were recruited into the study after informed consent. Information about demographic details, comorbidities, and risk factors for FI was collected using a structured pilot-tested questionnaire. Revised FI Scale (RFIS) was used for evaluation and grading of FI. Results: Our study reports the community prevalence of 1.5% (3/200) with 95% confidence interval (0.05, 2.95) for FI using the RFIS scale. The women who were identified to have FI were referred to the secondary hospital for further evaluation and management. All the women who reported FI had a history suggestive of local anal conditions/surgery. Only “passing blood in stool” was statistically significant with FI in logistic</p>	NAT	JUL TO DEC	Community medicine, General Surgery	<b>Impact Factor:NA</b> <b>H-Index: NA</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>regression. Multiple vaginal deliveries or associated obstetrical injuries did not show any association with FI. Conclusions: Large-scale multicenter studies are required to assess the prevalence and social burden caused by this disabling condition. KEY WORDS: Fecal Incontinence; Prevalence; Community Study; Females</p>				
653.	<p>Vijayakumar, S., Biswas, I. and Veeraraghavan, B. Accurate identification of clinically important Acinetobacter spp.: an update Future Sci OA; 2019, 5 (6): FSO395 <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore 632 004, Tamil Nadu, India.</b> Department of Microbiology, Molecular Genetics &amp; Immunology, University of Kansas Medical Center, Kansas City, KS 66160, USA. Acinetobacter species have emerged as one of the most clinically important pathogens. The phenotypic techniques which are currently available are insufficient in accurately identifying and differentiating the closely related and clinically important Acinetobacter species. Here, we discuss the advantages and limitations of the conventional phenotypic methods, automated identification systems, molecular methods and MALDI-TOF in the precise identification and differentiation of Acinetobacter species. More specifically, several species of this genus are increasingly reported to be of high clinical importance. Molecular characterization such as of bla OXA-51-like PCR together with rpoB sequencing has high discriminatory power over the conventional methods for Acinetobacter species identification, especially within the Acinetobacter calcoaceticus-Acinetobacter baumannii complex.</p>	INT	JUL TO DEC	Clinical Microbiology	<p><b>PMID:</b> 31285840 <b>Impact Factor: NA</b> <b>H-Index:3</b></p>
654.	<p>Vijayakumar, S., Veeraraghavan, B., Pragasam, A. K. and Bakthavachalam, Y. D. Genotyping of Acinetobacter baumannii in Nosocomial Outbreak and Surveillance Methods Mol Biol; 2019, 1946 17-22 <b>Address:</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> Department of Clinical Microbiology, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b> <a href="mailto:vbalaji@cmcvellore.ac.in">vbalaji@cmcvellore.ac.in</a></p> <p>Acinetobacter baumannii is considered to be an important nosocomial pathogen responsible for various outbreaks that have resulted in a need for effective epidemiological typing methods. Different typing methods are available for A. baumannii epidemiological studies. Currently, the phenotypic typing methods</p>	INT	JAN TO JUN	Clinical Microbiology	<p><b>PMID:30798540</b> <b>PMC</b> <b>Impact Factor: 0.38</b> <b>(RG-2018)</b> <b>H-Index: 126</b></p>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	are not being used and replaced by various molecular methods. In this chapter, two important epidemiological typing methods, pulsed-field gel electrophoresis (PFGE) and multi-locus sequence typing (MLST), are discussed.				
