List of publications of AIIMS, New Delhi for the month of October, 2018

[Source: www.pubmed.com].

1: Acharya P, Kutum R, Pandey R, Mishra A, Saha R, Munjal A, Ahuja V, Mukerji M, Makharia GK. First Degree Relatives of Patients with Celiac Disease Harbour an Intestinal Transcriptomic Signature that Might Protect them from Enterocyte Damage. Clin Transl Gastroenterol. 2018 Oct 8;9(10):195. doi: 10.1038/s41424-018-0059-7. PubMed PMID: 30293993; PubMed Central PMCID: PMC6174158.

INTRODUCTION: Celiac disease (CeD) is an autoimmune enteropathy which affects approximately 0.7% of the global population. While first-degree relatives (FDR) of patients with CeD have a 7.5% risk of developing enteropathy, many remain protected. Therefore, intestinal mucosa of FDR might have protective compensatory mechanisms against immunological injury. We have explored the protective mechanisms that may be active in intestinal mucosa of FDR.
METHODS: Intestinal mucosal biopsies (4-5 pieces) from treatment naïve patients with CeD (n=12), FDR (n=12) (anti-tTG negative) and controls (n=12) (anti-tTG negative) were obtained from each individual and subjected to microarray analysis using HT-12-v4 Human Expression BeadChips (Illumina). Differential gene expression analysis was carried out among CeD, FDR and controls; and resulting gene lists were analyzed using gene ontology and pathway enrichment tools.
RESULTS: Patients with CeD, FDR and control groups displayed significant differential gene expression. Thirty seven genes were upregulated and 372 were downregulated in the intestinal mucosa of FDR in comparison to CeD and controls. Pseudogenes constituted about 18% (315/1751) of FDR differentially expressed genes, and formed "clusters" that associated uniquely with individual study groups. The three study groups segregated into distinct clusters in unsupervised (PCA) and supervised (random forests) modelling approaches. Pathways analysis revealed an emphasis on crypt-villous maintenance and immune regulation in the intestinal mucosa of FDR.
CONCLUSIONS: Our analysis suggests that the intestinal mucosa of celiac FDR consist of a unique molecular phenotype that is distinct from CeD and controls. The transcriptomic landscape of FDR promotes maintenance of crypt-villous axis and modulation of immune mechanisms. These differences clearly demonstrate the existence of compensatory protective mechanisms in the FDR intestinal mucosa.

2: Agarwal A, Vibha D, Chawla R, Sharma MC. Unusual cause of fever, vision loss and super refractory status epilepticus in association with simian virus 40 (SV40). BMJ Case Rep. 2018 Oct 12;2018. pii: bcr-2018-225539. doi: 10.1136/bcr-2018-225539. PubMed PMID: 30317196.

We present a case of a 23-year-old man with history of fever followed by painless complete vision loss, with subsequent new-onset refractory status epilepticus (NORSE). He initially developed bilateral retinitis. A few days later, he started having focal seizures, and subsequently developed super-refractory status epilepticus, requiring anaesthetic agents. MRI brain revealed multifocal cortical and subcortical hyperintensities in occipital and temporoparietal regions without contrast enhancement. MRI repeated a month later showed new lesions with non-visualisation of some previous lesions. Finally, a brain biopsy was done which revealed presence of lymphocytic infiltrate with SV40 inclusions in oligodendrocyte. We propose the affliction of an atypical virus affecting the retina and brain grey and white matter, presenting with NORSE in our patient. Future similar cases and isolation of the virus may help in establishing the conclusive diagnosis.

3: Agarwal A, Kedia S, Jain S, Gupta V, Bopanna S, Yadav DP, Goyal S, Mouli VP, Dhingra R, Makharia G, Ahuja V. High risk of tuberculosis during infliximab therapy despite tuberculosis screening in inflammatory bowel disease patients in India. Intest Res. 2018 Oct;16(4):588-598. doi: 10.5217/ir.2018.00023. Epub 2018 Oct 10. PubMed PMID: 30301331; PubMed Central PMCID: PMC6223459.

Background/Aims: The data on the risk of tuberculosis (TB) reactivation with

infliximab (IFX) in patients with inflammatory bowel disease (IBD) from TB endemic countries, like India, is limited. The risk of TB reactivation on IFX and its predictors in patients with IBD was assessed.
Methods: This retrospective review included consecutive patients with IBD who received IFX, and were on follow-up from January 2005 to November 2017. The data was recorded on age/disease duration, indications for IFX, screening for latent tuberculosis (LTB) before IFX, response to IFX, incidence and duration when TB developed after IFX, and type of TB (pulmonary [PTB]/extra-pulmonary [EPTB]/disseminated).
Results: Of 69 patients (22 ulcerative colitis/47 Crohn's disease; mean age, 35.6±14.5 years; 50.7% males; median follow-up duration after IFX, 19 months [interquartile range, 5.5-48.7 months]), primary non-response at 8 weeks and secondary loss of response at 26 and 52 weeks were seen in 14.5%, 6% and 15% patients respectively. Prior to IFX, all patients were screened for LTB, 8 (11.6%) developed active TB (disseminated, 62.5%; EPTB, 25%; PTB, 12.5%) after a median of 19 weeks (interquartile range, 14.0-84.5 weeks) of IFX. Of these 8 patients' none had LTB, even when 7 of 8 were additionally screened with contrast-enhanced chest tomography. Though not statistically significant, more patients with Crohn's disease than ulcerative colitis (14.9% vs. 4.5%, P=0.21), and those with past history of TB (25% vs. 9.8%, P=0.21), developed TB. Age, gender, disease duration, or extraintestinal manifestations could not predict TB reactivation.
Conclusions: There is an extremely high rate of TB with IFX in Indian patients with IBD. Current screening techniques are ineffective and it is difficult to predict TB after IFX.

4: Agarwal N, Agrawal M, Sawarkar DP. Letter to the Editor. Ligamentum nuchae as a graft material for duraplasty in patients with Chiari malformation type I. J Neurosurg Pediatr. 2018 Oct;22(4):463-464. doi: 10.3171/2018.4.PEDS18301. Epub 2018 Jul 13. PubMed PMID: 30004313.

5: Agarwal R, Chawla D, Sharma M, Nagaranjan S, Dalpath SK, Gupta R, Kumar S, Chaudhuri S, Mohanty P, Sankar MJ, Agarwal K, Rani S, Thukral A, Jain S, Yadav CP, Gathwala G, Kumar P, Sarin J, Sreenivas V, Aggarwal KC, Kumar Y, Kharya P, Bisht SS, Shridhar G, Arora R, Joshi K, Bhalla K, Soni A, Singh S, Devakirubai P, Samuel R, Yadav R, Bahl R, Kumar V, Paul VK; QI Haryana Study Collaboration . Improving quality of care during childbirth in primary health centres: a stepped-wedge cluster-randomised trial in India. BMJ Glob Health. 2018 Oct 8;3(5):e000907. doi: 10.1136/bmjgh-2018-000907. eCollection 2018. PubMed PMID: 30364301; PubMed Central PMCID: PMC6195146.

Background: Low/middle-income countries need a large-scale improvement in the quality of care (QoC) around the time of childbirth in order to reduce high maternal, fetal and neonatal mortality. However, there is a paucity of scalable models.
Methods: We conducted a stepped-wedge cluster-randomised trial in 15 primary health centres (PHC) of the state of Haryana in India to test the effectiveness of a multipronged quality management strategy comprising capacity building of providers, periodic assessments of the PHCs to identify quality gaps and undertaking improvement activities for closure of the gaps. The 21-month duration of the study was divided into seven periods (steps) of 3 months each. Starting from the second period, a set of randomly selected three PHCs (cluster) crossed over to the intervention arm for rest of the period of the study. The primary outcomes included the number of women approaching the PHCs for childbirth and 12 directly observed essential practices related to the childbirth. Outcomes were adjusted with random effect for cluster (PHC) and fixed effect for 'months of intervention'.
Results: The intervention strategy led to increase in the number of women approaching PHCs for childbirth (26 vs 21 women per PHC-month, adjusted incidence rate ratio: 1.22; 95% CI 1.17 to 1.28). Of the 12 practices, 6 improved modestly, 2 remained near universal during both intervention and control periods, 3 did not

change and 1 worsened. There was no evidence of change in mortality with a majority of deaths occurring either during referral transport or at the referral facilities.
Conclusion: A multipronged quality management strategy enhanced utilisation of services and modestly improved key practices around the time of childbirth in PHCs in India.
Trial registration number: CTRI/2016/05/006963.

6: Agrawal SK, Panigrahy A, Perumalla S, Kapil A, Dhawan B. Microbiological profile and antibiotic resistance pattern of skin and soft-tissue infections: A study from Northern India. J Lab Physicians. 2018 Oct-Dec;10(4):471-472. doi: 10.4103/JLP.JLP_89_18. PubMed PMID: 30498325; PubMed Central PMCID: PMC6210851.

7: Ahamed F, Yadav K, Kant S, Saxena R, Bairwa M, Pandav CS. Effect of directly observed oral iron supplementation during pregnancy on iron status in a rural population in Haryana: A randomized controlled trial. Indian J Public Health. 2018 Oct-Dec;62(4):287-293. doi: 10.4103/ijph.IJPH_313_17. PubMed PMID: 30539891.

Background: In India, more than half of the pregnant women suffer from anemia. Low compliance to iron supplementation is one of the important reasons.
Objectives: The objective of the study is to estimate the reduction in the prevalence of anemia, improvement in iron status, and to compare the compliance to oral iron supplementation during pregnancy between directly observed iron-folic acid (IFA) supplementation group and control group.
Methods: This was a community-based open labeled parallel block-randomized controlled trial including 400 pregnant women in a rural setting of north India. In the intervention group, the first dose of IFA every week was supervised by ASHA and women were instructed to take the remaining tablets during the week as per the prescription. In control group, IFA tablets were supplemented without direct supervision.
Results: After 100 days of IFA supplementation, the reduction in anemia in the intervention group was 6% higher as compared to control group (P = 0.219). The increase in the mean hemoglobin level over and above control group was 0.52 g/dl in intervention group (P < 0.001). However, the mean increase in serum ferritin level in the intervention group was similar to the control group. The mean percentage compliance in the intervention group was almost 9% higher than that of control group (P = 0.001).
Conclusion: Directly supervised oral iron (IFA) supplementation improves compliance to oral iron (IFA) supplementation and also improves hemoglobin status among pregnant women. However, the mean increase in serum ferritin and reduction in the prevalence of anemia in the intervention group were not higher than the control group.

8: Ahuja K, Garg B, Chowdhuri B, Yadav RK, Chaturvedi PK. A Comparative Analysis of the Metabolic and Coagulative Profiles in Patients with Idiopathic Scoliosis, Congenital Scoliosis and Healthy Controls: A Case-Control Study. Asian Spine J. 2018 Dec;12(6):1028-1036. doi: 10.31616/asj.2018.12.6.1028. Epub 2018 Oct 16. PubMed PMID: 30322254; PubMed Central PMCID: PMC6284126.

STUDY DESIGN: Single-center, observational, case-control study.
PURPOSE: Comparison and analysis of the metabolic and coagulative profiles in patients with idiopathic scoliosis, patients with congenital scoliosis, and healthy controls.
OVERVIEW OF LITERATURE: Serum melatonin deficiency has been a controversial topic in the etiopathogenesis of scoliosis. Low bone mineral density, low vitamin D3 levels, and high parathyroid hormone levels are common metabolic abnormalities associated with scoliosis that may be responsible for its pathogenesis. In addition to metabolic defects, several studies have shown coagulation defects that either persist from the preoperative period or occur during surgery and usually lead to more than the expected amount of blood loss in patients undergoing deformity correction for scoliosis.

METHODS: The study population (n=73) was classified into those having congenital scoliosis (n=31), those with idiopathic scoliosis (n=30), and healthy controls (n=12). After detailed clinicoradiological evaluation of all the subjects, 10-mL blood samples were collected, measured, and analyzed for various metabolic and coagulation parameters.
RESULTS: The mean serum melatonin levels in patients with idiopathic scoliosis were significantly lower than those in the healthy controls. Although the mean serum melatonin level in the congenital group was also low, the difference was not statistically significant. Serum alkaline phosphatase and parathyroid hormone levels were higher in the scoliosis groups, whereas the vitamin D level was lower. No differences were observed in the coagulation profiles of the different groups.
CONCLUSIONS: Low serum melatonin levels associated with scoliosis can be a cause or an effect of scoliosis. Moreover, low bone mineral density, high bone turn over, and negative calcium balance appear to play an important role in the progression, if not the onset, of the deformity.

9: Anand S, Dhua AK. Re: Kumar M, Batra G, Maletha M, Malhotra A. Hirschsprung's disease in a child with posterior urethral valve: An unwanted association. Indian J Urol 2018;34:223-5. Indian J Urol. 2018 Oct-Dec;34(4):307-308. doi: 10.4103/iju.IJU_228_18. PubMed PMID: 30337792; PubMed Central PMCID: PMC6174711.

10: Anang S, Kaushik N, Hingane S, Kumari A, Gupta J, Asthana S, Shalimar, Nayak B, Ranjith-Kumar CT, Surjit M. Potent Inhibition of Hepatitis E Virus Release by a Cyclic Peptide Inhibitor of the Interaction between Viral Open Reading Frame 3 Protein and Host Tumor Susceptibility Gene 101. J Virol. 2018 Sep 26;92(20). pii: e00684-18. doi: 10.1128/JVI.00684-18. Print 2018 Oct 15. PubMed PMID: 30068652; PubMed Central PMCID: PMC6158408.

Hepatitis E virus (HEV) generally causes self-limiting acute viral hepatitis in normal individuals. It causes a more severe disease in immunocompromised persons and pregnant women. Due to the lack of an efficient cell culture system or animal model, the life cycle of the virus is understudied, few antiviral targets are known, and very few antiviral candidates against HEV infection have been identified. Inhibition of virus release is one possible antiviral development strategy, which limits the spread of the virus. Previous studies have demonstrated the essential role of the interaction between the PSAP motif of the viral open reading frame 3 protein (ORF3-PSAP) and the UEV domain of the host tumor susceptibility gene 101 (TSG101) protein (UEV-TSG101) in mediating the release of genotype 3 HEV. Cyclic peptide (CP) inhibitors of the interaction between the human immunodeficiency virus (HIV) gag-PTAP motif and UEV-TSG101 are known to block the release of HIV. Using a molecular dynamic simulation, we observed that both gag-PTAP and ORF3-PSAP motifs bind to the same site in UEV-TSG101 by hydrogen bonding. HIV-released inhibitory CPs also displayed binding to the same site in UEV-TSG101, indicating that they may compete with ORF3-PSAP or gag-PTAP for binding to UEV-TSG101. Two independent assays confirmed the ability of a cyclic peptide (CP11) to inhibit the ORF3-TSG101 interaction. CP11 treatment also reduced the release of both genotype 1 and genotype 3 HEV by approximately 90%, with a 50% inhibitory concentration (IC50) of 2 μM. Thus, CP11 appears to be an attractive candidate for further validation of its anti-HEV properties.IMPORTANCE There is no specific therapy against hepatitis E virus (HEV)-induced hepatic and nonhepatic health problems. Prevention of the release of the progeny viruses from infected cells is an attractive strategy to limit the spread of the virus. Interactions between the viral open reading frame 3 and the host tumor susceptibility gene 101 proteins have been shown to be essential for the release of genotype 3 HEV from infected cells. In this study, we have identified a cyclic peptide inhibitor of the above-mentioned interaction and demonstrate the efficiency of the inhibitor in preventing virus release from infected cells. Thus, our findings uncover the possibility of developing a specific antiviral agent against HEV by blocking its release from infected cells.

11: Angamuthu M, Tripathi M, Parida G, Goyal V, Damle N, Bal C. Tc-99m ECD Brain

Perfusion Single-photon Emission Computed Tomography in Parry-Romberg Syndrome. Indian J Nucl Med. 2018 Oct-Dec;33(4):366-367. doi: 10.4103/ijnm.IJNM_104_18. PubMed PMID: 30386067; PubMed Central PMCID: PMC6194759.

We report a 15-year-old girl referred to our department for a brain perfusion study with a diagnosis of Parry-Romberg syndrome with left hemifacial atrophy and left enophthalmos. In the presence of a normal magnetic resonance imaging, Tc-99m ECD brain perfusion revealed left temporal lobe hypoperfusion with preserved perfusion in rest of the cortical and subcortical regions and both cerebellar hemispheres.

12: Anghan H, Sethi P, Soneja M, Mahajan S, Wig N. Clinical and Laboratory Features Associated with Acute Kidney Injury in Severe Malaria. Indian J Crit Care Med. 2018 Oct;22(10):718-722. doi: 10.4103/ijccm.IJCCM_468_17. PubMed PMID: 30405282; PubMed Central PMCID: PMC6201649.

Introduction: Critically ill severe malaria constitutes one of the major hospital admissions in Indian setting. Clinical studies identifying the factors associated with acute kidney injury (AKI) in malaria are lacking. This study aimed to identify these factors.
Methods: This prospective observational study was conducted in a tertiary care center of North India. All adult patients with severe malaria were studied during 2012-2014.
Results: The study included 79 patients and AKI was observed in 36 patients. Of these 79 patients, 52.7% were Plasmodium falciparum positive and 47.2% were Plasmodium vivax positive. In AKI patients, thrombocytopenia and jaundice were the most common other complications seen. Among P. vivax malarial patients, 17 (36%) patients had AKI. Features associated with AKI among patients admitted with P. vivax malaria were as follows: tachycardia (adjusted relative risk [RR]: 3.9; 95% confidence interval [CI]: 1.1-13.7), direct hyperbilirubinemia (adjusted RR: 4.7; 95% CI: 1.4-15.2), anemia (adjusted RR: 6; 95% CI: 1.7-22.4), and sepsis (adjusted RR: 3.3; 95% CI: 1.1-13.7). The presence of tachycardia, acidosis, cerebral malaria, acute respiratory distress syndrome/acute lung injury, hypotensive shock, and poor Glasgow Coma Scale were associated with higher mortality in patients with AKI. Patients who required mechanical ventilation and/or vasopressor support had higher mortality.
Conclusion: P. vivax is an important cause of severe malaria with AKI in our setting. Various other clinical features are associated with AKI and related mortality.

13: Aron N, Sinha R, Sharma N, Agarwal T. Isoexpansile sulfur hexafluoride gas to repair near-total iris disinsertion. J Cataract Refract Surg. 2018 Oct;44(10):1175-1178. doi: 10.1016/j.jcrs.2018.06.024. Epub 2018 Jul 27. PubMed PMID: 30060901.

Iridodialysis is commonly encountered after blunt trauma to the eye. Most iris detachments are small, superior, and asymptomatic and require no surgical intervention. However, large areas of iridodialysis require early surgical repair to prevent the onset of iris necrosis, pigment dispersion, and secondary glaucoma. Suture fixation of iris to the sclera is the most commonly used method for iris repair; however, this technique becomes difficult in cases of near-total iris disinsertion, even in expert hands. We describe a case of posttraumatic near-total iris disinsertion with subluxated cataract managed with phacoemulsification and iris preservation with the help of intracameral injection of isoexpansile sulfur hexafluoride.

14: Arora K, Thukral A, Sankar MJ, Gulati S, Deorari AK, Paul VK, Agarwal R. Postnatal Maturation of Amplitude Integrated Electroencephalography (aEEG) in Preterm Small for Gestational Age Neonates. Indian Pediatr. 2018 Oct 15;55(10):865-870. PubMed PMID: 30426952.

OBJECTIVE: The primary objective was to evaluate the postnatal maturation pattern

on aEEG during first two weeks of life in clinically stable and neurologically normal preterm small for gestational age (PSGA) and gestation matched (1 week) preterm appropriate for gestational age (PAGA) neonates born between 300/7 and 346/7 weeks of gestation.
METHODS: Serial aEEG tracings were recorded on 3rd, 7th and 14th day of life. The primary outcome was total aEEG maturation score. Three blinded assessors assigned the scores.
RESULTS: We analyzed a total of 117 aEEG recordings in 40 (19 PSGA and 21 PAGA) neonates. The baseline characteristics were comparable except for birthweight [1186 (263) vs 1666(230) g]. There was no difference in the mean (SD) total scores on day 3 (9.0 (1.8) vs. 9.5 (1.1), P=0.32) and day 14 of life, but was lower in PSGA infants on day 7 (8.6 (2.4) vs. 10.1 (1.1), P=0.02). On multivariate analysis, maturation of PSGA neonates was found to be significantly delayed at any point of life from day 3 to day 14 (mean difference, -0.8, 95% CI: -1.6 to -0.02, P=0.04).
CONCLUSIONS: Lower aEEG maturation score on day 7 possibly indicates delayed maturation in PSGA neonates in the first week of life.