655.	<p>Vilanilam, G. K., John, A. E., Badi, M. K., Surapaneni, P. K. and Gopal, N.                      Barometric Pressure in Cerebral Amyloid Angiopathy: A Pressure to Bleed?                      J Stroke Cerebrovasc Dis; 2019, 28 (6): 1781</p> <p><b>Address:</b> Department of Neurology, Mayo Clinic Jacksonville, Florida. Electronic <b>Address:</b> vilanilam.george@mayo.edu.                      Department of Pathology, <b>Christian Medical College Vellore</b>, Tamil Nadu, India.                      Department of Neurology, Mayo Clinic Jacksonville, Florida.                      Department of Hematology, Mayo Clinic Jacksonville, Florida.</p>	INT	JAN TO JUN	Pathology	<p><b>PMID:30910266</b>  <b>PMC</b>  <b>Impact Factor: 1.598</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 50</b></p>
656.	<p>Vimala LR(1), Gibikote S(1), Irodi A(1), Rajan M(1), Christopher DJ(1).                      Correlation of quantitative and qualitative parameters of high-resolution computed tomography with pulmonary function test for diagnosing and assessing the severity of obstructive pulmonary disease.                      Pol J Radiol. 2019 Oct 3;84:e381-e388.                      doi: 10.5114/pjr.2019.89306. eCollection 2019.</p> <p><b>Author information:</b>                      (1)<b>Christian Medical College, Vellore</b>, India.</p> <p>Purpose: The aim of the study was to evaluate the role of high-resolution computed tomography (HRCT) in the prediction of presence and severity of chronic obstructive pulmonary disease (COPD), based on the pulmonary function test (PFT), to correlate the various quantitative and qualitative indices of COPD in HRCT with PFT values, and to derive at the threshold values for various quantitative HRCT indices of COPD. Material and methods: A one-year retrospective and prospective evaluation of the HRCTs of 90 cases and 38 controls was performed. Quantitative and qualitative parameters of COPD were assessed in HRCT and were correlated with PFT. Results: Among the qualitative parameters, significant correlation with spirometry was found with the qualitative scoring for emphysema and presence and inhomogeneous attenuation. Among the quantitative indices, anterior junction line length, thoracic cage</p>	INT	JUL TO DEC	Radiology, Pulmonary Medicine	<p><b>PMCID: PMC6964351</b>  <b>PMID: 31969954</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	ratio at both aortic arch and inferior pulmonary vein level, thoracic cross-sectional area/[height] <sup>2</sup> at the aortic arch were found to have good correlation with spirometry. There was significant strong correlation of anterior junction line length and tracheal index with residual volume/total lung capacity (RV/TLC). The threshold values of chest X-ray and HRCT quantitative parameters were calculated and were found to be lower than those of the western population. Conclusion: HRCT has a definite role in the diagnosis of COPD and can be used to predict the severity of emphysema. Copyright © Polish Medical Society of Radiology 2019. DOI: 10.5114/pjr.2019.89306				
657.	<p>Vineet Subodh Dhanawade Clinico-microbiological profile and outcome of patients with complicated parapneumonic effusion &amp; empyema thoracis in a tertiary care centre in South India <u>Lung India</u>. 2019 Nov; 36(Suppl 3): S168.</p> <p><b>Christian Medical College and Hospital, Vellore, Tamil Nadu, India.</b> E-mail: <a href="mailto:vin3787@yahoo.co.in">vin3787@yahoo.co.in</a></p> <p>Background: Pleural infections cause significant morbidity &amp; mortality especially in developing countries. Aims and Objectives: To describe the clinicomicrobiological profile and outcome at 3 months. Design: Prospective analytical study conducted for 1 year. Methods: All the relevant data were recorded. Results: Median age in study population was 48 years with a male preponderance. Common symptoms were cough (87%), dyspnea (84.4%), chest pain (75%), fever (67.2%). Co-morbidities were diabetes (35.9%), hypertension (21.9%), chronic lung disease (15.6%), malignancy (10.9%). On pleural fluid analysis, 71.9% were purulent and 28.1% had culture positivity. Of the 35 organisms isolated, 23 were aerobes, 5 were anaerobes, 6 mycobacterium tuberculosis and 1 fungus. Streptococci spp (7/23) was the commonest among the aerobes and Prevotella spp (2/5) among the anaerobes. Tuberculous effusion constituted 15.6%. Majority (87.5%) of patients were managed with chest tube drainage alone and only 4 patients underwent surgical decortication. 36(56.3%) patients were discharged on chest tube and the average length of tube thoracostomy was 45 days in the above patients. In the remaining, mean duration of chest tube drainage was 8 days. Mean duration of hospital stay was 10 days. Complications included un-expanding lung (48.4%), bronchopleural fistula (12.5%), sepsis (10.9%), respiratory failure (4.7%) and death within 3 months</p>	NAT	JUL TO DEC	Respiratory Medicine	<p><b>PMCID: PMC6891926</b> <b>Impact Factor: 0.58</b> <b>(RG-2018)</b> <b>H-Index: 18</b></p>



## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	(9%). Poor outcome was seen in 62.4% patients. Conclusion: Empyema carries high morbidity. A strategy of prolonged chest tube drainage with staged removal is an option in those with high surgical risk/unwilling for surgery.				