15: Bagga B, Kumar A, Chahal A, Gamanagatti S, Kumar S. Traumatic Airway Injuries: Role of Imaging. Curr Probl Diagn Radiol. 2018 Oct 29. pii: S0363-0188(18)30198-1. doi: 10.1067/j.cpradiol.2018.10.005. [Epub ahead of print] Review. PubMed PMID: 30446292.

Airway Injuries are rare but often immediately life threatening. Incidence ranges from 0.5-2 % in blunt and 1-6 % in penetrating trauma. Upper airway injuries (UAI) are often clinically apparent and get shunted during the primary survey in the emergency department. Few UAI and majority of lower airway injuries (LAI) are occult on primary survey and need a high suspicion index. Clinically, the diagnosis of tracheobronchial injury is delayed in many patients because the airway column is maintained by the peribronchial tissue. Imaging in the form of MDCT, in conjunction with endoscopy, plays a role in delineating the exact site and extent of injury and ruling out associated vascular and esophageal injuries for definitive management of UAI. Chest radiographs and ultrasonography help raise suspicion of LAI by detection of pneumomediastinum, persistent pneumothorax and/or subcutaneous emphysema and should be followed up with multidetector computed tomography (MDCT) which is the mainstay of diagnosis. However, it requires careful evaluation of the airway tract and a thorough knowledge about the mechanism of trauma for detection of subtle injuries. Reconstructions in multiple planes and use of various post-processing techniques including minimum intensity projection (MinIP) images enhance the detection rate. The specific signs of LAI on CT include discontinuity in the tracheobronchial tree, focal intimal flap projecting in the lumen, focal soft tissue attached to the tracheal/bronchial wall, complete cut off of the bronchus/trachea and the fallen lung sign. We, hereby, illustrate the imaging spectrum of traumatic airway injuries in detail and discuss their management implications.

16: Batabyal T, Muthukrishnan SP, Sharma R, Tayade P, Kaur S. Neural substrates of emotional interference: A quantitative EEG study. Neurosci Lett. 2018 Oct 15;685:1-6. doi: 10.1016/j.neulet.2018.07.019. Epub 2018 Jul 18. PubMed PMID: 30009875.

Emotional stimuli are known to capture attention and disrupt the executive functioning. However, the dynamic interplay of neural substrates of emotion and executive attentional network is widely unexplored. The present study attempts to elucidate the areas implicated during emotional interference condition. Fifteen right handed individuals [24.64 ± 2.63 years] performed two emotional interference tasks - Face Word Interference and Word Face Interference. Single trial EEG was recorded during baseline (eyes open) and during the tasks. The activity of the cortical sources was compared between the tasks and baseline for 66 gyri using sLORETA software. Eighteen gyri in Face Word Interference and fifty-four gyri in Word Face Interference have shown significantly decreased

activity [p < 0.05/66] with respect to baseline respectively. Interestingly, in both the interference tasks, there was disengagement of fronto-parietal attentional networks (implicating the probable ability of emotional stimuli to disrupt cognition) and the areas associated with default mode network. Further, during baseline there was significant activity in premotor cortical areas, which may be due to active inhibition of motor movements associated with response.

17: Berek JS, Kehoe ST, Kumar L, Friedlander M. Cancer of the ovary, fallopian tube, and peritoneum. Int J Gynaecol Obstet. 2018 Oct;143 Suppl 2:59-78. doi: 10.1002/ijgo.12614. PubMed PMID: 30306591.

The Gynecologic Oncology Committee of FIGO in 2014 revised the staging of ovarian cancer, incorporating ovarian, fallopian tube, and peritoneal cancer into the same system. Most of these malignancies are high-grade serous carcinomas (HGSC). Stage IC is now divided into three categories: IC1 (surgical spill); IC2 (capsule ruptured before surgery or tumor on ovarian or fallopian tube surface); and IC3 (malignant cells in the ascites or peritoneal washings). The updated staging includes a revision of Stage IIIC based on spread to the retroperitoneal lymph nodes alone without intraperitoneal dissemination. This category is now subdivided into IIIA1(i) (metastasis ≤10 mm in greatest dimension), and IIIA1(ii) (metastasis >10 mm in greatest dimension). Stage IIIA2 is now "microscopic extrapelvic peritoneal involvement with or without positive retroperitoneal lymph node" metastasis. This review summarizes the genetics, surgical management, chemotherapy, and targeted therapies for epithelial cancers, and the treatment of ovarian germ cell and stromal malignancies.

18: Bhadu D, Das SK, Wakhlu A, Dhakad U. Articular cartilage of knee and first MTP joint are the preferred sites to find double contour sign as an evidence of urate crystal deposition in asymptomatic hyperuricemic individuals. Acta Reumatol Port. 2018 Oct-Dec;43(4):264-268. PubMed PMID: 30641534.

BACKGROUND/OBJECTIVE: A cross-sectional study to determine the preferred sites of urate crystal deposition in asymptomatic hyperuricemic individuals by ultrasound.
METHODS: In two years period twenty four asymptomatic hyperuricemic individuals (serum uric acid ≥7mg/dl) and fifty controls (serum uric acid <7mg/dl) with age more than 18 years were included in this study. Double contour sign was looked for at three articular cartilage sites (first metatarsophalangeal, tibiotalar and femoral condyle) whereas hyperechoic aggregates were looked for at one joint site (radiocarpal joint) and two tendon sites (patellar tendon and triceps tendon). The Chi-square test was used to compare the categorical variables and discrete variables were compared by one way analysis of variance. The p-value<0.05 was considered significant.
RESULTS: Eight out of 24 asymptomatic hyperuricemic individuals had ultrasound evidence of urate crystal deposition in first metatarsophalangeal joint area followed by knee joint area which was detected in 6 patients. The detection rate of ultrasound abnormalities in asymptomatic hyperuricemic individuals was 45.8% with two joint area (knee and first metatarsophalangeal) and 50% with six sites assessment. Amongst controls, 16% were found to have these abnormal ultrasound findings.
CONCLUSION: The highest predilection of urate crystal deposition in asymptomatic hyperuricemic individuals is the articular cartilage of Knee and first metatarsophalangeal joints. This explain the frequent clinical presentation of arthritis in these joint areas.

19: Bhardwaj N, Khurana S, Kumari M, Malhotra R, Mathur P. Pattern of antimicrobial resistance of Gram-negative bacilli in surgical site infections in in-patients and out-patients at an apex trauma Center: 2013-2016. J Lab Physicians. 2018 Oct-Dec;10(4):432-436. doi: 10.4103/JLP.JLP_80_18. PubMed PMID: 30498317; PubMed Central PMCID: PMC6210838.

INTRODUCTION: Antimicrobial resistance is an increasing problem worldwide especially among the surgical site infections (SSIs). SSI is becoming more

serious due to hospital-acquired infections/nosocomial infections, which further leads to the overuse of broad-spectrum antibiotics. To investigate the antimicrobial resistance patterns among Gram-negative bacteria in SSI in in- and out-patients the present study was designed.
METHODOLOGY: During the 4 years (January 2013-December 2016), the antimicrobial resistant pattern was studied in the admitted patients and in the patients who were followed up to the outpatients department (OPD) after discharge. Antimicrobial resistance pattern testing was done by the disk diffusion method on Mueller-Hinton agar and by E-test for ten antibiotics according to The Clinical and Laboratory Standards Institute guidelines for Gram-negative bacilli.
RESULTS: A total of 2,447 strains were isolated from the studied population on over the period of 4 years. Of 2447, 1996 (81%) were isolated from patients who had SSI during the hospital stay, and 451 (18%) were from patients who attended the OPD after discharge. In the outpatients, who followed up in the OPD for the SSI, Escherichia coli (148), and Pseudomonas aeruginosa (93), whereas in the patients who develop SSI during their hospital stay, Acinetobacter baumannii (622), E. coli (424), and Klebsiella pneumoniae (315) were found to be common. A very high resistance pattern was observed in both the studied groups; however, a higher resistance pattern was seen in in-patients as compared to outpatients.
CONCLUSION: In our study, we have reported resistance pattern in Gram-negative bacteria isolated from the patients who were came for the follow as well as in the inpatients. For the outpatients, it can be concluded that it could be a community-acquired infection which is also an alarming condition for our society.

20: Bhatia D, Sinha A, Hari P, Sopory S, Saini S, Puraswani M, Saini H, Mitra DK, Bagga A. Rituximab modulates T- and B-lymphocyte subsets and urinary CD80 excretion in patients with steroid-dependent nephrotic syndrome. Pediatr Res. 2018 Oct;84(4):520-526. doi: 10.1038/s41390-018-0088-7. Epub 2018 Jul 9. PubMed PMID: 29983411.

BACKGROUND: Rituximab, a monoclonal antibody targeting B lymphocytes, effectively sustains remission in steroid-dependent nephrotic syndrome (SDNS). We studied its effects on lymphocyte subsets and urinary CD80 excretion (uCD80) in patients with SDNS.
METHODS: Blood and urine samples were collected from 18 SDNS patients before rituximab, and after 1 month and 1 year or at first relapse. T and B lymphocytes and uCD80 were determined by flow cytometry and ELISA, respectively.
RESULTS: Treatment was associated with reduction in counts of Th17, Th2, and memory T cells, and increased T-regulatory (Treg) cells. The Th17/Treg ratio declined from baseline (median 0.6) to 1 month (0.2, P = 0.006) and increased during relapse (0.3, P = 0.016). Ratios of Th1/Th2 cells at baseline, 1 month after rituximab, and during relapse were 7.7, 14.0 (P = 0.0102), and 8.7, respectively. uCD80 decreased 1 month following rituximab (45.5 vs. 23.0 ng/g creatinine; P = 0.0039). B lymphocytes recovered earlier in relapsers (60.0 vs.183.0 days; P < 0.001). Memory B cells were higher during relapse than remission (29.7 vs.18.0 cells/μL; P = 0.029).
CONCLUSION: Rituximab-induced sustained remission and B-cell depletion was associated with reduced numbers of Th17 and Th2 lymphocytes, and increased Treg cells; these changes reversed during relapses. Recovery of B cells and memory B cells predicted the occurrence of a relapse.

21: Bhatla N, Denny L. FIGO Cancer Report 2018. Int J Gynaecol Obstet. 2018 Oct;143 Suppl 2:2-3. doi: 10.1002/ijgo.12608. PubMed PMID: 30306587.

22: Bhatla N, Aoki D, Sharma DN, Sankaranarayanan R. Cancer of the cervix uteri. Int J Gynaecol Obstet. 2018 Oct;143 Suppl 2:22-36. doi: 10.1002/ijgo.12611. PubMed PMID: 30306584.

Since the publication of the last FIGO Cancer Report there have been giant strides in the global effort to reduce the burden of cervical cancer, with WHO announcing a call for elimination. In over 80 countries, including LMICs, HPV

vaccination is now included in the national program. Screening has also seen major advances with implementation of HPV testing on a larger scale. However, these interventions will take a few years to show their impact. Meanwhile, over half a million new cases are added each year. Recent developments in imaging and increased use of minimally invasive surgery have changed the paradigm for management of these cases. The FIGO Gynecologic Oncology Committee has revised the staging system based on these advances. This chapter discusses the management of cervical cancer based on the stage of disease, including attention to palliation and quality of life issues.

23: Bhatt A, Mehta SS, Zaveri S, Rajan F, Ray M, Sethna K, Katdare N, Patel MD, Kammar P, Prabhu R, Sinukumar S, Mishra S, Rangarajan B, Rangole A, Damodaran D, Penumadu P, Ganesh M, Peedicayil A, Raj H, Seshadri R. Treading the beaten path with old and new obstacles: a report from the Indian HIPEC registry. Int J Hyperthermia. 2018;35(1):361-369. doi: 10.1080/02656736.2018.1503345. Epub 2018 Oct 9. PubMed PMID: 30300029.

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 • Evaluate outcomes of cytoreductive surgery±HIPEC in patients enrolled in the registry. • 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.

24: Bhatt M, Rastogi N, Soneja M, Biswas A. Uncommon manifestation of leptospirosis: a diagnostic challenge. BMJ Case Rep. 2018 Oct 7;2018. pii: bcr-2018-225281. doi: 10.1136/bcr-2018-225281. PubMed PMID: 30297490.

Leptospirosis is a zoonotic disease commonly affecting the tropical countries. It may have protean clinical manifestations including hepatorenal dysfunction, myocarditis, pulmonary haemorrhage, meningitis, optic neuritis and rhabdomyolysis. Neurological manifestation of leptospirosis without the classical hepatorenal dysfunction is a rare entity. This complication of leptospirosis can present with diverse central and peripheral neurological presentations. The overlapping clinical manifestations with many common tropical pathogens often pose diagnostic dilemma and delay in definitive therapy may lead to adverse clinical consequences. We report a case of a 19-year-old man with no prior comorbidities presenting with high-grade fever and altered sensorium. He was diagnosed to be a probable case of leptospirosis, based on all available test results and by fulfilment of parameters under modified Faine's criteria. The patient was successfully managed and discharged in stable condition.

25: Bhoi D, Ranjitha N, Talawar P, Narasimhan P. A novel out plane technique of

midpoint transverse process to pleura block in breast surgery: A case report. Saudi J Anaesth. 2018 Oct-Dec;12(4):637-639. doi: 10.4103/sja.SJA_116_18. PubMed PMID: 30429750; PubMed Central PMCID: PMC6180702.

Regional anesthetic techniques have gradually revolutionized the perioperative analgesia in breast surgeries. Recently, midpoint transverse process to pleura block has been described and found to provide excellent opioid-sparing analgesia. We performed the block in a novel out-of-plane technique to decrease the patient-needle interaction time and at the same time achieving good analgesia. The immediate postoperative Numeric Pain Rating Scale score was 0/10 both at rest and on movement, and patient reported a score of 5/10 after 12 h, which get subsided with single dose of nonopioid analgesic.

26: Bypareddy R, Takkar B, Chawla R, Sachdeva N, Azad SV, Tripathy K. MOBILE SUBRETINAL CYSTICERCUS IMAGED BY SPECTRAL-DOMAIN OPTICAL COHERENCE TOMOGRAPHY WITH MOTION TRACKER. Retin Cases Brief Rep. 2018 Fall;12(4):272-274. doi: 10.1097/ICB.0000000000000507. PubMed PMID: 28033226.

PURPOSE: To report optical coherence tomography-based videoimaging of alive subretinal cysticercus along with its mobile scolex.
METHODS: Spectral-domain optical coherence tomography was used to record high-definition videoimages, using the inbuilt motion tracker, in a 12-year-old boy with history of neurocysticercosis.
RESULT: The scolex was found to be sensitive to light, and contractile movements were seen in the cyst wall and the germinative layers. The patient underwent vitrectomy, and the diagnoses were confirmed with histopathologic assessment.
CONCLUSION: Optical coherence tomography is a useful tool for diagnosing posterior segment cysticercosis. The intense motion of scolex does not impact the surrounding ocular structures.

27: Cathcart AL, Chan HL, Bhardwaj N, Liu Y, Marcellin P, Pan CQ, Shalimar, Buti M, Cox S, Parhy B, Zhou E, Martin R, Chang S, Lin L, Flaherty JF, Kitrinos KM, Gaggar A, Izumi N, Lim YS. No Resistance to Tenofovir Alafenamide Detected through 96 Weeks of Treatment in Patients with Chronic Hepatitis B Infection. Antimicrob Agents Chemother. 2018 Sep 24;62(10). pii: e01064-18. doi: 10.1128/AAC.01064-18. Print 2018 Oct. PubMed PMID: 30038044; PubMed Central PMCID: PMC6153810.

Tenofovir alafenamide (TAF) has shown equivalent efficacy and improved safety profiles for patients with chronic hepatitis B (CHB) compared to tenofovir disoproxil fumarate (TDF). However, limited data are available for its resistance profiles. In two clinical trials, 1,298 hepatitis E antigen-positive and -negative patients with CHB were randomized 2:1 and treated with TAF (n = 866) or TDF (n = 432). Baseline nucleos(t)ide analog resistance substitutions in HBV polymerase/reverse transcriptase (Pol/RT) were assessed using INNO-LiPA Multi-DR v2/v3. Resistance surveillance was conducted for patients with viremia (HBV DNA ≥ 69IU/ml) by HBV Pol/RT sequencing at week 96 or at discontinuation. In vitro phenotypic analysis was performed for patients with conserved site substitutions or virologic breakthrough while adherent to the study drug. At baseline, the majority of patients harbored virus with wild-type Pol/RT (89.2%), with 10.8% harboring resistance associated mutations. A similar percentage of patients in the TAF or TDF groups qualified for sequence analysis through week 96 (TAF, 11.1%; TDF, 10.9%). Of these, a small percentage of patients experienced virologic breakthrough (TAF, 2.8%; TDF, 3.2%) that was often associated with drug nonadherence (TAF, 30%; TDF, 50%). Across treatment groups, 132 patients qualified for sequence analysis through week 96, with nearly half having no sequence changes from baseline (43.2%). Most sequence changes occurred at polymorphic positions, and no isolates showed a reduction in susceptibility in vitro After 96 weeks, the proportion of patients achieving virus suppression (HBV DNA < 69 IU/ml) was similar across treatment groups, and no substitutions associated with resistance to TAF or TDF were detected. (These studies have been registered at ClinicalTrials.gov under identifiers NCT01940471 and NCT01940341.).

28: Chadda RK. Youth & mental health: Challenges ahead. Indian J Med Res. 2018 Oct;148(4):359-361. doi: 10.4103/ijmr.IJMR_1585_18. PubMed PMID: 30665996; PubMed Central PMCID: PMC6362731.

29: Chawla B, Chaurasia S, Sharma S, Pattebahadur R, Hasan F, Seth R, Kashyap S, Sen S. Magnetic resonance imaging for tumor restaging after chemotherapy in retinoblastoma with optic nerve invasion. Ophthalmic Genet. 2018 Oct;39(5):584-588. doi: 10.1080/13816810.2018.1502790. Epub 2018 Aug 8. PubMed PMID: 30089224.

PURPOSE: Extraocular retinoblastoma with optic nerve invasion is treated by a multimodal protocol consisting of neoadjuvant chemotherapy, enucleation, and adjuvant therapy. This study was conducted to evaluate the performance of magnetic resonance imaging (MRI) used for tumor restaging in these children after systemic chemotherapy administration.
METHODS: Contrast-enhanced MRI scan of orbits and brain was performed at diagnosis and patients were treated with neoadjuvant chemotherapy. After chemotherapy, MRI scan was repeated for tumor restaging and residual post-laminar thickening and/or enhancement of the affected optic nerve, if any, was recorded. MRI findings were correlated with histopathology in enucleated specimens. The main outcome measures were specificity, sensitivity, and accuracy of MRI in predicting post-laminar invasion after neoadjuvant chemotherapy.
RESULTS: A total of 46 eyes (46 patients) were studied. Optic nerve thickening on MRI had a sensitivity, specificity, and accuracy of 100% (95% Confidence Interval (CI): 64.6-100%), 76.9% (95% CI: 61.7-87.4%), and 80.4% (95% CI: 66.8-89.4%), respectively. Optic nerve enhancement had a sensitivity, specificity, and accuracy of 85.7% (95% CI: 48.7-97.4%), 79.5 % (95% CI: 64.5-89.2%), and 80.4% (95% CI: 66.8-89.4%), respectively. Combined thickening and enhancement of the optic nerve had a sensitivity, specificity, and accuracy of 100% (95% CI: 60.9-100%), 82.4% (95% CI: 66.5-91.7%), and 85% (95% CI: 70.9-92.9%), respectively.
CONCLUSION: MRI is a valuable tool for restaging of retinoblastoma and predicting residual optic nerve disease after neoadjuvant chemotherapy. Combined thickening and enhancement on MRI appeared to be a more reliable indicator of post-laminar invasion as compared to thickening or enhancement alone.

30: Chawla R, Kapoor M, Mehta A, Tripathy K, Vohra R, Venkatesh P. Sympathetic Ophthalmia: Experience from a Tertiary Care Center in Northern India. J Ophthalmic Vis Res. 2018 Oct-Dec;13(4):439-446. doi: 10.4103/jovr.jovr_86_17. PubMed PMID: 30479714; PubMed Central PMCID: PMC6210884.

Purpose: To describe our clinical experience with sympathetic ophthalmia (SO) at a tertiary eye care center in north India.
Methods: In this retrospective case series, analysis of the clinical features and visual outcomes of patients diagnosed with SO between March 2012 and March 2016 were performed.
Results: Ten male and four female patients (median age, 15.5 years) with SO following penetrating trauma (10 patients) or ocular surgery (four patients) were included. SO developed 2 weeks to 3 years after the insult. Mean presenting visual acuity of the sympathizing eyes was 1.086 (LogMAR). Anterior chamber reaction was documented in all eyes in which it could be assessed (14 sympathizing eyes; five exciting eyes). Neurosensory detachment was seen in 10 of 14 patients (71.5%). Five patients (35.7%) were managed with oral steroids alone, whereas nine (64.3%) were treated with intravenous pulse dexamethasone followed by oral steroids. Inflammation recurred in three patients during steroid tapering, necessitating restarting of steroid therapy with or without additional immunosuppressants. At the last follow-up, all 14 patients were in remission with low-dose oral steroids; seven patients were also on immunosuppressants. At the final follow-up, 12 of 14 (85.7%) sympathizing eyes achieved 20/40 or better visual acuity and three exciting eyes achieved at least 6/24 visual acuity.
Conclusion: Although SO is a potentially blinding disorder, early detection and

individualized treatment allow most patients achieve good final visual acuity.

31: Chawla R, Nath M, Moksha L, Nag TC, Velpandian T. An experimental study to evaluate safety/toxicity of intravitreal natalizumab. Indian J Ophthalmol. 2018 Oct;66(10):1441-1445. doi: 10.4103/ijo.IJO_425_18. PubMed PMID: 30249830; PubMed Central PMCID: PMC6173036.

Purpose: The purpose of this prospective experimental study was to evaluate the safety/toxicity of α4β1 integrin blockade in rabbit retina using its monoclonal antibody (Natalizumab).
Methods: Twelve New Zealand albino rabbits were divided into three groups (n = 4). Unilateral intravitreal injections of three different concentrations of natalizumab were performed in every rabbit of each group (Group A: 0.625 mg, Group B: 1.25 mg, and Group C: 2.5 mg). Baseline electroretinogram (ERG) and fundus photography were performed prior to injection. At days 1, 7, and 21 postinjection, ERG and fundus photography of each eye were performed. At last follow-up, Group C animals with highest drug concentration were sacrificed and the enucleated eyes were evaluated for retinal toxicity using transmission electron microscopy (TEM).
Results: No difference in ERG responses was observed in eyes injected with low and intermediate concentration of natalizumab between day 0 and day 21. Furthermore, rabbits injected intravitreally with highest dose showed reduction in amplitude of "a" wave (P = 0.0017) and a reduction in amplitude of "b" wave of ERG at day 21 (P = 0.0117). TEM revealed changes in the outer plexiform layer and inner nuclear layer, suggestive of toxicity primarily to the photoreceptor synaptic terminals and bipolar cells.
Conclusion: Low-dose (0.625 mg) and intermediate-dose (1.25 mg) intravitreal injection of natalizumab appears safe for rabbit retina. However, functional and anatomical changes were observed in rabbit retina following a high-dose (2.5 mg) intravitreal injection of a monoclonal antibody blocking α4β1 integrin.

32: Chhikara S, Sazawal S, Singh K, Chaubey R, Pati H, Tyagi S, Mahapatra M, Saxena R. Comparative analysis of the Sokal, Euro and European Treatment and Outcome Study score in prognostication of Indian chronic myeloid leukemia-chronic phase patients on imatinib. South Asian J Cancer. 2018 Oct-Dec;7(4):258-262. doi: 10.4103/sajc.sajc_244_17. PubMed PMID: 30430096; PubMed Central PMCID: PMC6190386.

Introduction: The ultimate goal for CML management is risk stratification of the patients to design the appropriate treatment approach. The Sokal, Euro and EUTOS risk scores were established to prognosticate the patients on therapy.
Aim: To perform a comparative assessment of the Sokal, Euro and EUTOS prognostic score in Indian CML-CP patients on imatinib.
Methods: This is a retrospective study performed in 260 Ph+ CML-CP patients who were administered oral imatinib (400 mg/day).
Results: 166/260 were males and 94/260 were females (M: F::1.6:1) with median age 35 years (range 20-70). 92 (35.38%), 125 (48.07%) and 43 (16.5%) patients were divided into low, intermediate and high risk Sokal score respectively. 102 (39.23%), 106 (40.76%) and 52 (20%) patients were discriminated into low, intermediate and high risk Euro score respectively. 210 (80.7%) and 50 (19.2%) patients were divided into low and high risk EUTOS score. Cumulative incidence of MMR for low, intermediate and high-risk Sokal score was 87%, 76% and 84% respectively (P = 0.016). Incidence of MMR in low, intermediate and high-risk Euro score was 93%, 85% and 68% respectively (P = 0.001). Incidence of MMR was 80 % and 81% for low and high risk EUTOS score (P = 0.764). Both EFS and OS are significantly correlated with Sokal score (P = 0.004, P = 0.007) and Euro score (P = 0.009, P = 0.001) but not with EUTOS score (P = 0.581, P = 0.927).
Conclusion: The present study highlights the significant prognostic role of Sokal and Euro score in predicting the treatment outcome of the CML- CP patients on imatinib.

33: Choudhary V, Sinha VK. Transdiagnostic applications of dialectical behaviour

therapy's distress tolerance skills in psychological management of OCD. Asian J Psychiatr. 2018 Dec;38:1-2. doi: 10.1016/j.ajp.2018.10.012. Epub 2018 Oct 15. PubMed PMID: 30359843.

34: Chowdhury T, Zeiler FA, Singh GP, Hailu A, Loewen H, Schaller B, Cappellani RB, West M. The Role of Intraoperative MRI in Awake Neurosurgical Procedures: A Systematic Review. Front Oncol. 2018 Oct 10;8:434. doi: 10.3389/fonc.2018.00434. eCollection 2018. PubMed PMID: 30364103; PubMed Central PMCID: PMC6191486.

Background: Awake craniotomy for brain tumors remains an important tool in the arsenal of the treating neurosurgeon working in eloquent areas of the brain. Furthermore, with the implementation of intraoperative magnetic resonance imaging (I-MRI), one can afford the luxury of imaging to assess surgical resection of the underlying gross imaging defined neuropathology and the surrounding eloquent areas. Ideally, the combination of I-MRI and awake craniotomy could provide the maximal lesion resection with the least morbidity and mortality. However, more resection with the aid of real time imaging and awake craniotomy techniques might give opposite outcome results. The goal of this systematic review.is to identify the available literature on combined I-MRI and awake craniotomy techniques, to better understand the potential morbidity and mortality associated. Methods: MEDLINE, EMBASE, and CENTRAL were searched from inception up to December 2016. A total of 10 articles met inclusion in to the review, with a total of 324 adult patients. Results: All studies showed transient neurological deficits between 2.9 to 76.4%. In regards to persistent morbidity, the mean was ~10% (ranges from zero to 35.3%) with a follow up period between 5 days and 6 months. Conclusion: The preliminary results of this review also suggest this combined technique may impose acceptable post-operative complication profiles and morbidity. However, this is based on low quality evidence, and is therefore questionable. Further, well-designed future trials with the long-term follow-up are needed to provide various aspects of feasibility and outcome data for this approach.

35: Chowdhury UK, Diplomate NB, Jena JK, Hasija S, Sankhyan LK. Successful Use of Intra-aortic Balloon Counterpulsation for Systemic Ventricular Failure Following Total Pericardiectomy for Calcific Chronic Constrictive Pericarditis. World J Pediatr Congenit Heart Surg. 2018 Oct 14:2150135118769321. doi: 10.1177/2150135118769321. [Epub ahead of print] PubMed PMID: 30319033.

We report two male patients aged 18 and 19 years, respectively, undergoing total pericardiectomy for chronic calcific constrictive pericarditis who developed systemic ventricular failure unresponsive to medical management following surgery. The failing circulation was successfully reestablished using intra-aortic balloon counterpulsation. Aortic counterpulsation facilitates recovery of ventricular function and appears to be a reasonable alternative in select instances of refractory cardiac failure following pericardiectomy.

36: Dadhwal V, Sharma AK, Deka D, Chawla L, Agarwal N. Selective fetal reduction in monochorionic twins: Preliminary experience. J Turk Ger Gynecol Assoc. 2018 Oct 9. doi: 10.4274/jtgga.2018.0052. [Epub ahead of print] PubMed PMID: 30299263.

OBJECTIVE: In complicated mono-chorionic twin pregnancies, vaso-occlusive techniques like bipolar cord coagulation (BPCC), radiofrequency ablation (RFA), interstitial laser ablation (ILA) of cord and fetoscopy guided cord coagulation with lasers are the methods proposed for selective fetal reduction. This study brings forth preliminary data of selective fetal reduction procedures at a tertiary care center in India.
MATERIAL AND METHODS: This was a prospective observational study of 31 patients with complicated mono-chorionic twin pregnancies. Methods used were ILA, RFA and BPCC. Outcome measures included overall co-twin survival after selective feticide, survival rates with each method, miscarriage (defined as all fetal loss before 24 weeks), early fetal death (<24 hours after procedure) and late fetal death (>24hrs after the procedure) of co-twin.
RESULTS: Technical success was achieved in 30/31(96.8%) of pregnancies. Over all

take home baby rate was 63.3%. Live birth rates were 50%, 71.4% and 75%with ILA, RFA and BPCC respectively.
CONCLUSION: Data from initial cases of selective fetal reduction in complicated mono-chorionic twins suggests that these procedures are feasible but are associated with high adverse perinatal outcome.

37: Dar HY, Pal S, Shukla P, Mishra PK, Tomar GB, Chattopadhyay N, Srivastava RK. Bacillus clausii inhibits bone loss by skewing Treg-Th17 cell equilibrium in postmenopausal osteoporotic mice model. Nutrition. 2018 Oct;54:118-128. doi: 10.1016/j.nut.2018.02.013. Epub 2018 Mar 20. PubMed PMID: 29793054.

OBJECTIVES: Postmenopausal osteoporosis is one of most commonly occurring skeletal diseases leading to bone loss and fragility. Probiotics have been associated with various immunomodulatory properties and thus can be exploited to enhance bone health. In the present study, we report, to our knowledge for the first time, that oral administration of Bacillus clausii (BC) in postmenopausal osteoporotic (OVX) mice model enhances bone health.
METHODS: BC was selected as probiotic of choice due to its established immunomodulatory properties. BC skews the Treg-Th17 cell balance in vivo by inhibiting osteoclastogenic Th17 cells and promoting antiosteoclastogenic Treg cell development in postmenopausal osteoporotic mice. Mice were divided into three groups (sham, OVX, and OVX+BC), and BC was administered orally in drinking water for 6wk post-ovariectomy. At the end of experiment, mice were sacrificed and bones were analyzed for various parameters, along with lymphoid tissues for Treg-Th17 cells and serum cytokines.
RESULTS: We observed that BC administration enhanced bone health. This effect of BC administration was found due to skewing of Treg-Th17 cell balance (enhanced Treg and decreased Th17 cells) in vivo. BC administration reduced levels of proinflammatory cytokines (interleukin [IL]-6, IL-17, IFN-γ and tumor necrosis factor-α) and increased levels of anti-inflammatory cytokine (IL-10).
CONCLUSIONS: The present study strongly supports and establishes the osteoprotective potential of BC leading to enhanced bone health in postmenopausal osteoporotic mice model.

38: Desai A, Yadav MA, Gupta V, Gupta S. Wavefront analysis to diagnose blunt trauma-induced Weigert ligament dialysis: Isolated peripheral posterior lenticonus. J Cataract Refract Surg. 2018 Nov;44(11):1390-1393. doi: 10.1016/j.jcrs.2018.06.058. Epub 2018 Oct 9. PubMed PMID: 30314753.

A 15-year-old male patient presented with vision loss after blunt trauma to the right eye and with clinical evidence of posterior lenticonus. The posttraumatic lenticonus was eccentric (superotemporal). Irregular astigmatism with high myopia on dilated retinoscopy within the lenticonus, localized posterior convexity of peripheral capsule on ultrasound biomicroscopy, and increased higher-order aberrations (HOAs) on wavefront aberrometry compared with fellow-eye findings confirmed the diagnosis. To our knowledge, acquired peripheral posterior lenticonus representing dialysis of Weigert ligament after acute blunt trauma is a new finding. This case provides an insight into the pattern of higher HOAs associated with any type of lenticonus.

39: Devasenapathy S, Midha R, Naskar T, Mehta A, Prajapati B, Ummekulsum M, Sagar R, Singh NC, Sinha S. A pilot Indian family-based association study between dyslexia and Reelin pathway genes, DCDC2 and ROBO1, identifies modest association with a triallelic unit TAT in the gene RELN. Asian J Psychiatr. 2018 Oct;37:121-129. doi: 10.1016/j.ajp.2018.08.020. Epub 2018 Aug 25. PubMed PMID: 30199849.

Dyslexia is a neurodevelopmental disorder that manifests as a reading disability despite normal intelligence and adequate educational opportunity. Twin and family studies have indicated a genetic component, while genome-wide studies have implicated a number of susceptibility genes, most of which have direct or

indirect roles in neuronal migration. Reelin (RELN) has important biological functions facilitating migration of neurons. Polymorphisms in RELN have been implicated in related disorders like autism and schizophrenia but have not been examined in dyslexia. We hypothesized that not only RELN, but its interactors in the neuronal migration pathway may play roles in the etiology of dyslexia. Twenty two functional variants across six RELN signalling genes (RELN, VLDLR, APOER2, DAB1, LIS1 and NDEL1) and two dyslexia candidate genes (DCDC2 and ROBO1) were analyzed for association in twenty six nuclear and three extended families with individuals affected with dyslexia. Univariate association analysis was suggestive of association (puncorrected=0.01) with rs362746 in RELN which however did not withstand Bonferroni corrections (pcorrected=0.21). Multimarker tests indicated significant association (p=0.037), based on which we tested for haplotype associations. Although there were no significant haplotypic associations, we found that a three marker unit with rs3808039 and rs2072403 flanking and independently in linkage disequilibrium with rs362746 was significantly overtransmitted (risk allelic combination - TAT) to dyslexia affected individuals in the sample (p=0.002). Our results suggest preliminary evidence for a new potential risk variant in the RELN locus for dyslexia.

40: Dhaked S, Sharma N, Chopra KK, Khanna A, Kumar R. Treatment seeking pathways in pediatric tuberculosis patients attending DOTS centers in urban areas of Delhi. Indian J Tuberc. 2018 Oct;65(4):308-314. doi: 10.1016/j.ijtb.2018.06.007. Epub 2018 Jul 30. PubMed PMID: 30522618.

BACKGROUND: The treatment seeking pathways prior to initiation of Direct Observed Treatment Short-course Therapy (DOTS), provides the extent of patient and health system delays among pediatric tuberculosis (TB) patients.

OBJECTIVES: The study attempted to understand the treatment seeking pathways of pediatric TB patients under revised national tuberculosis control program (RNTCP).

STUDY DESIGN AND SETTING: It was a prospective observational study carried out from January 2015 to December 2015. A predesigned, pretested and semi-structured questionnaire was used to interview 141 caregivers of pediatric patients (0-14 years) at two chest clinics selected purposively.

RESULTS: Thirteen different treatment seeking pathways were identified and fever was the commonest symptom (41.8%) for seeking care from 1st health facility. Median time taken from onset of symptoms to first consultation varied from 1 to 144 weeks. More than half of the study subjects were first taken to a private practitioner (64.5%) followed by a pharmacist (19.1%) and trust in provider was the commonest reason for choosing the first care-provider in 52 (41.1%), followed by easy access or convenience in 49 (34.8%).

CONCLUSION: A significant delay was found in treatment initiation of patients with extra pulmonary tuberculosis (EPTB), those belonging to lower socio-economic class families, low literacy level of parents, who went to private facility first and availed more than three health facilities before diagnosis.

41: Dhawan V, Kumar M, Deka D, Malhotra N, Singh N, Dadhwal V, Dada R. Paternal factors and embryonic development: Role in recurrent pregnancy loss. Andrologia. 2019 Feb;51(1):e13171. doi: 10.1111/and.13171. Epub 2018 Oct 15. PubMed PMID: 30324700.

The events occurring at the maternal-foetal interface define a successful pregnancy but the current paradigm has shifted towards assessing the contribution of spermatozoa for embryogenesis. Spermatozoa with defective DNA integrity may fertilise the oocyte but affect subsequent embryonic development. The present case-control study was conducted in male partners of couples experiencing recurrent pregnancy loss (RPL) to assess the gene expression of spermatozoal FOXG1, SOX3, OGG1, PARP1, RPS6, RBM9, RPS17 and RPL29. This was correlated with reactive oxygen species (ROS) levels and DNA Fragmentation Index (DFI). Semen samples were obtained from 60 cases and 30 fertile controls. Gene expression was done by qPCR analysis, and relative quantification was calculated by the 2-ΔΔCt method. Chemiluminescence and the sperm chromatin structure assay were used to

measure the ROS and DFI levels respectively. FOXG1, OGG1, RPS6 and RBM9 were seen to be upregulated, while SOX3 and PARP1 were downregulated. Relative expression of SOX3, OGG1, RPS6 and RPS17 showed a significant difference between patients and controls ($p < 0.05$). RPL patients were seen to have high ROS (>27.8; $p = 0.001$) and DFI (>30.7; $p < 0.0001$) with respect to controls. Sperm transcript dysregulation and oxidative DNA damage can be "carried over" after implantation, thus affecting embryogenesis and health of the future progeny.

42: Dixit S, Arora NK, Rahman A, Howard NJ, Singh RK, Vaswani M, Das MK, Ahmed F, Mathur P, Tandon N, Dasgupta R, Chaturvedi S, Jethwaney J, Dalpath S, Prashad R, Kumar R, Gupta R, Dube L, Daniel M. Establishing a Demographic, Development and Environmental Geospatial Surveillance Platform in India: Planning and Implementation. JMIR Public Health Surveill. 2018 Oct 5;4(4):e66. doi: 10.2196/publichealth.9749. PubMed PMID: 30291101; PubMed Central PMCID: PMC6231830.

BACKGROUND: Inadequate administrative health data, suboptimal public health infrastructure, rapid and unplanned urbanization, environmental degradation, and poor penetration of information technology make the tracking of health and well-being of populations and their social determinants in the developing countries challenging. Technology-integrated comprehensive surveillance platforms have the potential to overcome these gaps.
OBJECTIVE: This paper provides methodological insights into establishing a geographic information system (GIS)-integrated, comprehensive surveillance platform in rural North India, a resource-constrained setting.
METHODS: The International Clinical Epidemiology Network Trust International established a comprehensive SOMAARTH Demographic, Development, and Environmental Surveillance Site (DDESS) in rural Palwal, a district in Haryana, North India. The surveillance platform evolved by adopting four major steps: (1) site preparation, (2) data construction, (3) data quality assurance, and (4) data update and maintenance system. Arc GIS 10.3 and QGIS 2.14 software were employed for geospatial data construction. Surveillance data architecture was built upon the geospatial land parcel datasets. Dedicated software (SOMAARTH-1) was developed for handling high volume of longitudinal datasets. The built infrastructure data pertaining to land use, water bodies, roads, railways, community trails, landmarks, water, sanitation and food environment, weather and air quality, and demographic characteristics were constructed in a relational manner.
RESULTS: The comprehensive surveillance platform encompassed a population of 0.2 million individuals residing in 51 villages over a land mass of 251.7 sq km having 32,662 households and 19,260 nonresidential features (cattle shed, shops, health, education, banking, religious institutions, etc). All land parcels were assigned georeferenced location identification numbers to enable space and time monitoring. Subdivision of villages into sectors helped identify socially homogenous community clusters (418/676, 61.8%, sectors). Water and hygiene parameters of the whole area were mapped on the GIS platform and quantified. Risk of physical exposure to harmful environment (poor water and sanitation indicators) was significantly associated with the caste of individual household (P=.001), and the path was mediated through the socioeconomic status and density of waste spots (liquid and solid) of the sector in which these households were located. Ground-truthing for ascertaining the land parcel level accuracies, community involvement in mapping exercise, and identification of small habitations not recorded in the administrative data were key learnings.
CONCLUSIONS: The SOMAARTH DDESS experience allowed us to document and explore dynamic relationships, associations, and pathways across multiple levels of the system (ie, individual, household, neighborhood, and village) through a geospatial interface. This could be used for characterization and monitoring of a wide range of proximal and distal determinants of health.