658.	<p>Vinod, E., Francis, D. V., Jacob, T., Amirtham, S. M., Sathishkumar, S., Kanthakumar, P. and Oommen, V.</p> <p>Autologous platelet rich fibrin as a scaffold for chondrocyte culture and transplantation: An in vitro bovine study J Clin Orthop Trauma; 2019, 10 (Suppl 1): S26-S31</p> <p><b>Address:</b> Department of Physiology, <b>Christian Medical College and Hospital, Vellore, 632002, India.</b> Centre for Stem Cell Research, <b>Christian Medical College and Hospital, Vellore, 632002, India.</b> Department of Anatomy, <b>Christian Medical College and Hospital, Vellore, 632002, India.</b> Department of Anatomy, School of Medical Sciences, UNSW, Sydney, 2052, Australia.</p>	INT	JUL TO DEC	Physiology, Centre for Stem Cell Research, Anatomy.	<p><b>PMID:</b> 31700205 <b>Impact Factor:</b> 0.35 <b>(RG - 2018)</b> <b>H-Index:</b> 12</p>
659.	<p>Vinod, E., James, J. V., Kachroo, U., Sathishkumar, S., Livingston, A. and Ramasamy, B.</p> <p>Comparison of incremental concentrations of micron-sized superparamagnetic iron oxide for labelling articular cartilage derived chondroprogenitors Acta Histochem; 2019, 121 (7): 791-797</p> <p><b>Address:</b> Department of Physiology, <b>Christian Medical College, Vellore, 632002, India;</b> Centre for Stem Cell Research, <b>Christian Medical College, Vellore, 632002, India.</b> Electronic <b>Address:</b> elsyclarence@cmcvellore.ac.in. Department of Biochemistry, <b>Christian Medical College, Vellore, 632002, India.</b> Electronic <b>Address:</b> jithujames04@gmail.com. Department of Physiology, <b>Christian Medical College, Vellore, 632002, India.</b> Electronic <b>Address:</b> upasana_k@hotmail.com. Department of Physiology, <b>Christian Medical College, Vellore, 632002, India.</b> Electronic <b>Address:</b> solomon@cmcvellore.ac.in. Department of Orthopaedics, <b>Christian Medical College, Vellore, 632004, India.</b> Electronic <b>Address:</b> abel_livingston@cmcvellore.ac.in. Department of Orthopaedics, Royal Darwin Hospital, Tiwi, NT, 0810, Australia. Electronic <b>Address:</b> jpboopy@gmail.com.</p> <p>INTRODUCTION: In vivo tracking of labelled cells can provide valuable information about cellular behavior in the microenvironment, migration and contribution of transplanted cells toward tissue regeneration. Articular cartilage derived</p>	INT	JUL TO DEC	Physiology, Centre for Stem Cell Research, Biochemistry.	<p><b>PMID:</b> 31326114 <b>Impact Factor:</b> 1.719 <b>(BIOXBIO - 2018)</b> <b>H-Index:</b> 44</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>chondroprogenitors (CPs) show promise as a candidate for cell-based therapy as they have been classified as mesenchymal stem cells with inherent chondrogenic potential. Iron oxide labelling is known to withstand harsh processing techniques known to be associated with staining of osteochondral specimens. AIM AND METHODS: The aim of our study was to investigate the feasibility of labelling CPs with micron-sized super paramagnetic iron oxide (M-SPIO) particles and to study the effects of this approach on the labelling efficiency, viability, maintenance of phenotype and potential for differentiation. Human CPs were isolated using fibronectin adhesion assay, passage 2 cells were labelled using three concentrations of M-SPIO (12.75 mug/ml, 25.5 mug/ml and 38.25 mug/ml). At sub confluence, cells were assessed for a) iron uptake by Prussian blue stain and colorimetry b) viability using 7-amino actinomycin D, c) MSC marker expression by flow cytometric analysis and d) trilineage differentiation potential. RESULTS AND CONCLUSION: Iron uptake was higher with increase in M-SPIO concentration whereas CD73, CD90 marker expression significantly decreased and chondrogenic potential appreciably reduced with increase in M-SPIO concentration. In conclusion, 12.75 mug/ml M-SPIO can successfully label human articular cartilage derived chondroprogenitors with minimal effect on cellular viability, MSC marker expression and potential for differentiation.</p>				
660.	<p>Vinod, E., Kachroo, U., Amirtham, S. M., Ramasamy, B. and Sathishkumar, S.                      Comparative analysis of fresh chondrocytes, cultured chondrocytes and chondroprogenitors derived from human articular cartilage                      Acta Histochem; 2019, 151462  <b>Address:</b> Department of Physiology, <b>Christian Medical College, Vellore,</b> 632002, India; Centre for Stem Cell Research, <b>Christian Medical College, Vellore,</b> 632002, India. Electronic <b>Address:</b> elsyclarence@cmcvellore.ac.in.                      Department of Physiology, <b>Christian Medical College, Vellore,</b> 632002, India. Electronic <b>Address:</b> upasana_k@hotmail.com.                      Department of Physiology, <b>Christian Medical College, Vellore,</b> 632002, India. Electronic <b>Address:</b> sooma_a@hotmail.com.                      Department of Orthopaedics, Royal Darwin Hospital, 105 Rocklands Drive, Tiwi, NT, 0810, Australia. Electronic <b>Address:</b> jpboopy@gmail.com.                      Department of Physiology, <b>Christian Medical College, Vellore,</b> 632002, India. Electronic <b>Address:</b> solomon@cmcvellore.ac.in.                      INTRODUCTION: Interest in chondroprogenitors arose due to their inherent stem cell like properties, and their initial characterization</p>	INT	JUL TO DEC	Physiology, Centre for Stem Cell Research.	<p><b>PMID:</b> 31733827  <b>Impact Factor:</b> 1.719  <b>(BIOXBIO - 2018)</b>  <b>H-Index:</b> 44</p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>was based on identification of a small percentage of CD49e positive cells in cultured chondrocytes (CC). It was further noted that when fresh chondrocytes (FC; reported to express low CD49e) were subjected to fibronectin adhesion assay, an isolate of chondroprogenitors was obtained, which was highly positive for CD49e, thus making it a distinguishing marker for this cell population. However, this notion was challenged when reports demonstrated high CD49e expression in CC as well. Therefore, our aim was to compare CD49e expression in FC, CC and chondroprogenitors. METHODS: Chondrocytes and chondroprogenitors were isolated from articular cartilage of osteoarthritic joints from three patients. Assessment of classic fibronectin receptor (CD49e, CD29), positive (CD105, CD73, CD90) and negative (CD45, CD34) mesenchymal stem cell marker expression in all groups was performed, as chondroprogenitors fulfill the minimal criteria laid down by International Society for Cellular Therapy. Following this, adipogenic, osteogenic and chondrogenic differentiation was assessed by Oil red O, Alizarin Red and Alcian Blue staining respectively. RESULTS AND CONCLUSION: Our observations indicate that FC show significantly low surface marker expression as compared to CC and chondroprogenitors, whereas no significant difference was seen in values when CC and chondroprogenitors were compared. Moreover, comparable results were exhibited when trilineage differentiation potential was compared across groups. Since CC and chondroprogenitors show similar characteristics, there is a pressing need for a specific differentiating marker to isolate a pure population of chondroprogenitors.</p>				
661.	<p>Vinod, E., Kachroo, U., Ozbey, O., Sathishkumar, S. and Boopalan, Prjvc            Comparison of human articular chondrocyte and chondroprogenitor cocultures and monocultures: To assess chondrogenic potential and markers of hypertrophy            Tissue and Cell; 2019, 57 42-48  <b>Address:</b> Department of Physiology, <b>Christian Medical College, Vellore,</b> 632002, India; Centre for Stem Cell Research, <b>Christian Medical College, Vellore,</b> 632002, India. Electronic <b>Address:</b> elsyclarence@cmcvellore.ac.in.            Department of Physiology, <b>Christian Medical College, Vellore,</b> 632002, India. Electronic <b>Address:</b> upasana_k@hotmail.com.            Department of Histology and Embryology Campus, School of Medicine, Akdeniz University, Antalya, 07070, Turkey. Electronic <b>Address:</b> ozlem_ozbey@hotmail.com.</p>	INT	JAN TO JUN	Physiology, Orthopaedics	<p><b>PMID:30947962</b>  <b>PMC</b>  <b>Impact Factor: 1.438</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 46</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Department of Physiology, <b>Christian Medical College, Vellore</b>, 632002, India. Electronic <b>Address:</b> solomon@cmcvellore.ac.in.            