43: Elavarasi A, Vishnu VY, Srivastava MVP, Goyal V, Singh MB, Khanna G, Suri V, Sharma MC. Polymyositis with too Many Associations: A Paraneoplastic Syndrome. Ann Indian Acad Neurol. 2018 Oct-Dec;21(4):331-334. doi:

10.4103/aian.AIAN_432_17. PubMed PMID: 30532371; PubMed Central PMCID: PMC6238571.

44: Francis Thottian AG, Gandhi AK, Ramateke PP, Gogia A. Acinic cell carcinoma of parotid gland with cavernous sinus metastasis: A case report. J Cancer Res Ther. 2018 Oct-Dec;14(6):1428-1430. doi: 10.4103/0973-1482.192850. PubMed PMID: 30488869.

Acinic cell carcinoma (AciCC) is a low-grade malignancy which rarely metastasizes to bone or cavernous sinuses. A 62-year-old male patient, previously treated for AciCC of right parotid with surgery and local radiotherapy, presented 10 years later with progressive visual impairment and restriction of ocular movements. Magnetic resonance imaging of the head and orbit showed an expansile lobulated mass with heterogeneous signal intensity in bilateral cavernous sinus with encasement of the internal carotid artery on both sides. Fluorodeoxyglucose positron emission tomography/computed tomography showed multiple lytic lesions with increased uptake in the left clavicle (with soft tissue component), sternum, multiple cervico-dorso-lumbar vertebrae, and ribs. Biopsy from the clavicular lesion showed AciCC. He was treated with palliative radiotherapy to cavernous sinuses and other metastatic site followed by palliative chemotherapy with six cycles of paclitaxel and carboplatin. He had a partial response to palliative treatment and had good symptomatic relief at 12 months of follow-up.

45: Ganga KP, Shaw M, Sharma A, Jagia P. Rare origin of left main coronary artery from non-coronary sinus with aortic coarctation. BMJ Case Rep. 2018 Oct 16;2018. pii: bcr-2018-226732. doi: 10.1136/bcr-2018-226732. PubMed PMID: 30333202.

Anomalous origin of left main coronary artery from non-coronary sinus (LCANCS) is an extremely rare anomaly. Aortic coarctation in association with LCANCS has not been previously described in literature.

46: Ganie MA, Chakraborty S, Sehgal A, Sreejith M, Kandasamy D, Jana M, Rashid A. Bone Mineral Density is Unaltered in Women with Polycystic Ovary Syndrome. Horm Metab Res. 2018 Oct;50(10):754-760. doi: 10.1055/a-0733-7768. Epub 2018 Oct 12. PubMed PMID: 30312986.

CONTEXT: The effects of endocrine aberrations associated with polycystic ovary syndrome (PCOS) on bone mineral density (BMD) in young women is a matter of debate.
OBJECTIVES: To compare BMD in young women with PCOS to age and body mass index (BMI) matched controls and to elucidate its correlation to BMI, insulin resistance and serum testosterone.
DESIGN AND METHODS: We recruited 60 women with PCOS aged 14-24 years, diagnosed based on Rotterdam 2003 criteria, and 58 age matched controls. BMD was measured by dual energy X-ray absorptiometry. In addition, these subjects underwent biochemical and hormonal analysis including oral glucose tolerance test, calculation of Homeostatic Model Assessment-Insulin Resistance Index, measurement of serum thyroxine, thyrotropin, prolactin, total testosterone, dehydroepiandrosterone sulfate, follicular phase luteinizing hormone and follicle stimulating hormone.
RESULTS: There was no difference of BMD between women with PCOS and control women (1.103±0.08 vs 1.126±0.083 g/cm2; p=0.122). In subgroup analysis based on BMI, BMD in obese women with PCOS was significantly higher than their overweight and lean counterparts at lumbar spine (p<0.001), neck of femur (p=0.005) and total hip (p<0.001). BMD was not different at any site between oligomenorrheic and non-oligomenorrheic women with PCOS. It positively correlated with BMI, waist and hip circumference in women with PCOS. No correlation was found with HOMA-IR or Testosterone.
CONCLUSIONS: BMI is the most important determinant of BMD in women with PCOS. BMD is not different between healthy young women and those with PCOS.

47: Garg P, Jaryal AK, Kachhawa G, Deepak KK, Kriplani A. Estimation of

asymmetric dimethylarginine (ADMA), placental growth factor (PLGF) and pentraxin 3 (PTX 3) in women with preeclampsia. Pregnancy Hypertens. 2018 Oct;14:245-251. doi: 10.1016/j.preghy.2018.03.005. Epub 2018 Mar 10. PubMed PMID: 29548740.

OBJECTIVE: To evaluate the sequential trend of asymmetric dimethylarginine (ADMA), placental growth factor (PLGF) and pentraxin 3 (PTX 3) in pregnancies developing preeclampsia (PE) as compared to healthy pregnancy (HP) and to estimate their predictive value for development of PE later in pregnancy.
STUDY DESIGN: Nested case control design, sampling was done in 13 women with PE and 21 age matched healthy pregnant women at 11-13 weeks, 20-22 weeks and 30-32 weeks of gestation.
MAIN OUTCOME MEASURE: PLGF, ADMA, and PTX 3 were estimated temporally.
RESULTS: Serum ADMA and PTX 3 levels were higher in PE than HP even at 11-13 weeks and remained elevated throughout the gestation. PTX 3 concentration increased in both the groups with advancing gestation however significant rise was observed only in HP group. PLGF levels also increased with advancing gestation in HP group while in PE, there was a rise till 20-22 weeks of gestation followed by fall at 30-32 weeks. PLGF levels were lower in PE at 30-32 weeks than healthy pregnancy. Area under curve (AUC) for ADMA and PTX 3 were: at 11-13 weeks; 95.95% and 83.33% and 20-22 weeks; 89.88% and 90.06% respectively. At 30-32 weeks, PLGF and ADMA demonstrated an AUC of 86.51% and 86.51% respectively.
CONCLUSION: Abnormally elevated ADMA and PTX 3 levels precede the manifestation of PE and suggest endothelial dysfunction with exaggerated inflammatory response in PE. Both ADMA and PTX 3 can be used to segregate high risk women for development of PE than others in early pregnancy.

48: Garg R. Elderly patients for cancer surgeries: How much to investigate! J Anaesthesiol Clin Pharmacol. 2018 Oct-Dec;34(4):539-541. doi: 10.4103/joacp.JOACP_103_18. PubMed PMID: 30774238; PubMed Central PMCID: PMC6360899.

49: Garg R. Ongoing quest for a better predictor of difficult airway. J Anaesthesiol Clin Pharmacol. 2018 Oct-Dec;34(4):431-432. doi: 10.4103/0970-9185.249302. PubMed PMID: 30774222; PubMed Central PMCID: PMC6360892.

50: Garg S, Sharma V, Kumar R, Kumar L, Chopra A. Rapid Onset Anemia in Chronic Myeloid Leukemia Due to Red Cell Agglutination: A Rare Occurrence. Indian J Hematol Blood Transfus. 2018 Oct;34(4):758-759. doi: 10.1007/s12288-018-0944-y. Epub 2018 Mar 10. PubMed PMID: 30369759; PubMed Central PMCID: PMC6186252.

51: Ghosh A, Singh T, Singla V, Bagga R, Srinivasan R, Khandelwal N. Read-out segmented echo planar diffusion imaging of the female pelvis-utility in endometrial carcinoma-a preliminary experience. Br J Radiol. 2018 Oct;91(1090):20180018. doi: 10.1259/bjr.20180018. Epub 2018 Jun 5. PubMed PMID: 29750540; PubMed Central PMCID: PMC6350492.

OBJECTIVE:: Susceptibility artefacts from bones and bowel, geometric distortion makes diffusion imaging of the pelvis difficult. We discuss the difficulties of single-shot-echo-planar (ss-ep) DWI and evaluate a new diffusion-weighted imaging (DWI) technique-readout segmented echo planar (rs-ep) DWI in endometrial carcinoma and discuss the imaging physics.
METHODS:: Institute review board approval was obtained and five consecutive patients underwent both rs-ep and ss-ep-DWI of the female pelvis and two radiologists compared the images. ROIs were drawn on the endometrium on the b400 images-signal to noise was calculated and compared using F test.
RESULTS:: The rs-ep-DWI had less imaging artefacts, less bowel-related susceptibility and geometric distortion compared to ss-ep-DWI. There was statistically significant greater SNR in ss-ep-DWI compared to rs-ep-DWI. This

resulted in increased graininess of the readout segmented diffusion images. Artefacts in SS-EPI-DTI may make fibre tracking fallacious and rs-ep DTI may have fewer artefacts.
CONCLUSION:: rs-ep-DWI is a new imaging arsenal in imaging of the female pelvis in general; however further reduction in imaging time and improvement in signal to noise may be desirable.
ADVANCES IN KNOWLEGDE:: rs-ep-DWI affords lesser imaging artefacts from susceptibility and geometric distortion; at a higher time dividend and may find a place in oncological imaging.

52: Goel P, Bajpai M, Kandasamy D. An Enigmatic Route to the Contralateral Pelvicalyceal System on Antegrade Pyelogram. J Indian Assoc Pediatr Surg. 2018 Oct-Dec;23(4):236-238. doi: 10.4103/jiaps.JIAPS_139_18. PubMed PMID: 30443125; PubMed Central PMCID: PMC6182956.

Introduction: The authors present the rare yet enigmatic phenomenon of 'pyelo-renal' backflow.
Case Presentation: An eight-month-old boy with multiple congenital anomalies underwent left Anderson-Hynes Pyeloplasty for pelvi-ureteric junction obstruction. Antegrade dye-study done through the nephrostomy revealed obstruction at the level of the pelvi-ureteric junction, yet the contrast was visualized in the pelvis of contralateral kidney and urinary bladder (pyelo-venous backflow) masquerading as vesicoureteric reflux. The phenomenon of 'pyelo-renal' backflow along with pyelo-tubular, pyelo-interstitial, pyelo-sinusal and pyelo-lymphatic backflow have been described and the respective mechanisms discussed.
Conclusion: The phenomenon is known to happen in the presence of obstruction to outflow from renal pelvis thereby creating a closed compartment. Injection of contrast at a pressure above the critical limit may result in forniceal tears and back-flow of contrast into the renal tubules and beyond.

53: Goel P, Jain V, Kumar S, Sharma S, Bajpai M. Report of Massive Bleed after Chest-drain Insertion in a Case of Job's (hyper-IgE) Syndrome. J Indian Assoc Pediatr Surg. 2018 Oct-Dec;23(4):225-227. doi: 10.4103/jiaps.JIAPS_72_17. PubMed PMID: 30443121; PubMed Central PMCID: PMC6182952.

Chest-drain insertion is considered to be a benign procedure. A 6-year-old girl who is a known case of hyper-IgE/Job's syndrome presented to us following three episodes of fresh bleed following chest-drain insertion for the left lung abscess. The site of bleed was localized to be the ruptured pseudoaneurysm of the anterior segmental branch of the left pulmonary artery. For successful management, various pitfalls and gray areas have been highlighted: (a) the procedure of chest-drain insertion has a potential for many complications some of which may be life-threatening, (b) the importance of proper history taking and a complete evaluation of all patients before surgical intervention, (c) role of ultrasound-guided chest-drain insertion, and (d) the importance of lateral and pragmatic approach with multidisciplinary involvement in such unusual and challenging cases cannot be overemphasized.

54: Goel P, Bajpai M, Nagendla MK, Singh A. Gastric Deserosalization: What Lies Behind Closed Doors. J Indian Assoc Pediatr Surg. 2018 Oct-Dec;23(4):216-218. doi: 10.4103/jiaps.JIAPS_78_17. PubMed PMID: 30443118; PubMed Central PMCID: PMC6182938.

Congenital intestinal malrotation has a wide spectrum of presentation varying from incidental detection to recurrent episodes of benign abdominal pain to frank gastrointestinal obstruction, mid-gut volvulus, and bowel gangrene. Herein, we report the first case of congenital intestinal malrotation leading to gastric deserosalization. Intraoperative findings were conspicuous by the presence of midgut volvulus and gastric perforation in the posterior wall. There are a few more dimensions uncovered by this case, a brief reference to each has been considered necessary.

55: Gogia A, Raina V, Deo SVS, Shukla NK, Mathur S, Mohanti BK, Sharma DN. Clinico-pathological characteristics and treatment outcome in invasive lobular carcinoma of the breast: An Indian experience. Indian J Cancer. 2018 Oct-Dec;55(4):344-347. doi: 10.4103/ijc.IJC_428_18. PubMed PMID: 30829268.

BACKGROUND: Invasive lobular carcinoma (ILC) is the second most common histologic subtype of breast cancer and accounts for 10%-15% of all breast cancers in the west. There is a scarcity of data on ILC from the Indian subcontinent. This report intends to present the patterns of care, survival outcomes, and prognostic factors of ILC treated in a tertiary care institute.
MATERIALS AND METHODS: This retrospective analysis included consecutive patients diagnosed with ILC and registered at our Institute between 2009 and 2016.
RESULTS: We included 97 patients with a median age of 53 years (range 28-80). American Joint Committee on Cancer (7th edition) stage distribution was stage I-8.24%, stage II-45.36%, stage III- 34.10%, and stage IV-12.30%. Bilateral breast cancer was seen in 8 cases. Estrogen receptor, progesterone receptor, and HER 2/neu positivity was 90%, 85%, and 9%, respectively. Triple-negative breast cancer constituted 5% of cases. Twenty-nine events were recorded (systemic and locoregional relapse) with a median follow-up of 3.5 years. Three years relapse-free survival (RFS) and overall survival were 80% and 60%, respectively. Bones were the most common site of metastasis. Age <45 years [HR-1.4 (0.8-2.1), P < 0.001] and advanced clinical tumor stage [T4, HR-2.1 (1.1-3.8), P = 0.001] were associated with poor RFS.
CONCLUSION: ILC constituted 2.5% of breast cancer cases at our institute. Triple negativity and HER-2/neu positivity were seen in 9% and 5% of cases, respectively. Age <45 years and advanced clinical tumor stage were associated with poor RFS.

56: Gordon T, Balakrishnan K, Dey S, Rajagopalan S, Thornburg J, Thurston G, Agrawal A, Collman G, Guleria R, Limaye S, Salvi S, Kilaru V, Nadadur S. Air pollution health research priorities for India: Perspectives of the Indo-U.S. Communities of Researchers. Environ Int. 2018 Oct;119:100-108. doi: 10.1016/j.envint.2018.06.013. Epub 2018 Jun 23. Review. PubMed PMID: 29944987.

57: Goyal S, Jadaun S, Kedia S, Kumar-Acharya S, Varma S, Nayak B, Thakur B, M D S. Thromboelastography Parameters in Patients with Acute on Chronic Liver Failure. Ann Hepatol. 2018 Oct 16;17(6):1042-1051. doi: 10.5604/01.3001.0012.7205. PubMed PMID: 30600294.

INTRODUCTION AND AIM: Patients with acute on chronic liver failure (ACLF) have abnormal conventional coagulation tests- platelet count and international normalized ratio (INR). Thromboelastography (TEG) is a rapid, point-of-care assay, more comprehensive than platelet count and INR as it assesses for platelet adequacy (number and function), coagulation factors and clot retraction. The aim of the study was to evaluate the TEG parameters in patients with ACLF, chronic liver disease having acute decompensation (AD) and healthy subjects (HC).
MATERIAL AND METHODS: TEG parameters were assessed in patients with ACLF and AD within 24 h of admission. Consecutive patients were included in the study over 12 months. Healthy subjects were recruited as controls.
RESULTS: 179 patients were included- 68 ACLF, 53 AD and 58 HC. The mean values of INR in ACLF, AD and HC groups were 2.9 ± 1.4, 1.6 ± 0.4 and 1.1 ± 0.2; P < 0.001. Among TEG parameters - maximum amplitude (MA) was low in ACLF and AD patients as compared with HC (53.8 ± 15, 58.3 ± 13.9 mm and 67.2 ± 12.1 mm, respectively; P < 0.001). Lysis at 30 min (LY30) was high in ACLF patients, as compared to AD and HC (8.6 ± 14.1%, 5.0 ± 9.5% and 4.9 ± 9.8%, respectively; P = 0.060). There were no differences in r time, k time, and alpha angle between groups; normal in >90% patients. There was no difference in TEG parameters between different ACLF grades, whereas CCTs were more deranged with increasing grades of ACLF.
CONCLUSION: Despite abnormal conventional coagulation tests, TEG parameters in ACLF patients are essentially normal, except reduced maximum amplitude. Future studies are needed to explore the utility of TEG in clinical management of ACLF

patients.

58: Grewal KS, Bhatia R, Singh N, Singh R, Dash D, Tripathi M. Confusional state in a pregnant woman: A case of NMDA receptor encephalitis during pregnancy. J Neuroimmunol. 2018 Dec 15;325:29-31. doi: 10.1016/j.jneuroim.2018.10.008. Epub 2018 Oct 19. PubMed PMID: 30366206.

We report the case of a pregnant female presenting with behavioral change and hallucinations followed by focal seizures with impaired awareness. EEG revealed generalized slowing interspersed with extreme delta-brush pattern and MRI brain was normal. Both Serum and CSF anti-N-methyl-d-aspartate receptor (NMDAR) antibodies were positive. Patient had a prolonged hospital stay with full recovery and delivered a healthy baby, highlighting the significance of early diagnosis and management in this disorder.

59: Gundapaneni S, Dhua AK, Jain V, Jana M, Agarwala S, Bhatnagar V. Teratoma in the Hepatoduodenal Ligament. J Indian Assoc Pediatr Surg. 2018 Oct-Dec;23(4):228-231. doi: 10.4103/jiaps.JIAPS_36_18. PubMed PMID: 30443122; PubMed Central PMCID: PMC6182942.

A teratoma is not an uncommon tumor in the pediatric age group. It has a predilection for specific sites, but a teratoma arising from the hepatoduodenal ligament (HDL) is very rare. Only 15 cases of HDL teratoma have been reported so far. Due to the proximity to important structures, it is imperative that the correct anatomical localization is done preoperatively to avoid intraoperative surprises. Herein, we report a case of HDL teratoma in a toddler who underwent a successful excision. The relevant literature is also discussed briefly from a pediatric surgeon's perspective.

60: Gupta A, Shukla G. Obstructive Sleep Apnea and Stroke. J Clin Sleep Med. 2018 Oct 15;14(10):1819. doi: 10.5664/jcsm.7416. PubMed PMID: 30353831; PubMed Central PMCID: PMC6175788.

61: Gupta A, Shukla G. PAP Treatment for Patients Who Have Had a Stroke. J Clin Sleep Med. 2018 Oct 15;14(10):1825. doi: 10.5664/jcsm.7422. PubMed PMID: 30353830; PubMed Central PMCID: PMC6175795.

62: Gupta AK, Rani K, Swarnkar S, Kumar GK, Khan MI, Pokhriyal R, Kumar DR, Goyal V, Tripathi M, Gupta R, Chadda RK, Vanamail P, Hariprasad G. Evaluation of Serum Apolipoprotein E as a Potential Biomarker for Pharmacological Therapeutic Efficacy Monitoring in Dopamine Dictated Disease Spectrum of Schizophrenia and Parkinson's disease: A Preliminary Study. J Cent Nerv Syst Dis. 2018 Oct 9;10:1179573518803585. doi: 10.1177/1179573518803585. eCollection 2018. PubMed PMID: 30327579; PubMed Central PMCID: PMC6178121.