Department of Orthopaedics, <b>Christian Medical College, Vellore</b>, 632004, India; Centre for Stem Cell Research, <b>Christian Medical College, Vellore</b>, 632002, India. Electronic <b>Address:</b> jpboopy@gmail.com.</p> <p>BACKGROUND AND OBJECTIVE: In the field of cartilage repair, use of two or more cell populations such as mesenchymal stem cells with chondrocytes in an in-vitro co-culture synergistic environment has been attempted to evade limitations of monoculture systems and promote/induce chondrogenesis. Articular cartilage-derived chondroprogenitors (CPs), considered to have stem-cell like characteristics have been proposed as a potential contender for neocartilage development. Our objective was to assess whether co-cultures using different ratios of chondrocytes(C) and CPs would demonstrate better results in terms of growth kinetics, surface marker expression, chondrogenic potential, tendency for hypertrophy and glycosaminoglycan deposition than monocultures. STUDY DESIGN: Human chondrocytes and CPs (fibronectin adhesion assay) from the same cartilage source were isolated. Passage 2 cells were subjected to monolayer/pellet cultures and were grown as monocultures and cocultures at the following percentage ratios(C:CP) 80:20, 65:35, 50:50, 35:65 and 20:80. RESULTS: Analysis of data acquired from population doubling, flow cytometry, RT-PCR and Safranin O uptake demonstrated similar results in all monoculture and co-culture groups with no significant inter-group variation, even when reported specific markers of identification (CD54 and CD44:chondrocyte markers) and isolation (CD29 and CD49e: forming heterodimeric fibronectin receptor for CP sorting) were examined. CONCLUSION: In conclusion, this study suggests the need for improved sorting techniques based on a characteristic differentiating biomarker for selection of cells which are true representatives of CPs possessing properties of enhanced chondrogenesis and reduced hypertrophy.</p>				
662.	<p>Vinod, E., Vinod Francis, D., Manickam Amirtham, S., Sathishkumar, S. and Boopalan, Prjvc            Allogeneic platelet rich plasma serves as a scaffold for articular cartilage derived chondroprogenitors            Tissue and Cell; 2019, 56 107-113</p> <p><b>Address:</b> Department of Physiology, <b>Christian Medical College, Vellore, India</b> - 632002; Centre for Stem Cell Research, <b>Christian</b></p>	INT	JAN TO JUN	Physiology, Anatomy, Orthopaedics	<p><b>PMID:30736898</b>  <b>PMC</b>  <b>Impact Factor: 1.438</b>  <b>(BIOXBIO-2018)</b>  <b>H-Index: 46</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Medical College, Vellore, India</b> - 632002.                      Department of Anatomy, <b>Christian Medical College, Vellore, India</b> - 632002.                      Department of Physiology, <b>Christian Medical College, Vellore, India</b> - 632002.                      Department of Orthopaedics, <b>Christian Medical College, Vellore, India</b> - 632004; Centre for Stem Cell Research, <b>Christian Medical College, Vellore, India</b> - 632002. Electronic Address: <a href="mailto:jpboopy@gmail.com">jpboopy@gmail.com</a>.</p> <p>Limited self-restorative ability of the cartilage has necessitated the use of cell and tissue engineering based therapies. Recent advances in the isolation, expansion and characterization of articular cartilage derived chondroprogenitors(CPs) has gained popularity in its role for cartilage repair. Platelet rich plasma (PRP) is a reliable biological scaffold for in-vitro and in-vivo studies with reported therapeutic applications in cartilage and bone pathologies. The aim of this study was to evaluate whether human allogeneic PRP could serve as a biological scaffold for chondroprogenitors (CPs) in cartilage repair. CPs were isolated from the superficial layer of three osteoarthritic knee joints by fibronectin adhesion assay and characterized using flow cytometric analysis. Allogeneic citrated