Aim of the Study: Parkinson's disease and schizophrenia are disease end points of dopaminergic deficit and hyperactivity, respectively, in the mid brain. Accordingly, current medications aim to restore normal dopamine levels, overshooting of which results in adverse effects of psychosis and extra-pyramidal symptoms, respectively. There are currently no available laboratory tests to guide treatment decisions or help predict adverse side effects of the drugs. The aim was to therefore explore the possibility of using apolipoprotein E as a biomarker to monitor pharmacological intervention in dopamine dictated states of Parkinson's disease and schizophrenia for optimum therapy.
Methods: Naïve and treated, Parkinson's disease and schizophrenic patients were recruited from neurology and psychiatry clinics. Serum of healthy volunteers was collected as controls. Serum concentrations of apolipoprotein E was estimated by enzyme-linked immunosorbent assay (ELISA). Pathway analysis was carried out to delineate the interactions of apolipoprotein E in Parkinson's disease and schizophrenia.
Results: Apolipoprotein E levels are higher in Parkinson's disease patients as

compared with schizophrenic samples (P<.05). Also, post-treatment apolipoprotein E levels in both disease states were at par with levels seen in healthy controls. The interactions of apolipoprotein E validate the results and place the differential expression of the protein in Parkinson's disease and schizophrenia in the right perspective.
Conclusion: Apolipoprotein E concentration across the dopaminergic spectrum suggests that it can be pursued not only as a potential biomarker in schizophrenia and Parkinson's disease, but can also be an effective tool for clinicians to determine efficacy of drug-based therapy.

63: Gupta R, Talwar P, Talwar P, Khurana S, Kushwaha S, Jalan N, Thakur R. Diagnostic accuracy of nucleic acid amplification based assays for tuberculous meningitis: A meta-analysis. J Infect. 2018 Oct;77(4):302-313. doi: 10.1016/j.jinf.2018.04.017. Epub 2018 May 25. PubMed PMID: 29758242.

BACKGROUND: Numerous in-house and commercial nucleic acid amplification tests (NAAT) have been evaluated using variable reference standards for diagnosis of TBM but their diagnostic potential is still not very clear.
METHODS: We conducted a meta-analysis to assess the diagnostic accuracy of different NAAT based assays for diagnosing TBM against 43 data sets of confirmed TBM (n = 1066) and 61 data sets of suspected TBM (n = 3721) as two reference standards. The summary estimate of the sensitivity and the specificity were obtained using the bivariate model. QUADAS-2 tool was used to perform the Quality assessment for bias and applicability. Publication bias was assessed with Deeks' funnel plot.
RESULTS: Studies with confirmed TBM had better summary estimates as compared to studies with clinically suspected TBM irrespective of NAAT and index tests used. Among in-house assays, MPB as the gene target had best summary estimates in both confirmed [sensitivity:90%(83-95), specificity:97-%(87-99), DOR:247 (50-1221), AUC:99%(97-100), PLR:38.8-(6.6-133), NLR:0.11(0.05-0.18), I2 = 15%] and clinically suspected [sensitivity:69%(47-85), specificity:96%(90-98), DOR:62(16.8-232), AUC:94%(92-97), PLR:16.9(6.5-36.8), NLR:0.33(0.16-0.56), I2:15.3%] groups. GeneXpert revealed good diagnostic accuracy only in confirmed TBM group [sensitivity = 57%(38-74), specificity = 98%(89-100), DOR = 62(7-589), AUC = 87%(79-96), PLR = 33.2(3.8-128), NLR = 0.45(0.26-0.68), I2 = 0%].
CONCLUSIONS: This meta-analysis identified potential role of MPB gene among in-house assays and GeneXpert as commercial assay for diagnosing TBM.

64: Gupta S, Selvan H, Shakrawal J, Gupta V. One-step management of post-traumatic triple dialysis using two rings. Eur J Ophthalmol. 2018 Oct 1:1120672118803520. doi: 10.1177/1120672118803520. [Epub ahead of print] PubMed PMID: 30270659.

PURPOSE: To report a case that presented with post blunt trauma cataract, zonular dialysis, cyclodialysis and iridodialysis and its successful single-sitting management.
METHODS: After lens aspiration, a capsular tension ring and multipiece intraocular lens were placed in the bag to support the zonules, a single eyelet Cionni ring was fixed in the sulcus to provide endocyclotamponade, and iridodialysis repair was done using the 'stroke and dock technique'.
RESULT: Successful centration of the intraocular lens, closure of the cleft and apposition of the iris root to its base were achieved at the end of the surgery.
CONCLUSION: A single-sitting surgery correcting all the three dialysis can curtail the burden of repeated surgeries and their complications, providing early visual recovery and cost-effectivity.

65: Gupta S, Lodha R, Kabra SK. Asthma, GERD and Obesity: Triangle of Inflammation. Indian J Pediatr. 2018 Oct;85(10):887-892. doi: 10.1007/s12098-017-2484-0. Epub 2017 Nov 11. Review. PubMed PMID: 29127618.

There is increasing prevalence of both asthma and obesity in children globally in

recent years. Various epidemiological studies link obesity as a risk factor for asthma and suggest a possible causal association. Obesity asthma phenotype is considered as distinct in view of greater severity and poor asthma control. Various mechanisms underlying this phenotype have been suggested including mechanical effects of obesity and systemic inflammation, but still the exact mechanism is unclear. Also, the comorbidities like gastroesophageal reflux disease (GERD) and sleep disordered breathing (SDB) lead to inflammation in airways and contribute to asthma obesity association. A better understanding of mechanisms by which obesity and GERD lead to inflammation in airways and increase the risk of asthma may provide insight towards targeted treatment approach of these patients.

66: Gupta SK, Siddharth V, Belagere MR, Stewardson AJ, Kant S, Singh S, Singh N. National survey of infection control programmes in South Asian association for Regional Cooperation countries in the era of patient safety. Indian J Med Microbiol. 2018 Oct-Dec;36(4):577-581. doi: 10.4103/ijmm.IJMM_18_82. PubMed PMID: 30880710.

Background: The implementation of hospital infection prevention and control (IPC) in south Asia is not well described. We aimed to assess IPC programmes in hospitals in this region and explore opportunities for improvement.
Methods: Attendees from hospitals in the South Asian Association for Regional Cooperation (SAARC) region who were at one of four National Initiative for Patient Safety workshops organised by All India Institute of Medical Sciences (New Delhi) from 2009 to 2012 were invited to complete a semi-structured questionnaire. The survey addressed six main components of IPC programmes.
Results: We received responses from 306 participants from 82 hospitals. Five key opportunities for improvement emerged: (1) lack of healthcare epidemiologists, (2) relative infrequency of antibiotic guidelines (53%) and prescribing audits (33%) (3) lack of awareness of needle stick injury rates (84%) (4) only 47% of hospitals were prepared for surge capacity for patients with infectious diseases, and (5) limited coordination of hospital infection control personnel with other support services (55%-66%).
Conclusion: These results outline IPC challenges in the SAARC region and may be useful to guide future quality improvement initiatives.

67: Gutman T, Hanson CS, Bernays S, Craig JC, Sinha A, Dart A, Eddy AA, Gipson DS, Bockenhauer D, Yap HK, Groothoff J, Zappitelli M, Webb NJA, Alexander SI, Goldstein SL, Furth S, Samuel S, Blydt-Hansen T, Dionne J, Michael M, Wenderfer SE, Winkelmayer WC, Currier H, McTaggart S, Walker A, Ralph AF, Ju A, James LJ, Carter S, Tong A. Child and Parental Perspectives on Communication and Decision Making in Pediatric CKD: A Focus Group Study. Am J Kidney Dis. 2018 Oct;72(4):547-559. doi: 10.1053/j.ajkd.2018.05.005. Epub 2018 Jul 3. PubMed PMID: 29980375.

BACKGROUND & OBJECTIVES: Effective communication and shared decision making improve quality of care and patient outcomes but can be particularly challenging in pediatric chronic disease because children depend on their parents and clinicians to manage complex health care and developmental needs. We aimed to describe the perspectives of children with chronic kidney disease (CKD) and their parents with regard to communication and decision making.
STUDY DESIGN: Qualitative study.
SETTING & PARTICIPANTS: Children with CKD (n=34) and parents (n=62) from 6 centers across 6 cities in Australia, Canada, and the United States participated in 16 focus groups.
ANALYTICAL APPROACH: Transcripts were analyzed thematically.
RESULTS: We identified 4 themes: (1) disempowered by knowledge imbalance (unprepared and ill-informed, suspicion of censorship, and inadequacy as technicians), (2) recognizing own expertise (intuition and instinct unique to parental bond, emerging wisdom and confidence, identifying opportunities for control and inclusion, and empowering participation in children), (3) striving to assert own priorities (negotiating broader life impacts, choosing to defer

decisional burden, overprotected and overruled, and struggling to voice own preferences), and (4) managing child's involvement (respecting child's expertise, attributing "risky" behaviors to rebellion, and protecting children from illness burden).
LIMITATIONS: Only English-speaking participants were recruited, which may limit the transferability of the findings. We collected data from child and parent perspectives; however, clinician perspectives may provide further understanding of the difficulties of communication and decision making in pediatrics.
CONCLUSIONS: Parents value partnership with clinicians and consider long-term and quality-of-life implications of their child's illness. Children with CKD want more involvement in treatment decision making but are limited by vulnerability, fear, and uncertainty. There is a need to support the child to better enable him or her to become a partner in decision making and prepare him or her for adulthood. Collaborative and informed decision making that addresses the priorities and concerns of both children and parents is needed.

68: Gyawali S, Sarkar S, Balhara YPS, Kumar S, Patil V, Singh S. Perceived stigma and its correlates among treatment seeking alcohol and opioid users at a tertiary care centre in India. Asian J Psychiatr. 2018 Oct;37:34-37. doi: 10.1016/j.ajp.2018.07.018. Epub 2018 Aug 2. PubMed PMID: 30103185.

BACKGROUND AND AIMS: Perceived stigma is related to the beliefs that members of stigmatized group have about the stigmatizing attitudes present in society. We present the data on perceived stigma in alcohol and opioid users seeking treatment.
METHODS: This study was conducted at a tertiary care de-addiction facility with recruitment of patients with substance use disorders (alcohol and opioid use). Perceived stigma was assessed using Perceived Stigma of Substance Abuse Scale (PSAS).
RESULTS: The study included 201 participants, majority of whom were males (99.5%), educated up to 10th std. (65.7%), with mean duration of substance use of 11.4 years. Opiates were the primary substance of abuse in the majority (83.6%) with ever-injecting drug use present in a considerable proportion (29.4%). The mean perceived stigma scale score was 21.23±3.03. The perceived stigma was higher in patients from rural background, but was not associated with age, educational status, current living situation, duration of substance use and injecting drug use.
CONCLUSION: Stigma remains an important issue among patients with alcohol and opioid use disorders. Perceived stigma could affect participation in society and health seeking behavior in substance using population, thus needs further exploration.

69: Haisley KR, Hart CM, Kaempf AJ, Dash NR, Dolan JP, Hunter JG. Specific Tumor Characteristics Predict Upstaging in Early-Stage Esophageal Cancer. Ann Surg Oncol. 2019 Feb;26(2):514-522. doi: 10.1245/s10434-018-6804-z. Epub 2018 Oct 30. PubMed PMID: 30377918.

BACKGROUND: Early-stage esophageal cancer (stages 0-1) has been shown to have relatively good outcomes after local endoscopic or surgical resection. For this reason, neoadjuvant chemoradiation usually is reserved for higher-stage disease. Some early tumors, however, are found after resection to be more advanced than predicted based on initial clinical staging, termed pathologic upstaging. Such tumors may have benefited from alternate treatment models had their true stage been known preoperatively. This study aimed to identify high-risk features in early esophageal cancers that might predict tumor upstaging and guide more individualized treatment algorithms.
METHODS: Through retrospective review of a single-institution foregut disease registry, we evaluated patients who underwent esophagectomy for high-grade dysplasia (Tis) or stage 1 esophageal cancer, searching for factors associated with pathologic upstaging.
RESULTS: The review included 110 patients (88% male, median age at diagnosis, 64.5 years) treated between January 2000 and June 2016. Upstaging occurred for

20.9% of the patients, and was more common for patients with angiolymphatic invasion (odds ratio [OR], 11.07; 95% confidence interval [CI], 2.96-41.44; P<0.001) or signet-ring features (OR, 23.9; 95% CI, 2.6-216.8; P=0.005). In the absence of other predictors, upstaging was associated with decreased overall survival (P=0.006).
CONCLUSIONS: Approximately 20% of patients with early-stage esophageal cancer may be upstaged at resection. Angiolymphatic invasion and signet-ring features may predict tumors likely to be upstaged, resulting in decreased overall survival.

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Background: Laryngoscopy and tracheal intubation are noxious stimuli which evoke a transient but marked sympathetic response. Alpha-2 adrenoceptor agonists attenuate the sympathoadrenal responses by inhibiting noradrenaline release.
Aim: This study aims to evaluate and compare the effect of intravenous dexmedetomidine and clonidine on cardiovascular response resulting from laryngoscopy and endotracheal intubation.
Settings and Design: This was a prospective randomized controlled study carried out in the operating room.
Materials and Methods: Ninety American Society of Anesthesiologists Physical Status I and II patients were randomly allocated into three groups, that is, Group C (clonidine 2 μg/kg), Group D (dexmedetomidine 1 μg/kg), and Group S (normal saline) infused over 10 min. Blood pressures - systolic (SBP) and diastolic (DBP), mean arterial pressure (MAP), and heart rate (HR) were recorded after drug administration and intubation at subsequent intervals.
Statistical Analysis Used: Quantitative data were analyzed using ANOVA test (with post hoc Bonferroni correction for intragroup comparison). Qualitative data were analyzed using Chi-square test. P < 0.05 was considered statistically significant.
Results: HR, SBP, DBP, and MAP were lower in Group C and D compared to Group S at all times measured. HR was significantly lower in Group D compared to Group C after drug infusion. At 1 min after intubation, SBP and MAP were lower in Group D compared to Group C. At 3, 5, and 10 min after intubation, SBP, DBP, and MAP were lower in Group D compared to Group C.
Conclusion: There was significant reduction in hemodynamic response by dexmedetomidine and clonidine as compared to controls. Furthermore, attenuation of the pressor response to intubation was better following premedication with dexmedetomidine than with clonidine.

71: Ismail J, Chidambaram M, Sankar J, Agarwal S, Lodha R. Disseminated Cryptococcosis Presenting as Miliary Lung Shadows in an Immunocompetent Child. J Trop Pediatr. 2018 Oct 1;64(5):434-437. doi: 10.1093/tropej/fmx083. PubMed PMID: 29177510.

Disseminated cryptococcosis is infrequent in immunocompetent children. Pulmonary and central nervous system are the commonly involved sites of infection in an immunocompromised host. We report a fatal case of disseminated cryptococcosis in an immunocompetent host presenting as fever of unknown origin with miliary shadows on chest radiograph, mimicking tuberculosis. In countries with the heavy burden of tuberculosis, a high index of suspicion is needed for early diagnosis of its close mimics like disseminated cryptococcosis.

72: Ismail J, Sankar J. Triage Nurse-Ordered Diagnostic Studies - An Evolving Strategy to Reduce Emergency Department Length of Stay? Indian J Pediatr. 2018 Oct;85(10):827-828. doi: 10.1007/s12098-018-2780-3. Epub 2018 Sep 4. Review. PubMed PMID: 30182279.

73: Jain S, Mahapatra SJ, Gupta S, Shalimar, Garg PK. Infected Pancreatic Necrosis due to Multidrug-Resistant Organisms and Persistent Organ failure Predict Mortality in Acute Pancreatitis. Clin Transl Gastroenterol. 2018 Oct 5;9(10):190. doi: 10.1038/s41424-018-0056-x. PubMed PMID: 30287818; PubMed Central PMCID: PMC6172262.

BACKGROUND: Organ failure determines outcome in acute pancreatitis (AP). It is controversial if infected pancreatic necrosis (IPN) is also an independent determinant of mortality. We hypothesized that the predictors of mortality in AP might have changed with advances in management and consequent decline in mortality over the past decades. Our objective was to study the predictors of mortality in patients with AP.
METHODS: Consecutive patients with a first episode of AP hospitalized from January 2015 to December 2016 were included in an observational study. Patients with IPN were treated with a conservative first approach followed by intervention. Necrosectomy, if required, was delayed beyond 4 weeks and done primarily employing minimally invasive techniques. The primary outcome measure was independent predictors of in-hospital mortality.
RESULTS: Of 209 patients with AP, 81 (39%) had persistent organ failure (OF) and 108 (52%) developed IPN. Overall, 46/209 (22%) patients died. Independent predictors of mortality were OF (odds ratio [OR]19; 95% CI: 6.1-58.8), and IPN due to infection with multidrug resistant (MDR) organisms (OR: 8.4; 95% CI:3.1-22.5). Infected pancreatic necrosis by itself was not found to be a significant predictor of mortality (OR 2; 95% CI: 0.4-9.5).
CONCLUSION: Persistent OF and complicated IPN due to MDR infection were independent predictors of mortality in patients with AP. Renewed efforts to prevent MDR infection with antibiotic stewardship and strategies for early control of sepsis are urgently required.

74: Jat KR, Kumar A. Sublingual Immunotherapy in Allergic Rhinitis: Search for a Suitable Biomarker Continues! Indian J Pediatr. 2018 Oct;85(10):834-835. doi: 10.1007/s12098-018-2773-2. Epub 2018 Aug 20. Review. PubMed PMID: 30128633.

75: Jauhari P, Saini L, Chakrabarty B, Kumar A, Gulati S. Juvenile Canavan Disease: A Leukodystrophy without White Matter Changes. Neuropediatrics. 2018 Dec;49(6):420-421. doi: 10.1055/s-0038-1672175. Epub 2018 Oct 10. PubMed PMID: 30304741.

76: Jha V, Ur-Rashid H, Agarwal SK, Akhtar SF, Kafle RK, Sheriff R; ISN South Asia Regional Board. The state of nephrology in South Asia. Kidney Int. 2019 Jan;95(1):31-37. doi: 10.1016/j.kint.2018.09.001. Epub 2018 Oct 26. PubMed PMID: 30612598.

77: Kakkar A, Pradeep I, Singh G, Dinda A, Agarwal SK. Peripheral T-Cell Lymphoma: A Posttransplant Lymphoproliferative Disorder Presenting as a Jejunal Mass in a Renal Transplant Recipient. Exp Clin Transplant. 2018 Oct;16(5):617-619. doi: 10.6002/ect.2016.0042. Epub 2016 Dec 2. PubMed PMID: 27915968.

Posttransplant lymphoproliferative disorders are a spectrum of lymphoproliferative disorders seen in recipients of solid-organ, bone marrow, and stem cell allografts. They include polyclonal early lesions mimicking infectious mononucleosis and monoclonal proliferations of B and T cells, indistinguishable from lymphomas occurring in immunocompetent individuals. Although most posttransplant lymphoproliferative disorders are B-cell neoplasms, T-cell posttransplant lymphoproliferative disorders are very rare. Among solid-organ transplants, renal allografts have low risk for development of posttransplant lymphoproliferative disorders. We describe the case of an adult male who developed a T-cell posttransplant lympho?roliferative disorder involving the small intestine after renal transplant, which was diagnosed as peripheral T-cell

lymphoma, not otherwise specified.

78: Kamath-Rayne BD, Thukral A, Visick MK, Schoen E, Amick E, Deorari A, Cain CJ, Keenan WJ, Singhal N, Little GA, Niermeyer S. Helping Babies Breathe, Second Edition: A Model for Strengthening Educational Programs to Increase Global Newborn Survival. Glob Health Sci Pract. 2018 Oct 4;6(3):538-551. doi: 10.9745/GHSP-D-18-00147. Print 2018 Oct 3. PubMed PMID: 30287531; PubMed Central PMCID: PMC6172134.

BACKGROUND: Helping Babies Breathe (HBB), a skills-based program in neonatal resuscitation for birth attendants in resource-limited settings, has been implemented in over 80 countries since 2010. Implementation studies of HBB incorporating low-dose high-frequency practice and quality improvement show substantial reductions in fresh stillbirth and first-day neonatal mortality. Revision of the program aimed to further augment provider and facilitator skills and address gaps in implementation with the goal of improving neonatal survival.
METHODS: The Utstein Formula for Survival-Medical Science X Educational Efficiency X Local Implementation = Survival-provided a framework for the revisions. The 2015 Neonatal Resuscitation Consensus on Science and Treatment Recommendations by the International Liaison Committee on Resuscitation informed scientific updates, which were harmonized with the 2012 World Health Organization Basic Newborn Resuscitation Guidelines. Published literature and program reports, consensus guidelines on reprocessing equipment, systematic collection of suggestions from frontline users, and responses to a semistructured online questionnaire informed educational/implementation revisions. Links to maternal care were added. Draft materials underwent Delphi review and field testing in India and Sierra Leone. An Utstein-style meeting of stakeholders identified key actions for successful implementation.
RESULTS: Scientific revisions included expectant management of infants with meconium-stained amniotic fluid, limitation of suctioning, and initiating and continuing effective ventilation until spontaneous respirations. Frontline users (N=102) suggested augmented simulation methods to build confidence and competence and additional guidance for facilitators on implementation. Users identified a need for sufficient practice during the workshop, systematized ongoing practice, and enough simulators for participants. Field trials refined approaches to self-reflection, feedback and debriefing, and quality improvement. Utstein meeting stakeholders validated the importance of quality improvement and use of data to improve outcomes.
CONCLUSIONS: The second edition of HBB provides a newer paradigm of learning for providers that incorporates workshop practice, self-reflection, and feedback and debriefing to reinforce learning as well as the promotion of mentorship and development of facilitators, systems for low-dose high-frequency practice in facilities, and quality improvement related to neonatal resuscitation.