blood was harvested from three subjects to obtain PRP. CPs at a concentration of one million cells per ml were gelled with PRP using calcium chloride. The PRP-CP scaffolds were subjected for adipogenic, osteogenic, chondrogenic differentiation and processed for post differentiation-staining studies (Oil Red O, Von Kossa, Alcian blue staining), immunofluorescence (collagen II) and live dead assays (Calcein AM-Ethidium Homodimer). We show that PRP was able to sustain CP cell viability and differentiate towards adipogenic, osteogenic and chondrogenic lineage under appropriate culture conditions. We also noted positive extracellular matrix production in PRP-CP scaffolds cultured without chondrogenic supplementation. Our results suggest that PRP could be a promising bio-active scaffold due to its synergistic effect in supporting cell proliferation, maintaining cell viability and favoring extracellular matrix production. PRP can be used as biological scaffold for the delivery of CPs in cartilage healing.</p>				
663.	<p>Viswanathan, S. A. and Russell, P. S. S.                      Predictive components in the structure of an intensive, parent mediated, early intervention for children with autism spectrum disorders in India                      J Family Med Prim Care; 2019, 8 (7): 2218-2222  <b>Address:</b> Department of Psychiatry, Child and Adolescent Psychiatry</p>	NAT	JUL TO DEC	Psychiatry, Child and Adolescent Psychiatry	<p><b>PMID:</b> 31463233  <b>Impact Factor: 0.21 (RG - 2018)</b>  <b>H-Index: NA</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p>Unit, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b>                      Introduction: The predictive factors of parent mediated, Early Intervention (EI) for children with Autism Spectrum Disorders (ASD) have not been studied in India; we document the structural therapeutic factors, which predict the EI outcome. Methods: Data of 77 children with an ICD 10 diagnosis of Pervasive Developmental Disorder (ASD in DSM 5), and completed a 12-week EI with proven effectiveness was collected from the database of a teaching hospital. We studied the structural therapeutic factors associated with EI outcome, as measured by Psycho-Educational Profile-Revised (PEP-R), while controlling the confounders with multiple linear regression analyses. Results: The Fine-motor skills improved in residential patients (t = 2.54, P = 0.02; 15 units). As the duration of intervention decreased at home per day, there was a significant decrease in Gross-motor skills (t = -2.67, P = 0.02; -15 units). With increase in duration of intervention in hospital per day, there was a significant increase (t = 2.86, P = 0.01; 30 units) in the Eye-hand integration. Cognitive-verbal skills acquisition decreased (t = -2.90, P = 0.01; 33 units) as the duration of intervention decreased at hospital. The use of medication did not predict any of the outcome factors. Conclusion: The above mentioned predictive factors should be monitored and titrated in the family context when children with ASD undergo parent mediated, EI programme. It is important to that the multidisciplinary family medicine teams reinforce these parents, who are the main column of support in primary-care settings for children with neuro-developmental disabilities in India.</p>				
664.	<p>Vitagliano, A., Ambrosini, G., Andrisani, A., Kamath, M. S. and Sardo, A. D. S.                      Adherence to review protocol and rigorous methodology are the pre-requisites of a well-conducted systematic review                      Hum Reprod Update; 2019, 25 (6): 802-803  <b>Address:</b> Department of Women and Children's Health, Unit of Gynecology and Obstetrics, University of Padua, Padua, Italy.                      Reproductive Medicine Unit, <b>Christian Medical College Hospital, Vellore, India.</b>                      Department of Public Health, School of Medicine, University of Naples Federico II, Naples, Italy.</p>	INT	JUL TO DEC	Reproductive Medicine Unit	<p><b>PMID:</b> 31712822  <b>Impact Factor:</b> 12.878  <b>(BIOXBIO - 2018)</b>  <b>H-Index: 158</b></p>