79: Kant S, Kaur R, Goel AD, Malhotra S, Haldar P, Kumar R. Anemia at the time of delivery and its association with pregnancy outcomes: A study from a secondary care hospital in Haryana, India. Indian J Public Health. 2018 Oct-Dec;62(4):315-318. doi: 10.4103/ijph.IJPH_40_18. PubMed PMID: 30539898.

Maternal anemia has been reportedly associated with increased risk of maternal and fetal morbidity and mortality. Adverse pregnancy outcomes such as preterm birth, low birth weight, and stillbirth have been reported to be associated with anemia. However, different studies have shown inconsistent results. In the present study, we report the association between maternal hemoglobin levels at the time of delivery and outcomes among women at a secondary care hospital in northern India. Secondary analysis of routinely collected hospital data from January 2015 to December 2016 was carried out. Sociodemographic details, hemoglobin levels at the time of admission, and birth outcomes were retrieved from the records of women admitted for delivery. The outcomes were compared among anemic and nonanemic women. About 78% of the women were found to have anemia at the time of delivery. A significantly higher proportion of anemic women had preterm labor.

80: Kapil U, Bhadoria AS. Utility of Mid-Upper Arm Circumference in Detection of Maternal Acute Malnutrition. Indian J Community Med. 2018 Oct-Dec;43(4):325. doi: 10.4103/ijcm.IJCM_285_18. PubMed PMID: 30662192; PubMed Central PMCID: PMC6319296.

81: Katiyar V, Dharanipathy S, Gurjar H, Vora Z, Sharma R. Post-traumatic hydrocephalus following decompressive craniectomy: how well can it be predicted? Acta Neurochir (Wien). 2018 Nov;160(11):2125. doi: 10.1007/s00701-018-3684-8. Epub 2018 Oct 2. PubMed PMID: 30280259.

82: Katwa U, Kabra SK. Advances in Asthma - III. Indian J Pediatr. 2018 Oct;85(10):885-886. doi: 10.1007/s12098-018-2784-z. Epub 2018 Sep 11. PubMed PMID: 30206759.

83: Kaur H, Nanda A, Verma M, Mutneja P, Koli D, Bhardwaj S. Prosthetic rehabilitation of resected orbit in a case of mucormycosis. J Indian Prosthodont Soc. 2018 Oct-Dec;18(4):364-369. doi: 10.4103/jips.jips_53_18. PubMed PMID: 30449965; PubMed Central PMCID: PMC6180739.

The design of orbital prosthesis to rehabilitate patients with orbital exenteration depends on the underlying clinical condition, material chosen for prosthesis, method of retention of the prosthesis, and and preference of the patient. Rehabilitation of a patient with orbital exenteration due to mucormycosis has been described by fabricating a prosthesis that used polymethyl methacrylate (to fabricate a conformer) and silicone material (to fabricate prosthetic superstructure). The two-component prosthesis was designed to attain dual mechanical retention using an anatomic undercut (conformer) and manually created mechanical undercut (prosthetic superstructure). The objective was to maintain the biological health of the underlying postsurgical tissue, longevity of the prosthesis, optimal esthetics, and adequate retention.

84: Kaur M, Titiyal JS, Surve A, Falera R, Verma M. Effect of Lens Fragmentation Patterns on Phacoemulsification Parameters and Postoperative Inflammation in Femtosecond Laser-Assisted Cataract Surgery. Curr Eye Res. 2018 Oct;43(10):1228-1232. doi: 10.1080/02713683.2018.1485951. Epub 2018 Jul 6. PubMed PMID: 29874114.

PURPOSE: To evaluate intraoperative and postoperative outcomes with "chop" or "matrix" lens fragmentation patterns in femtosecond laser-assisted cataract surgery.
METHODS: Prospective comparative study of 66 eyes with grade III-IV nuclear sclerosis was conducted at an apex tertiary care ophthalmic center. Cases were randomly allocated to undergo femtosecond laser pretreatment using matrix pattern (group I; n = 33) or chop pattern (group II; n = 33) of lens fragmentation (LenSx laser platform), followed by phacoemulsification. The primary outcome measures were intraoperative phacoemulsification parameters and postoperative anterior chamber (AC) flare. Secondary outcome measures were intraoperative complications, postoperative central macular thickness, visual acuity, and endothelial cell counts. Follow-up was performed on postoperative day (POD) 1 and 30.
RESULTS: Phacoemulsification parameters including cumulative dissipated energy ($p = 0.008$), ultrasonic time ($p = 0.001$), aspiration time ($p < 0.001$), and total duration ($p = 0.001$) were significantly less in group I. The AC flare was 9.8 ± 4.6 in group I and 15.4 ± 6.0 in group II ($p < 0.001$) on POD 1, and the difference persisted at 1 month. A highly significant positive correlation was observed between the total duration of phacoemulsification and AC flare ($p < 0.001$). No case developed cystoid macular edema. The postoperative specular counts were significantly less in group II on POD 1 ($p = 0.036$) and POD 30 ($p = 0.02$). There was no difference in visual acuity between the two groups, and intraoperative complications were not observed in any case.
CONCLUSION: A decrease in phacoemulsification time and energy is observed after femtosecond laser pretreatment with the matrix pattern of lens fragmentation as

compared to the chop pattern. The endothelial cell loss and postoperative inflammation is significantly less with the matrix pattern, and the inflammation correlates with the duration of phacoemulsification.

85: Kaur N, Gupta P, Saini V, Sherawat S, Gupta S, Dua A, Kumar V, Injeti E, Mittal A. Cinnamaldehyde regulates H(2) O (2) -induced skeletal muscle atrophy by ameliorating the proteolytic and antioxidant defense systems. J Cell Physiol. 2019 May;234(5):6194-6208. doi: 10.1002/jcp.27348. Epub 2018 Oct 14. PubMed PMID: 30317570.

Skeletal muscle atrophy/wasting is associated with impaired protein metabolism in diverse physiological and pathophysiological conditions. Elevated levels of reactive oxygen species (ROS), disturbed redox status, and weakened antioxidant defense system are the major contributing factors toward atrophy. Regulation of protein metabolism by controlling ROS levels and its associated catabolic pathways may help in treating atrophy and related clinical conditions. Although cinnamaldehyde (CNA) enjoys the established status of antioxidant and its role in ROS management is reported, impact of CNA on skeletal muscle atrophy and related pathways is still unexplored. In the current study, the impact of CNA on C2C12 myotubes and the possible protection of cultured cells from H 2 O 2 -induced atrophy is examined. Myotubes were treated with H 2 O 2 in the presence and absence of CNA and the changes in the antioxidative, proteolytic systems, and mitochondrial functions were scored. Morphological analysis showed significant protective effects of CNA on length, diameter, and nuclei fusion index of myotubes. The evaluation of biochemical markers of atrophy; creatine kinase, lactate dehydrogenase, succinate dehydrogenase along with the study of muscle-specific structural protein (i.e., myosin heavy chain-fast [MHCf] type) showed significant protection of proteins by CNA. CNA pretreatment not only checked the activation of proteolytic systems (ubiquitin-proteasome E3-ligases [MuRF1/Atrogin1]), autophagy [Beclin1/LC3B], cathepsin L, calpain, caspase), but also prevented any alteration in the activities of antioxidative defense enzymes (catalase, glutathione- S-transferase, glutathione-peroxidase, superoxide dismutase, glutathione reductase). The results suggest that CNA protects myotubes from H 2 O 2 -induced atrophy by inhibiting/resisting the amendments in proteolytic systems and maintains cellular redox-balance.

86: Kaushal A, Bindra A, Singh S. Response to comments: Modification of intravenous cannula for arterial line insertion: Simple yet effective technique. Indian J Anaesth. 2018 Oct;62(10):831. doi: 10.4103/ija.IJA_568_18. PubMed PMID: 30443076; PubMed Central PMCID: PMC6190424.

87: Kedia S, Jain S, Goyal S, Bopanna S, Yadav DP, Sachdev V, Sahni P, Pal S, Dash NR, Makharia G, Travis SPL, Ahuja V. Potential of Fecal Calprotectin as an Objective Marker to Discriminate Hospitalized Patients with Acute Severe Colitis from Outpatients with Less Severe Disease. Dig Dis Sci. 2018 Oct;63(10):2747-2753. doi: 10.1007/s10620-018-5157-6. Epub 2018 Jun 8. PubMed PMID: 29948556.

BACKGROUND: Acute severe colitis (ASC) is conventionally diagnosed by Truelove and Witts' criteria which are non-specific and can be affected by other pathologic conditions. Fecal calprotectin (FCP) is a gut-specific marker of inflammation which can predict short-term outcomes in patients with ASC. We aimed to define the role of FCP in the diagnosis of ASC.
METHODS: This prospective observational cohort study included adult patients (>18 years) with ulcerative colitis (UC) for whom FCP was measured and was under follow-up from April 2015 to December 2016. Patients were divided into two cohorts: (1) all consecutive hospitalized patients with ASC as defined by Truelove and Witts' criteria; (2) outpatients with active UC (defined by Mayo score) who did not fulfill Truelove and Witts' criteria. FCP levels were compared between the two cohorts, and a cutoff for FCP to diagnose ASC was determined.
RESULTS: Of 97 patients, 49 were diagnosed with ASC (mean age: 36.1±11.9 years,

36 males) and 48 with active UC (mean age: 37.9±12.4 years, 25 males). Median FCP levels were significantly higher in patients with ASC [1776(952-3123) vs 282(43-568) µg/g, p<0.001] than mild to moderately active UC (n=48) or moderately active UC [n=35, 1776(952-3123) vs 332(106-700) µg/g, p<0.001]. A FCP cutoff of 782 µg/g of stool had excellent diagnostic accuracy, with an area under the curve of 0.92(95% CI 0.87-0.97), sensitivity of 84% and specificity of 88% to differentiate ASC from active UC.
CONCLUSION: FCP could differentiate ASC from mild to moderate patients with UC, but requires validation before clinical use.

88: Khanduja S, Takkar B, Khanduja N, Venkatesh P. Post-transplant erythrocytosis-related maculopathy: successful management of hyperviscosity with phlebotomy. Int Ophthalmol. 2018 Oct;38(5):2163-2166. doi: 10.1007/s10792-017-0660-x. Epub 2017 Jul 29. PubMed PMID: 28756498.

PURPOSE: To report clinical features in a case of hyperviscosity retinopathy following post-renal transplant erythrocytosis (PTE) and its outcome after phlebotomy.
METHODS: Fundus fluorescein angiography and optical coherence tomography (OCT) were carried out for a 29-year-old renal allograft recipient who presented with acute unilateral visual loss.
RESULT: There was mild retinal vascular dilation in both eyes with retinal hemorrhages and retinal opaqueness in left eye. Cystoid macular edema was noted on OCT. Microvascular leaks and micro-occlusions were seen all around the foveal avascular zone on fluorescein angiogram. Investigations revealed hemoglobin to be 16.8 g%, and a PTE was diagnosed. The patient underwent phlebotomy following which there was near complete resolution of macular edema with improvement in vision.
CONCLUSION: Hyperviscosity retinopathy can cause acute visual loss in cases of renal allograft recipients who develop PTE. Prompt management with phlebotomy can lead to reversal of macular edema in such cases.

89: Kharbanda OP, Moynihan P, Priya H, Ivaturi A, Gupta A, Haldane D. Report from a symposium on accelerating policy-driven action against excessive sugar consumption for the prevention of early childhood caries and noncommunicable diseases. Indian J Public Health. 2018 Oct-Dec;62(4):305-307. doi: 10.4103/ijph.IJPH_314_17. PubMed PMID: 30539895.

Dental diseases and other noncommunicable diseases (NCDs) share common risks. Omnipresent and easily available sugars are a contributing risk factor for overweight, obesity, and diabetes. In addition, sugar consumption is known to cause dental caries in early childhood (early childhood caries) and in adults. It has been noticed that the prevalence of NCDs is increasing each year, leading to 70% of deaths. A symposium of diverse academicians was convened to identify the gaps in evidence, policy, and advocacy for action on sugars, emphasizing on its detrimental effects on oral health. Existence of policies on sugars, experiences of other countries, feasibility in India, and the role of public health dentists, public, and stakeholders were discussed. Policy priorities in India and advocacy to strengthen action against inappropriate sugar intake could help address the growing burden of sugar-related NCDs. Recommendations to this end were put forth by the panel of experts.

90: Khokhar S, Yadav D, Gupta S, Sihota R, Chaurasia AK, Gupta A, Gupta V. Refractive outcomes of cataract surgery in primary congenital glaucoma. Eye (Lond). 2018 Oct 31. doi: 10.1038/s41433-018-0253-6. [Epub ahead of print] PubMed PMID: 30382237.

AIM: To evaluate refractive outcomes of cataract surgery with intraocular lens (IOL) implantation in operated eyes of primary congenital glaucoma (PCG).
DESIGN: A retrospective case-control study.
METHODS: Patients of PCG who developed cataract following trabeculectomy with

trabeculotomy were recruited. Preoperative biometry was recorded and refractive outcomes of the patients in terms of spherical equivalent (SE) and prediction error were noted at 3 and at 12 months following surgery. The refractive outcomes were compared with non-glaucomatous eyes of children in similar age group who underwent lens aspiration with IOL implantation (controls).
RESULTS: The median age of the children with PCG (n=31) at the time of cataract surgery was 60 months, similar to controls (n=29); 48 months (p=0.3). The SE in PCG eyes at 12 months was comparable to controls (p=0.18). The prediction error (postoperative SE-predicted SE) at 3 months (p=0.018) and at 12 months (p=0.03) among PCG eyes was higher and more myopic compared with controls. The range of prediction error at 12 months in PCG eyes was -8.6 to+5.8D (median-2.0D), whereas in controls it was -4.2 to+6.3D (median+0.5D). For each mmHg intraocular pressure (IOP) increase there was 0.42mm increase in axial length among PCG eyes and a 0.24mm increase among controls (p<0.001).
CONCLUSIONS: After IOL implantation there was a greater prediction error and a greater myopic shift among PCG eyes. Eyes of children with PCG are more prone to refractive surprises as their axial length changes are more sensitive to IOP fluctuation.

91: Khurana S, Bhardwaj N, Kumari M, Malhotra R, Mathur P. Prevalence, etiology, and antibiotic resistance profiles of bacterial bloodstream infections in a tertiary care hospital in Northern India: A 4-year study. J Lab Physicians. 2018 Oct-Dec;10(4):426-431. doi: 10.4103/JLP.JLP_78_18. PubMed PMID: 30498316; PubMed Central PMCID: PMC6210839.

INTRODUCTION: Bloodstream infections (BSIs) can lead to life-threatening sepsis and are globally associated with high morbidity and mortality. Although BSIs require immediate antimicrobial treatment, their prevalence, etiology, and antimicrobial susceptibilities differ from one country to other. There is a dearth of such data from India. Here, we report the 4-year etiologic data on BSI in trauma patients admitted to a tertiary care referral hospital in New Delhi, India.
MATERIALS AND METHODS: A retrospective study was conducted at the trauma center between January 2013 and December 2016. The routine microbiological data on bacterial BSI were recorded and determined retrospectively from the laboratory records. Antimicrobial susceptibility profiles were statistically analyzed.
RESULTS: A total of 2017 bacterial strains isolated from blood culture samples were included for microbiological analysis. During the study, the median age of the patients varied from 30 to 35 years, with the percentage of females in the study population varying from 17% to 19%. The predominant pathogens were Gram-negative bacteria, with Acinetobacter species, followed by Klebsiella species being the most commonly isolated organisms throughout the 4 years of study. Among Gram-positive isolates, Staphylococcus species were the leading pathogens (11%-15%).
CONCLUSIONS: A detailed analysis of prevalence, etiology of BSIs in India and its resistance profile is crucial for appropriate antibiotic use, clinical management, and formulation of antibiotic policies and preventive measures.

92: Khurana U, Majumdar K, Kapoor N, Joshi D, Goel G, Sharma T, Biswas D. Spectrum of parasitic infections in centrifuged urine sediments from a newly developed tertiary care centre in Central India. J Parasit Dis. 2018 Dec;42(4):608-615. doi: 10.1007/s12639-018-1043-6. Epub 2018 Oct 29. PubMed PMID: 30538361; PubMed Central PMCID: PMC6261132.

Detection of urinary parasites is relatively rare and incidental finding in routine urine examination. Common urinary parasitic infections as described in literature include Trichomonas, Schistosoma hematobium and Microfilaria. Trichomonas vaginalis is known to cause vaginitis and urethritis, and may be found in urine sediments. In this study, the spectrum of urinary parasitic infections that had been reported in the last one and a half year was evaluated, and point prevalence in this zone was estimated. Microbiologist opinion had been

taken in the difficult cases. Out of the total centrifuged urine sediments examined, urinary parasitic infection was found in 33 cases. The calculated point prevalence is 0.39%. Most common parasitic infection reported was flagellates (27 cases: 25 T. vaginalis, 2 commensal flagellate closest to Chylomastix), followed by three cases showing eggs of Enterobius vermicularis, one case showing larvae of Strongyloides stercoralis and two cases of ciliate protozoa. One of the ciliate protozoa was Balantidium coli and the other one was Balantidium like ciliate morphologically closest to Chilodonella spp. Pyuria was found in 22 out of the 33 cases and hematuria in 17 out of 33 cases. A fairly wide morphological spectrum of parasites may be diagnosed through microscopic examination of centrifuged urine sediment. They may cause pyuria and haematuria, and morphological awareness helps in prompt and effective management in most cases.

93: Kiss-Lane T, Spruijt O, Day T, Lam V, Ramchandran KJ, Chan S, Hsin G, Vallath N, Bhatnagar S, Rajagopal MR, Lorenz KA. Palliative care clinicians and online education in India: a survey. BMJ Support Palliat Care. 2018 Oct 9. pii: bmjspcare-2018-001546. doi: 10.1136/bmjspcare-2018-001546. [Epub ahead of print] PubMed PMID: 30301753.

BACKGROUND: Whether online resources can facilitate spread of palliative care knowledge and skills in India is an urgent question given few providers and a large, ageing population.
OBJECTIVES: We surveyed needs and feasibility regarding e-learning.
METHODS: Indian, Australian and North American palliative care experts developed an electronic survey using Qualtrics, emailed to all registrants of the 2017 Indian Association of Palliative Care (IAPC) conference and distributed during the conference.
RESULTS: Of 60 respondents (66% men, 60% doctors), most worked in hospitals and had oncology backgrounds, and 35% were from Kerala and Tamil Nadu. Most (90.9%) received palliative care training in India or overseas with 41% trained in a Trivandrum Institute of Palliative Sciences residential course (4-6 weeks). 17% completed the IAPC essential certificate and 22% had undertaken various distance learning courses. Interest in online training was substantial for most aspects of palliative care.
CONCLUSION: There was a high level of interest and reported feasibility in taking a case-based online course. This pilot survey provides support for online case-based education in India, particularly among physicians.

94: Krishna Gour SS, Agrawal M, Sawarkar D. Letter to the Editor. Altered intracranial venous physiology. J Neurosurg Pediatr. 2018 Oct;22(4):464-466. doi: 10.3171/2018.5.PEDS18288. Epub 2018 Jul 20. PubMed PMID: 30028272.

95: Krishna H, Changil A, Srinivas M, Roy TS, Jacob TG. Ultrastructural Study of Rat Testis Following Conventional Phototherapy during Neonatal Period. J Microsc Ultrastruct. 2018 Oct-Dec;6(4):205-211. doi: 10.4103/JMAU.JMAU_17_18. PubMed PMID: 30464894; PubMed Central PMCID: PMC6206757.