665.	<p>Vivekanandan, K. S., Thangadurai, P., Prasad, J. and Jacob, K. S.                      Sexual Dysfunction among Men in Rural Tamil Nadu: Nature, Prevalence, Clinical Features, and Explanatory Models                      Indian J Psychol Med; 2019, 41 (1): 81-86  <b>Address:</b> Department of Psychiatry, <b>Christian Medical College,</b></p>	NAT	JAN TO JUN	Psychiatry, Community Health	<p><b>PMID:30783313</b>  <b>PMC ID:6337923</b>  <b>Impact Factor:</b>  <b>0.64(RG-2018)</b>  <b>H-Index: 17</b></p>

## CMC SCIENTIFIC RESEARCH PUBLICATION FOR THE YEAR 2019 (JANUARY TO DECEMBER)

S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	<p><b>Vellore, Tamil Nadu, India.</b> Department of Community Health, <b>Christian Medical College, Vellore, Tamil Nadu, India.</b></p> <p>Background and Aim: There is a dearth of community data on nature, prevalence, clinical features, and explanatory models related to sexual dysfunction among men, particularly from rural India. This study attempted to examine different aspects of male sexual dysfunction and misconceptions in the community. Materials and Methods: Villages in Kaniyambadi Block, Vellore district were stratified, and four were randomly selected. Men living in these villages were recruited for the study. The following instruments were administered: (i) International Index of Erectile Function, (ii) Chinese Index of Premature Ejaculation (iii) Short Explanatory Model Interview, and (iv) Revised Clinical Interview Schedule. The data were analyzed using standard bivariate and multivariate statistics. Results: A total of 211 men were recruited. The majority were middle-aged (mean 40.73 years), literate (84.8%), married, and with children (72%), from nuclear families (99.6%), followed the Hindu religion (87.7%), reported satisfaction with their marriage (51.2%), had a single sexual partner (99.5%), and practised contraception (88.2%). A minority reported erectile dysfunction (29.9%), premature ejaculation (19.4%), and depression/anxiety (30.8%). Erectile dysfunction was associated with single marital status (<math>P &lt; 0.001</math>), premature ejaculation (<math>P &lt; 0.001</math>), worry about nocturnal emission and loss of semen (<math>P &lt; 0.02</math>), and punishment by God as causal beliefs (<math>P &lt; 0.001</math>). Premature ejaculation was associated with diabetes mellitus (<math>P &lt; 0.05</math>), alcohol use (<math>P &lt; 0.05</math>), anxiety and depression (<math>P &lt; 0.01</math>), guilt about masturbation (<math>P &lt; 0.001</math>), and belief that nocturnal emission is causal (<math>P &lt; 0.001</math>) and erectile dysfunction (<math>P &lt; 0.05</math>). Conclusion: Sexual misconception and dysfunction in men are significant problems in rural communities in India. They mandate the need for sex education in schools and the empowerment of physicians in primary and secondary care to manage such problems.</p>				
<b>666.</b>	<p>Wilder-Smith A(1), Rupali P(2). Estimating the dengue burden in India. Lancet Glob Health. 2019 Aug;7(8):e988-e989. doi: 10.1016/S2214-109X(19)30249-9. Epub 2019 Jun 11.</p> <p><b>Author information:</b> (1)Department of Disease Control, London School of Hygiene &amp; Tropical Medicine, London WC1E 7HT, UK; Heidelberg Institute of</p>	<b>INT</b>	<b>JUL TO DEC</b>	Infectious Diseases	<b>PMID: 31201129</b> <b>Impact Factor: 3.13</b> <b>(RG – 2018)</b> <b>H-Index: 53</b>

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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Global Health, University of Heidelberg, Heidelberg, Germany. Electronic address: <a href="mailto:annelies.wilder-smith@lshtm.ac.uk">annelies.wilder-smith@lshtm.ac.uk</a> (2) <b>Christian Medical College, Vellore, Tamil Nadu</b> , India. DOI: 10.1016/S2214-109X(19)30249-9				