Introduction: Phototherapy is the most common treatment for neonatal jaundice. This study sought to determine ultrastructural changes in testis, at different time-points, after 48 hours of conventional phototherapy was given to newborn rats.
Methods: Newborn male Wistar rats (n = 36) were divided into two groups as follows - group 1 (G1), control (without phototherapy) and group 2 (G2), exposure to conventional phototherapy for 48 h. Six animals from each group were sacrificed on postnatal days (PND) 70, 100 and 130. The testes were dissected out and processed for Transmission Electron Microscopy (TEM).
Results: TEM showed that G2 on PND 70 and 100 showed damaged organelles, including nuclei, mitochondria, endoplasmic reticulum, vacuoles and electron dense bodies in the testes. Seminiferous Tubule on PND130 showed lesser damage. On PND70 ST wall thickness (STWT) of G2 was significantly higher ($P < 0.001$) than G1 STWT of G2 was significantly lower than G1 on PND100 ($P = 0.047$) and on PND130 ($P < 0.001$). Mitochondrial diameter in spermatogonia was significantly higher in

G2 on PND70 (P = 0.001), PND100 (P = 0.031) and PND130 (P = 0.028). Primary spermatocytes in G2 also had larger mitochondria on PND70 (P < 0.001), PND100 (P = 0.007) and PND130 (P = 0.008). Further, spermatids had larger mitochondria in G2 on PND70 (P < 0.001), PND100 (P = 0.044) and PND130 (P < 0.001).
Conclusion: Phototherapy causes degenerative changes in rat testis on PND70 and 100 that partially recover by PND 130.

96: Kumar A, Mohapatra S, Bakhshi S, Mahapatra M, Sreenivas V, Das BK, Sood S, Kapil A. Rectal Carriage of Carbapenem-Resistant Enterobacteriaceae: A Menace to Highly Vulnerable Patients. J Glob Infect Dis. 2018 Oct-Dec;10(4):218-221. doi: 10.4103/jgid.jgid_101_17. PubMed PMID: 30581264; PubMed Central PMCID: PMC6276316.

Background: Bloodstream infection (BSI) due to carbapenem-resistant enterobacteriaceae (CRE) is the leading cause of morbidity and mortality in patients with hematological malignancy. These patients receive chemotherapy during treatment, which lead to severe mucositis of gastrointestinal tract and myelosuppression. It was hypothesized that the gut colonizer translocate into the blood circulation causing BSI. Colonization rate with CRE among these patients in India is unknown.
Aim: This study aims to determine the carriage rate of CRE in cancer patients.
Setting and Design: A prospective study was conducted in a tertiary care hospital of India.
Materials and Methods: Rectal swab of 93 patients were collected and processed as per the Center for Disease Control and Prevention protocol for detection of CRE. The isolate CREs were identified by standard phenotypic tests and confirmed for carbapenem resistance by disk diffusion test using carbapenem disk (imipenem, meropenem, doripenem, and ertapenem), Carba-NP test and modified Hodge test. Resistant to any of the carbapenem disc is considered as CRE.
Results: A total of 86 isolates were detected from 93 patients. Seventy-six isolates were identified as CRE, and 10 isolates were Gram-positive cocci and other Gram-negative bacilli. Acute myeloid leukemia was the most common clinical presentation followed by acute lymphoid leukemia. Thirty-nine out of 93 patients were on chemotherapy. Sixty-seven out of 76 isolates of CRE were observed positive for carbapenemase production by Carba-NP test.
Conclusion: This study highlights very high rate of CRE carriage among the hematological malignancy patients; who are highly vulnerable to infection. This confirms the need of infection control prevention activities among the hematological malignancy patients.

97: Kumar A, Gupta S, Jakhmola CK. Amenorrhea along with renal and thyroid metastasis: Unusual presentation of pancreatic adenocarcinoma. Med J Armed Forces India. 2018 Oct;74(4):400-403. doi: 10.1016/j.mjafi.2017.09.013. Epub 2017 Nov 28. PubMed PMID: 30449933; PubMed Central PMCID: PMC6224655.

98: Kumar P, Kakkar P, Ravani R, Karthikeya R, Kumar A. Splenic tuberculosis and multifocal serpiginoid choroiditis. Int Ophthalmol. 2018 Oct;38(5):2191-2194. doi: 10.1007/s10792-017-0689-x. Epub 2017 Aug 10. PubMed PMID: 28798995.

Serpiginoid multifocal choroiditis is a distinct morphological identity with a reported causal association with Mycobacterium tuberculosis. We report a case of serpiginoid multifocal choroiditis in a 17-year-old boy who was suffering from isolated splenic tuberculosis. He was treated with systemic steroids along with anti-tubercular treatment with good visual recovery. This case was unique as no other organs except spleen and choroid showed tubercular involvement. We hereby emphasize association of extrapulmonary sites with multifocal serpiginoid choroiditis and propose a thorough investigation for primary to be included in routine protocol of choroiditis workup.

99: Kumar R, Gupta N, Himani, Sharma A. Novel combination of tanshinone I and lenalidomide induces chemo-sensitivity in myeloma cells by modulating telomerase

activity and expression of shelterin complex and its associated molecules. Mol Biol Rep. 2018 Dec;45(6):2429-2439. doi: 10.1007/s11033-018-4409-z. Epub 2018 Oct 11. PubMed PMID: 30311125.

Shelterin complex and its associated molecules are imperative for proper functioning and maintenance of human telomeres. These molecules in association with human telomerase have been found altered in most cancers including multiple myeloma thereby proposed them as suitable therapeutic targets. Further, due to aggressive and recurring behavior of myeloma novel, efficacious and safe therapeutic agents for disease prevention are primary requirements for treatment of this disease. This maiden attempt evaluated the anti-proliferative properties of tanshinone I (TanI) alone or in combination with lenalidomide (Len) on myeloma cancer cell lines (RPMI8226 and U226). Further, after drug treatment levels of telomerase activity (TA) and molecular expression (mRNA & protein) of shelterin complex and its associated molecules have also been investigated. Results demonstrated that, TanI significantly inhibited proliferation of myeloma cells in dose and time dependent manner as observed through cytotoxicity assay. Additionally, induction of apoptosis by TanI and in combination with Len was observed in myeloma cells through propidium iodide (PI) staining, annexin V-FITC/PI staining, TUNEL and caspase-3/7 activity assays. Further, drug treatment significantly decreased ($p < 0.01$) TA and molecular expression of ACD, TERF2IP and TANK1 in comparison to vehicle control (0.1% DMSO) myeloma cells. Thus, this maiden in-vitro study provided initial evidences of therapeutic potential of TanI alone or in combination with chemotherapeutic agent Len as novel anticancer agents in myeloma cells which need further evaluation in future. Lastly, down-regulation of TA and decreased expression of these molecules underscores their potential as plausible therapeutic targets.

100: Kumar V, Garg R, Mishra R, Gupta N. Anesthetic concerns for rigid bronchoscopic debulking of tracheal growth in postpneumonectomy patient. J Anaesthesiol Clin Pharmacol. 2018 Oct-Dec;34(4):563-564. doi: 10.4103/joacp.JOACP_391_16. PubMed PMID: 30774249; PubMed Central PMCID: PMC6360905.

101: Kumar V, Chawla A, Kaur A. Multiple Idiopathic Cervical Root Resorptions in Patients with Hepatitis B Virus Infection. J Endod. 2018 Oct;44(10):1575-1577. doi: 10.1016/j.joen.2018.06.017. Epub 2018 Aug 23. PubMed PMID: 30144987.

Multiple idiopathic cervical root resorptions are a rare finding. The diagnosis is perplexing, and treatment is a challenge. It is a debilitating condition that often leads to extraction of all the involved teeth. Various theories have been given for explanation of the disease entity; however, the etiology remains elusive. This report describes a case of an 18-year-old man with idiopathic cervical resorption that progressed aggressively and involved 20 teeth. The medical history of hepatitis B virus infection made this case unique in the literature. The mechanism of increased osteoclastic activity in patients with hepatitis B virus infection is discussed as a predisposing factor for the development of root resorption.

102: Kumar V, Yadav B. HOLE-DOOR SIGN: A Novel Intraoperative Optical Coherence Tomography Feature Predicting Macular Hole Closure. Retina. 2018 Oct;38(10):2045-2050. doi: 10.1097/IAE.0000000000001791. PubMed PMID: 28796146.

PURPOSE: To describe a novel intraoperative finding during pars plana vitrectomy for macular hole using operating microscope-integrated spectral domain optical coherence tomography that predicts the closure of macular hole.
METHODS: Twenty-five eyes of 25 patients with macular hole, who underwent 25-gauge pars plana vitrectomy over a period of 16 months at a tertiary eye care center by a single surgeon, were recruited in this retrospective interventional study. All eyes were assessed with intraoperative spectral domain optical

coherence tomography before and after internal limiting membrane peeling. The patients were assessed in terms of best-corrected visual acuity, preoperative minimal hole diameter, and type of hole closure.
RESULTS: After the internal limiting membrane was peeled, vertical pillars of tissue were seen at the edges of hole projecting into the vitreous cavity. This appearance was similar to that of an open door over the macular hole and was termed "hole-door sign." Hole-door sign was seen in 15 of 25 eyes (60%). All the eyes with hole-door sign had Type-1 closure of macular hole (100%), whereas only 6 of 10 eyes (60%) without hole-door sign had Type-1 closure of the macular hole.
CONCLUSION: Hole-door sign is a novel intraoperative finding that predicts postoperative Type-1 closure of macular hole. This may add to the utility of intraoperative optical coherence tomography in clinical practice.

103: Kumari P, Lavania S, Tyagi S, Dhiman A, Rath D, Anthwal D, Gupta RK, Sharma N, Gadpayle AK, Taneja RS, Sharma L, Ahmad Y, Sharma TK, Haldar S, Tyagi JS. A novel aptamer-based test for the rapid and accurate diagnosis of pleural tuberculosis. Anal Biochem. 2019 Jan 1;564-565:80-87. doi: 10.1016/j.ab.2018.10.019. Epub 2018 Oct 22. PubMed PMID: 30352198.

Pleural tuberculosis (pTB) is diagnosed by using a composite reference standard (CRS) since microbiological methods are grossly inadequate and an accurate diagnostic test remains an unmet need. The present study aimed to evaluate the utility of Mycobacterium tuberculosis (Mtb) antigen and DNA-based tests for pTB diagnosis. Patients were classified as 'Definite TB', 'Probable TB' and 'Non-TB' disease according to the CRS. We assessed the performance of in-house antigen detection assays, namely antibody-based Enzyme-Linked ImmunoSorbent Assay (ELISA) and aptamer-based Aptamer-Linked Immobilized Sorbent Assay (ALISA), targeting Mtb HspX protein and DNA-based tests namely, Xpert MTB/RIF and in-house devR-qPCR. ROC curves were generated for the combined group of 'Definite TB' and 'Probable TB' vs. 'Non-TB' disease group and cut-off values were derived to provide specificity of ≥98%. The sensitivity of ALISA was ~93% vs. ~24% of ELISA (p-value ≤0.0001). devR-qPCR exhibited a sensitivity of 50% vs. ~22% of Xpert (p-value ≤0.01). This novel aptamer-based ALISA test surpasses the sensitivity criterion and matches the specificity requirement spelt out in the 'Target product profile' for extrapulmonary tuberculosis samples by Unitaid (Sensitivity ≥80%, Specificity 98%). The superior performance of the aptamer-based ALISA test indicates its translational potential to bridge the existing gap in pTB diagnosis.

104: Kusuma YS, Babu BV. Migration and health: A systematic review on health and health care of internal migrants in India. Int J Health Plann Manage. 2018 Oct;33(4):775-793. doi: 10.1002/hpm.2570. Epub 2018 Aug 3. Review. PubMed PMID: 30074640.

The objective of this paper is to review published studies on various health conditions and health care access of internal migrants in India. The guidelines under PRISMA Statement for Reporting Systematic Reviews and Meta-Analysis were followed. We searched 3 databases-Web of Science, Medline (PubMed), and Google Scholar. By applying selection criteria, we identified a total of 42 papers to include in the review. These studies reported various health problems/morbid conditions, and some studies reported health care access. Major health issues of poor migrants included work-related injuries, noncommunicable diseases like diabetes and hypertension, and communicable diseases like malaria and HIV. In addition, behavioural risks such as the use of tobacco and alcohol are reported. Information on health care seeking and poor access to government health care system are available. This review demonstrates the need to improve the health status and health care access of poor migrants. As health systems-related factors also influence the health care seeking behaviour, they are to be considered along with improving the living conditions of this population. Thus, a comprehensive migrant-sensitive health care should be the part of the urban health care system.

105: Lamsal R, Rath GP. Pediatric neuroanesthesia. Curr Opin Anaesthesiol. 2018

Oct;31(5):539-543. doi: 10.1097/ACO.0000000000000630. Review. PubMed PMID: 29985182.

PURPOSE OF REVIEW: Pediatric neuroanesthesia is a fascinating, yet challenging branch of anesthesia. This review highlights some of the recent insights into pediatric neuroanesthesia from the past 18 months.
RECENT FINDINGS: Although there are incontrovertible evidences in animals suggesting that prolonged exposure to general anesthesia causes long-term neurological impairment, the translational relevance of these findings in humans is debatable. Early surgery for pediatric drug-refractory epilepsy is supported by emerging literature, but poses unique perioperative problems for the treating neuroanesthesiologist. Similarly, minimizing intraoperative blood loss and blood transfusion concerns every anesthesiologist managing small children. The usefulness of tranexamic acid in children is further enhanced by some studies in spine surgeries. Some pertinent issues related to intraoperative neuromonitoring are also discussed in the text.
SUMMARY: There are several logistical and ethical problems of carrying out high-quality prospective studies in children but important findings on prevention of anesthetic neurotoxicity; minimizing intraoperative blood loss, intraoperative neurophysiological monitoring, examining optimal doses and choices of anesthetic agents in epilepsy surgery have been published recently.

106: Lavania S, Das R, Dhiman A, Myneedu VP, Verma A, Singh N, Sharma TK, Tyagi JS. Aptamer-Based TB Antigen Tests for the Rapid Diagnosis of Pulmonary Tuberculosis: Potential Utility in Screening for Tuberculosis. ACS Infect Dis. 2018 Oct 25. doi: 10.1021/acsinfecdis.8b00201. [Epub ahead of print] PubMed PMID: 30350564.

Pulmonary tuberculosis is the most common manifestation of tuberculosis, and to this day, sputum smear microscopy remains the most widely used diagnostic test in resource-limited settings despite its suboptimal sensitivity. Here we report the development of two DNA aptamer-based diagnostic tests, namely aptamer linked immobilized sorbent assay (Aptamer ALISA) and electrochemical sensor (ECS), for the direct detection of a TB biomarker HspX in sputum. First we compared the performance of Aptamer ALISA with anti-HspX polyclonal antibody-based enzyme linked immunosorbent assay (Antibody ELISA) in a blinded study of 314 sputum specimens. Aptamer ALISA displayed a high sensitivity of 94.1% (95% CI 86.8-98%) as compared to 68.2% sensitivity (95% CI 57.2-77.9%) of Antibody ELISA (p-value < 0.05) using culture as the reference standard without compromising test specificity of 100%. Out of nine smear-negative culture-positive samples, six were positive by Aptamer ALISA and only two were detected by Antibody ELISA. ALISA detected as positive 80 of 85 culture-positive TB as compared to 57 of 81 diagnosed as TB by X-ray (p-value < 0.0001). These findings demonstrate the superiority of the aptamer-based test over smear microscopy, antibody-based ELISA, and chest X-ray for TB detection (p-value < 0.0001 for all). Further, we have developed a ~30 min point-of-care ECS test that discriminates between tuberculous and nontuberculous sputum with a sensitivity of ~92.3% and specificity of 91.2%. The tests developed in the current study cost ~$1-3/test and have potential utility in active case finding in high-risk groups and screening for pulmonary TB among presumptive TB subjects.

107: Madhusudhan KS, Srivastava DN, Sharma S, Sharma S. Interventional Radiology in India. AJR Am J Roentgenol. 2018 Oct;211(4):730-735. doi: 10.2214/AJR.18.19777. Epub 2018 Jul 31. PubMed PMID: 30063369.

OBJECTIVE: The purpose of this article is to review the status of interventional radiology (IR) in India.
CONCLUSION: After a few initial challenges, the specialty of interventional radiology (IR) is well established in most cities in India, where various quality procedures are now regularly performed. The national IR society, the Indian Society of Vascular and Interventional Radiology, is still new, but its

collaboration with other international societies will help its progress. Education and training in IR are fast evolving in India, and as more radiologists choose IR as their career, IR is bound to progress.

108: Magoon R, Dhawan I, Makhija N. On-table extubation following off-pump bidirectional cavopulmonary anastomosis: Two sides of the coin. Ann Card Anaesth. 2018 Oct-Dec;21(4):461-462. doi: 10.4103/aca.ACA_31_18. PubMed PMID: 30333351; PubMed Central PMCID: PMC6206804.

109: Mahey R, Gupta M, Kandpal S, Malhotra N, Vanamail P, Singh N, Kriplani A. Fertility awareness and knowledge among Indian women attending an infertility clinic: a cross-sectional study. BMC Womens Health. 2018 Oct 29;18(1):177. doi: 10.1186/s12905-018-0669-y. PubMed PMID: 30373587; PubMed Central PMCID: PMC6206860.

BACKGROUND: To evaluate fertility knowledge and awareness among infertile women attending an Indian assisted fertility clinic and their understanding of the menstrual cycle, how age affects fertility and need for assisted fertility treatment.
METHODS: A cross sectional study was conducted including 205 women seeking fertility treatment at an assisted reproductive unit between March 2017 to August 2017. Patients were interviewed with the help of structured questionnaire by a fertility counsellor. The previous studies were reviewed and a questionnaire was made according to our patient profile and sociodemographic characteristics. Knowledge and awareness was stratified according to socioeconomic status (SES).
RESULTS: Most women (59%) were aged between 20 to 30 years indicating concern about their fertility and need for evaluation. More than half (63%) women were from the middle socio-economic strata. Knowledge about fertility and reproduction was low: 85% were not aware of the ovulatory period in the menstrual cycle, only 8% considered age more than 35 years as the most significant risk factor for infertility and most were unaware of when to seek treatment for infertility after trying for pregnancy. Less than half of women understood the need for assisted fertility treatment and donor oocytes in advanced age.
CONCLUSIONS: Most Indian women across different SES are unaware of the effect of age on fertility. Targeted educational interventions are needed to improve knowledge regarding ideal age of fertility, factors affecting fertility potential and fertility options available for sub-fertile couples. Fertility counselling and information should be provided to young people at every contact with health care professionals.

110: Malgulwar PB, Sharma V, Tomar AS, Verma C, Nambirajan A, Singh M, Suri V, Sarkar C, Sharma MC. Transcriptional co-expression regulatory network analysis for Snail and Slug identifies IL1R1, an inflammatory cytokine receptor, to be preferentially expressed in ST-EPN-RELA and PF-EPN-A molecular subgroups of intracranial ependymomas. Oncotarget. 2018 Oct 26;9(84):35480-35492. doi: 10.18632/oncotarget.26211. eCollection 2018 Oct 26. PubMed PMID: 30464804; PubMed Central PMCID: PMC6231457.

Recent molecular subgrouping of ependymomas (EPN) by DNA methylation profiling has identified ST-EPN-RELA and PF-EPN-A subgroups to be associated with poor outcome. Snail/Slug are cardinal epithelial-to-mesenchymal transcription factors (EMT-TFs) and are overexpressed in several CNS tumors, including EPNs. A systematic analysis of gene-sets/modules co-expressed with Snail and Slug genes using published expression microarray dataset (GSE27279)identified 634 genes for Snail with enriched TGF-β, PPAR and PI3K signaling pathways, and 757 genes for Slug with enriched focal adhesion, ECM-receptor interaction and regulation of actin cytoskeleton related pathways. Of 37 genes commonly expressed with both Snail and Slug, IL1R1, a cytokine receptor of interleukin-1 receptor family, was positively correlated with Snail (r=0.43) and Slug (r=0.51), preferentially expressed in ST-EPN-RELA and PF-EPN-A molecular groups, and enriched for pathways related to inflammation, angiogenesis and glycolysis. IL1R1 expression was fairly specific to EPNs among various CNS tumors analyzed. It also showed significant

positive correlation with EMT, stemness and MDSC (myeloid derived suppressor cell) markers. Our study reports IL1R1 as a poor prognostic marker associated with EMT-like phenotype and stemness in EPNs. Our findings emphasize the need to further examine and validate IL1R1 as a novel therapeutic target in aggressive subsets of intracranial EPNs.