667.	Wilkinson J(1), Bhattacharya S(2), Duffy J(3)(4), Kamath MS(5), Marjoribanks J(6), Repping S(7), Vail A(1), van Wely M(7), Farquhar CM(6). Reproductive medicine: still more ART than science? BJOG. 2019 Jan;126(2):138-141. doi: 10.1111/1471-0528.15409. Epub 2018 Aug 23.  <b>Author information:</b> (1)Centre for Biostatistics, University of Manchester, Manchester, UK. (2)College of Biomedical and Life Sciences, Cardiff University School of Medicine, Cardiff, UK. (3)Primary Care Health Sciences, University of Oxford, Oxford, UK. (4)Balliol College, University of Oxford, Oxford, UK. (5)Reproductive Medicine Unit, <b>Christian Medical College, Vellore</b> , India. (6)Cochrane Gynecology and Fertility Group, University of Auckland, Auckland, New Zealand. (7)Centre for Reproductive Medicine, Academic Medical Centre, University of Amsterdam, Amsterdam, the Netherlands. DOI: 10.1111/1471-0528.15409	INT	JUL TO DEC	Reproduction Medicine Unit	PMID: 30009579 <b>WOS:</b> 000452871600003 <b>Impact Factor:</b> 5.193 <b>(BIOXBIO - 2018)</b> <b>H-Index: 148</b>
668.	Williams, V. M., Sasidharan, B., Aljabab, S., Parvathaneni, U., Laramore, G. E., Wong, T. P. and Liao, J. J. Proton Radiotherapy for Locally Advanced Nasopharyngeal Carcinoma: Early Clinical Outcomes From a Single Institution International Journal of Radiation Oncology Biology Physics; 2019, 105 (1): E397-E397	INT	JUL TO DEC	Radiation Oncology	<b>WOS:</b> 000485671501195 <b>Impact Factor:</b> 6.203 <b>(BIOXBIO - 2018)</b> <b>H-Index: 228</b>
669.	Yoganathan, S., Mariappan, R., Sudhakar, S. V., Mani, S. E., Mathew, V., Thomas, M. and Aboobacker, F. N. An Unusual Cause of Chronic Headache in an Adolescent Boy: A Case Report Neuropediatrics; 2019, 50 (6): 395-399 <b>Address:</b> Department of Neurological Sciences, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India. Department of Anaesthesia, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India. Department of Radiodiagnosis, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India. Department of Haematology, <b>Christian Medical College, Vellore, Tamil Nadu</b> , India.	INT	JUL TO DEC	Neurological Sciences, Anaesthesia, Radiodiagnosis, Haematology.	<b>PMID:</b> 31529425 <b>Impact Factor:</b> 1.654 <b>(BIOXBIO - 2018)</b> <b>H-Index: 63</b>



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S.No	AUTHOR, TITLE, SOURCE, AUTHOR AFFILIATION, ABSTRACT	NAT / INT	MONTH	DEPT	PMID
	Spontaneous intracranial hypotension (SIH) is an under-diagnosed cause of headache in children and adolescents. SIH results from cerebrospinal fluid (CSF) leak due to breach in the dura mater and the etiology for dural breach is often diverse. We report an adolescent boy who presented with chronic episodic headache that later progressed to daily headache. There was a typical history of worsening of headache on upright position and relief of headache on lying down. He was treated with migraine prophylaxis in another hospital but there was no response. Marfanoid features and brisk deep tendon reflexes were observed on clinical examination. Brain magnetic resonance imaging (MRI) revealed sagging of the brain stem, pachymeningeal enhancement, and tonsillar herniation. MRI of spine myelogram confirmed multiple levels of CSF leak. He was initially managed with supportive measures and fluoroscopic-guided fibrin glue injection. Although child remained symptom-free for the next 6 months, he again developed headache. MRI and computed tomography spine myelogram revealed a meningeal diverticulum in the lumbar spine. He was managed with an autologous epidural blood patch and he has been well since then. In this report, we highlight the clinical and radiological pointers to the presence of SIH in children with recurrent headache.				
<b>670.</b>	Zou, Z., Bowen, S. R., Thomas, H. M. T., Sasidharan, B., Rengan, R. and Zeng, J. Scanning Beam Proton Therapy Versus Photon IMRT for Stage III Lung Cancer: Comparison of Dosimetry, Toxicity and Outcomes International Journal of Radiation Oncology Biology Physics; 2019, 105 (1): E540-E540	<b>INT</b>	<b>JUL TO DEC</b>	Radiation Oncology	<b>WOS:000485671501526</b> <b>Impact Factor: 6.203</b> <b>(BIOXBIO - 2018)</b> <b>H-Index: 228</b>

### CMC SCIENTIFIC RESEARCH PUBLICATIONS FOR THE YEAR 2019 (JANUARY TO DECEMBER)

ORIGIN	JAN TO JUNE	JUL TO DEC	TOTAL
<b>INTERNATIONAL</b>	<b>158</b>	<b>293</b>	<b>451</b>
<b>NATIONAL</b>	<b>75</b>	<b>144</b>	<b>219</b>
<b>TOTAL =</b>	<b>233</b>	<b>437</b>	<b>670</b>