111: Malhotra A, Sharma U, Puhan S, Chandra Bandari N, Kharb A, Arifa PP, Thakur L, Prakash H, Vasquez KM, Jain A. Stabilization of miRNAs in esophageal cancer contributes to radioresistance and limits efficacy of therapy. Biochimie. 2019 Jan;156:148-157. doi: 10.1016/j.biochi.2018.10.006. Epub 2018 Oct 13. Review. PubMed PMID: 30326253.

The five-year survival rate of esophageal cancer patients is less than 20%. This may be due to increased resistance (acquired or intrinsic) of tumor cells to chemo/radiotherapies, often caused by aberrant cell cycle, deregulated apoptosis, increases in growth factor signaling pathways, and/or changes in the proteome network. In addition, deregulation in non-coding RNA-mediated signaling pathways may contribute to resistance to therapies. At the molecular level, these resistance factors have now been linked to various microRNA (miRNAs), which have recently been shown to control cell development, differentiation and neoplasia. The increased stability and dysregulated expression of miRNAs have been associated with increased resistance to various therapies in several cancers, including esophageal cancer. Therefore, miRNAs represent the next generation of molecules with tremendous potential as biomarkers and therapeutic targets. However, detailed studies on miRNA-based therapeutic interventions are still in their infancy. Hence, in this review, we have summarized the current status of microRNAs in dictating the resistance/sensitivity of tumor cells to chemotherapy and radiotherapy. In addition, we have discussed various strategies to increase radiosensitivity, including targeted therapy, and the use of miRNAs as radiosensitive/radioresistance biomarkers for esophageal cancer in the clinical setting.

112: Mallick S, Kunhiparambath H, Gupta S, Benson R, Sharma S, Laviraj MA, Upadhyay AD, Julka PK, Sharma D, Rath GK. Hypofractionated accelerated radiotherapy (HART) with concurrent and adjuvant temozolomide in newly diagnosed glioblastoma: a phase II randomized trial (HART-GBM trial). J Neurooncol. 2018 Oct;140(1):75-82. doi: 10.1007/s11060-018-2932-3. Epub 2018 Jun 23. PubMed PMID: 29936695.

INTRODUCTION: Maximal safe surgical resection followed by adjuvant chemoradiation has been standard for newly diagnosed glioblastoma multiforme (GBM). Hypofractionated accelerated radiotherapy (HART) has the potential to improve outcome as it reduces the overall treatment time and increases the biological effective dose.
METHODS: Between October 2011 and July 2017, a total of 89 newly diagnosed GBM patients were randomized to conventional fractionated radiotherapy (CRT) or HART. Radiotherapy was delivered in all patients with a three-dimensional conformal radiotherapy technique in CRT arm (60 Gy in 30 fractions over 6 weeks @ 2 Gy/per fraction) or simultaneous integrated boost intensity modulated radiotherapy in HART arm (60 Gy in 20 fractions over 4 weeks @ 3 Gy/per fraction to high-risk planning target volume (PTV) and 50 Gy in 20 fractions over 4 weeks @ 2.5 Gy/per fraction to low-risk PTV). The primary endpoint of the trial was overall survival (OS).
RESULTS: After a median follow-up of 11.4 months (Range: 2.9-42.5 months), 26 patients died and 39 patients had progression of the disease. Median OS for the entire cohort was 23.4 months. Median OS in the CRT and HART arms were 18.07 months (95% CI 14.52-NR) and 25.18 months (95% CI 12.89-NR) respectively, p=0.3. Median progression free survival (PFS) for the entire cohort was 13.5 months (Range: 11.7-15.7 months). In multivariate analysis patients younger than 40 years of age, patients with a gross total resection of tumor and a mutated IDH-1 had significantly better OS. PFS was significantly better for patients with a gross total resection of tumor and a mutated IDH-1. All patients

included in the trial completed the planned course of radiation. Only two patients required hospital admission for features of raised intracranial tension. One patient in the HART arm required treatment interruption.
CONCLUSION: HART is comparable to CRT in terms of survival outcome. HART arm had no excess treatment interruption and minimal toxicity. Dose escalation, reduction in overall treatment time, is the advantages with use of HART.

113: Mandal A, Sahi PK. Iron Pots for the Prevention and Treatment of Anemia in Preschoolers: Correspondence. Indian J Pediatr. 2018 Oct;85(10):931-932. doi: 10.1007/s12098-018-2644-x. Epub 2018 Mar 8. PubMed PMID: 29516377.

114: Mazzeo AT, Gupta D. Monitoring the injured brain. J Neurosurg Sci. 2018 Oct;62(5):549-562. doi: 10.23736/S0390-5616.18.04465-X. Epub 2018 Apr 18. Review. PubMed PMID: 29671295.

Traumatic brain injury can be defined as the most complex disease in the most complex organ. When an acute brain injury occurs, several pathophysiological cascades are triggered, leading to further exacerbation of the primary damage. A number of events potentially occurring after TBI can compromise the availability or utilization of energy substrates in the brain, ultimately leading to brain energy crisis. The frequent occurrence of secondary insults in the acute phase after TBI, such as intracranial hypertension, hypotension, hypoxia, hypercapnia, hyperthermia, seizures, can then increase cerebral damage, and adversely affect outcome. Neuromonitoring techniques provide clinicians and researchers with a mean to detect and reverse those processes that lead to this energy crisis, especially ischemic processes, and have become a critical component of modern neurocritical care. Which is the best way to monitoring the brain after an acute injury has been a matter of debate for decades. This review will discuss how monitoring the injured brain can reduce secondary brain damage and ameliorate outcome after acute brain injury.

115: Meel R, Devi S, Ganger A, S M, Pushker N. Isolated severe microblepharon in a neonate: a rare case. Int Ophthalmol. 2018 Oct;38(5):2175-2178. doi: 10.1007/s10792-017-0675-3. Epub 2017 Aug 12. PubMed PMID: 28803395.

PURPOSE: To report a rare case of isolated severe microblepharon in a neonate.
METHODS: A 27 days old male child was brought by parents with redness, photophobia and discharge for two weeks. Thorough ophthalmological and systemic examination was performed.
RESULTS: The diagnosis of isolated severe microblepharon with infectious keratitis was made. After the appropriate management of infectious keratitis and achieving complete resolution, the child was subjected to bilateral lid reconstruction was done in the form of upper lid skin grafting and tarsorrhaphy and the patient is being followed up.
CONCLUSION: A rare case of bilateral isolated severe microblepharon affecting all four eyelids is being reported. Urgent surgical intervention is recommended in such cases in order to achieve good corneal coverage which results in faster healing of infective keratitis and a good visual outcome.

116: Meena JP, Ahad A, Gupta AK, Mallick S, Seth R. Bone relapse in T-lineage acute lymphoblastic leukemia in a child. Oxf Med Case Reports. 2018 Sep 24;2018(10):omx110. doi: 10.1093/omcr/omx110. eCollection 2018 Oct. PubMed PMID: 30263126; PubMed Central PMCID: PMC6151312.

Acute lymphoblastic leukemia (ALL) is the most common malignancy in children. T-cell ALL accounts for 10-15% of cases. ALL can rarely relapse in unusual extramedullary sites like bone. Hereby, we report a case of 7-year-old male child who was being treated for T-cell ALL and then presented with left arm swelling. This swelling was initially thought to be a bone tumor but later it was found to be infiltrated by leukemic blasts. We reviewed all previous cases and suggest that in a patient of ALL presenting with a bone swelling during or after completion of therapy, one should suspect of bone relapse.

117: Mehtab W, Singh N, Malhotra A, Makharia GK. All that a physician should know about gluten-free diet. Indian J Gastroenterol. 2018 Sep;37(5):392-401. doi: 10.1007/s12664-018-0895-0. Epub 2018 Oct 26. Review. PubMed PMID: 30367395.

Gluten-free diet (GFD) is the only definitive treatment for patients with celiac disease (CeD). Strict adherence to GFD improves the symptoms, nutritional deficiencies, and the overall well-being of the patients. The management of CeD is truly different and unique from the treatment of other medical or surgical diseases. While prescribing a GFD is easy, the key to the success lies in the dietary counseling by a nutrition specialist/physician and maintenance of adherence to the prescribed diet by the patient. When restricting gluten from all possible sources, it is pertinent to recommend a diet that is healthy and balanced for patients with celiac disease. Those following GFD must be counseled properly on the ways of balancing their diets and of avoiding cross contamination. They should be taught how to read food labels properly and given tips for dining out or during traveling. Regular follow up with patients is required for assessing the compliance and monitoring growth and the status of recovery. In this review article, we have compiled, for the physicians and gastroenterologists, the relevant information about GFD including counseling, adherence, nutritional adequacy, and many other related issues.

118: Menon V, Kattimani S, Sarkar S, Sathyanarayanan G, Subramanian K, Velusamy SK. Age at onset of first suicide attempt: Exploring the utility of a potential candidate variable to subgroup attempters. Asian J Psychiatr. 2018 Oct;37:40-45. doi: 10.1016/j.ajp.2018.08.006. Epub 2018 Aug 6. PubMed PMID: 30107315.

PURPOSE: Our objective was to explore the utility of age at first suicide attempt in identifying subgroups of suicide attempters.
METHODS: In a retrospective study design, we collected information from the clinical charts of 895 patients assessed over a seven-year period. Admixture analysis was used to determine the best fitting theoretical model for distribution of age at first attempt that divided the sample. Subsequently, multivariate analysis was performed to identify variables that distinguished the subgroups identified.
RESULTS: The theoretical solution that best explained the observed distribution of age at first suicide attempt was a mixture of two Gaussian distributions with a cut-off of 31 years for the two subgroups. In logistic regression analysis, male gender (Odds ratios [OR] 3.047, 95% Confidence Interval (CI) 1.818-5.106), fewer years of formal schooling (OR 3.384, 95% CI 1.701-6.734) and being married (OR 23.36, 95% CI 10.753-50.000), were more commonly associated with the late onset subgroup (age at first attempt >31 years). Further, the late onset subgroup had poorer global functioning (OR 0.980, 95% CI 0.962 to 0.998).
CONCLUSION: Age at onset of first suicide attempt is a useful candidate marker to delineate an early and late onset subgroup among suicide attempters. These results are likely to inform customization of suicide prevention strategies.

119: Mishra D, Satpathy G, Chawla R, Venkatesh P, Ahmed NH, Panda SK. Utility of broad-range 16S rRNA PCR assay versus conventional methods for laboratory diagnosis of bacterial endophthalmitis in a tertiary care hospital. Br J Ophthalmol. 2019 Jan;103(1):152-156. doi: 10.1136/bjophthalmol-2018-312877. Epub 2018 Oct 12. PubMed PMID: 30315133.

BACKGROUND: Endophthalmitis, a sight-threatening intraocular infection, can be of postsurgical, post-traumatic or endogenous origin. Laboratory diagnosis-based appropriate therapy can be vision-saving. Conventional culture-based laboratory diagnosis takes time and lacks sensitivity. In this study a broad-range PCR assay was assessed against conventional and automated culture methods in vitreous specimens for accurate microbiological diagnosis.
AIMS: To use broad-range PCR assay targeting 16S ribosomal RNA (rRNA) region of bacteria and to assess its performance vis-à-vis conventional and automated culture methods in the laboratory diagnosis of endophthalmitis.

METHODS: Vitreous specimens from 195 patients with clinically diagnosed endophthalmitis were processed for classical and automated culture methods, antimicrobial sensitivity and broad-range PCR assay targeting 762 bp region of 16S rRNA followed by nucleotide sequencing by Sanger's method. Causative agents were identified from the nucleotide sequences analysed against the GenBank database, and organisms were identified using the Clinical and Laboratory Standards Institute (CLSI) MM18A guidelines.
RESULTS: Bacteria could be detected from 127 (65.13%) of the 195 vitreous specimens by broad-range PCR assay; bacterial isolation was possible from 17 (8.7%) and 60 (30.76%) of these specimens by conventional and automated culture methods, respectively ($p<0.0001$). PCR assay could detect two uncultured bacterium, and in five cases the bacterial identity could not be determined from NCBI database matching.
CONCLUSION: Broad-range PCR assay could provide definitive microbial diagnosis within 24 hours in significantly more patients ($p<0.0001$). Some rare organisms could be detected, useful in treatment modalities. Automated culture was significantly more sensitive than conventional culture.

120: Misra A, Sattar N, Tandon N, Shrivastava U, Vikram NK, Khunti K, Hills AP. Clinical management of type 2 diabetes in south Asia. Lancet Diabetes Endocrinol. 2018 Dec;6(12):979-991. doi: 10.1016/S2213-8587(18)30199-2. Epub 2018 Oct 1. Review. PubMed PMID: 30287103.

Compared with other ethnic groups, south Asian people with type 2 diabetes tend to develop the disease at a younger age and manifest with higher glycaemia, dyslipidaemia, nephropathy, and cardiovascular diseases. Additionally, specific issues that can affect treatment of type 2 diabetes in south Asia include poor awareness of the disease, delay in diagnosis, inadequate treatment, the use of ineffective and often harmful alternative medicines, and frequent non-compliance with lifestyle recommendations and drug treatment. Disease development at younger ages, delayed diagnosis, and inadequate management result in early development of severe complications and premature mortality. In this Series paper, we describe the challenges associated with the increasing burden of type 2 diabetes in south Asia and discuss ways to improve clinical care of people with the disorder in the region (defined to include Bangladesh, Bhutan, India, Nepal, Pakistan, and Sri Lanka). Treatment of diabetes in south Asia needs to be individualised on the basis of diverse and heterogeneous lifestyle, phenotype, environmental, social, cultural, and economic factors. Aggressive management of risk factors from diagnosis is necessary to reduce the risk of microvascular and macrovascular complications, focusing on provision of basic treatments (eg, metformin, low-cost statins, and blood pressure-lowering drugs) and other interventions such as smoking cessation. Strengthening of the primary care model of care, better referral linkages, and implementation of rehabilitation services to care for patients with chronic complications will be important. Finally, improvement of physicians' skills, provision of relevant training to non-physician health-care workers, and the development and regular updating of national clinical management guidelines will also be crucial to improve diabetes care in the region.

121: Mondal D, Jana M, Julka PK, Roy S. Synchronous orbital and mandibular metastases from squamous cell carcinoma of lung as initial disease presentation in a young female: First report of a rare occurrence. J Cancer Res Ther. 2018 Oct-Dec;14(6):1425-1427. doi: 10.4103/0973-1482.199429. PubMed PMID: 30488868.

Metastatic tumor to orbit or mandible as initial presentation is rare. According to the available literature, majority of these described cases had its origin from lung and breast. Adenocarcinoma is the most commonly described histology. Concurrence of both of these metastases from a squamous cell carcinoma of the lung has not been reported in literature as initial presenting symptom. A young female patient with synchronous orbital and mandibular metastases as initial presentation of squamous cell carcinoma of the lung is being presented. The patient was treated with palliative radiation and chemotherapy but unfortunately died of progressive disease. To the best our knowledge, this is the first report

describing such unusual presentation.

122: Moscote-Salazar LR, Koller O, Valenzuela S, Narvaez-Rojas A, Satyarthee GD, Mo-Carrascal J, Maraby J. Neurosurgical Implications of Osteogenesis Imperfecta in a Child after Fall: Case Illustration. J Pediatr Neurosci. 2018 Oct-Dec;13(4):459-461. doi: 10.4103/JPN.JPN_9_18. PubMed PMID: 30937089; PubMed Central PMCID: PMC6413607.

Osteogenesis imperfecta (OI) is a group of hereditary genetic pathologies of connective tissue, which is characterized by bone fragility and fractures. It is classified into types I, II, III, IV, V, and VI. The disorder is caused by an autosomal-dominant mutation in one of the two genes that encode the alpha chains of type I collagen, COL1A1 and COL1A2. Several central nervous system abnormalities have been described in children with OI, however, it has been through various case reports. The neurological abnormalities that have been described are macrocephaly, ventriculomegaly, myelopathy, cranial neuropathy, basilar invagination, obstructive hydrocephalus, cranial fractures, and intracranial hemorrhage. In this report, we describe the clinical case of a child with parietal fracture; the main objective of this work being to show one of the several neurological implications that children with OI can present, and their implications for the pediatric neurosurgeons as neurosurgical complications are very frequent.

123: Muhammad Aslam MK, Sharma VK, Pandey S, Kumaresan A, Srinivasan A, Datta TK, Mohanty TK, Yadav S. Identification of biomarker candidates for fertility in spermatozoa of crossbred bulls through comparative proteomics. Theriogenology. 2018 Oct 1;119:43-51. doi: 10.1016/j.theriogenology.2018.06.021. Epub 2018 Jun 27. PubMed PMID: 29982135.

Associations between expression of some proteins in spermatozoa and fertility have been sought in recent years to identify the male fertility markers. Since the incidence of sub-fertility is high in crossbred bulls, the present investigation was carried out on high- and low-fertile crossbred bulls to identify fertility markers in spermatozoa through proteomics approach. Sperm proteome of high-fertile bulls were compared with low-fertile bulls using 2D-DIGE and MALDI-TOF-MS techniques and the results were validated with immuno-blotting. The proteins MDH2, ENO1, RIBC1, CAPN7, ATP5D, LacA like protein-2 like, NCAPD3, DECR1, GCNT2, GDI2, TOP and USP12 were over expressed in high-fertile spermatozoa, whereas DST like isoform 1, TMEM43 and BSP1 were over expressed in low-fertile spermatozoa ($P < 0.05$). The differential expression ranged from 1.57 (GDI2) to 5.1 (BSP1) fold between the two groups. Based on the GO annotation, majority of them were involved in cellular and metabolic processes, with catalytic and binding activities, and localized in cell and organelles. Among these proteins, ENO1 and BSP1 were selected based on the degree of differential expression and reliability in identification, for further validation. Immuno-blotting studies indicated that ENO1expression was positively correlated ($P < 0.05$) while the expression of BSP1 was negatively ($P < 0.01$) correlated with bull fertility. The proportion of capacitated spermatozoa in frozen thawed spermatozoa of low-fertile bulls was higher ($P < 0.05$) as compared to high-fertile bulls. Collectively, the study identified some potential molecules in spermatozoa of bulls, which may act as a panel of biomarkers for fertility.

124: Nagarajappa A, Kaur M, Sinha R. Anaesthetic concerns in the patients with congenital erythropoietic porphyria for ocular surgery. J Clin Anesth. 2019 May;54:3-5. doi: 10.1016/j.jclinane.2018.10.010. Epub 2018 Oct 26. PubMed PMID: 30388602.

125: Nagori SA, Jose A, Roy Chowdhury SK, Roychoudhury A. Is splint therapy required after arthrocentesis to improve outcome in the management of temporomandibular joint disorders? A systematic review and meta-analysis. Oral Surg Oral Med Oral Pathol Oral Radiol. 2019 Feb;127(2):97-105. doi:

10.1016/j.oooo.2018.09.010. Epub 2018 Oct 5. Review. PubMed PMID: 30393091.

OBJECTIVE: The aim of this systematic review was to assess the efficacy of splint therapy in improving outcomes after arthrocentesis for the management of temporomandibular joint disorders.
STUDY DESIGN: A comprehensive electronic search was conducted to search for randomized control trials, controlled clinical trials, and retrospective studies comparing arthrocentesis and splint therapy with arthrocentesis alone.
RESULTS: Six studies were included in this review. There was no statistical significant difference in pain reduction with or without the use of splint after arthrocentesis at 1 month (fixed: weighted mean difference [WMD] = -0.01; 95% confidence interval [CI] -0.46 to 0.44; P = .96; I2 = 0%) and 6 months (fixed: WMD = -0.08; 95% CI -0.27 to 0.42; P = .66; I2 = 0%). Similarly, no difference was seen in improvement in maximal mouth opening at 1 month (fixed: WMD = -0.16; 95% CI -1.75 to 1.42; P = .84; I2 = 44%), and 6 months (fixed: WMD = -0.83; 95% CI -0.52 to 2.18; P = .23; I2 = 0%).
CONCLUSIONS: Within the limitation of this review, there is some evidence that splint therapy may not improve outcomes after arthrocentesis. There is a need for well-designed RCTs evaluating the additional benefit of splint therapy after arthrocentesis for managing temporomandibular joint disorders.

126: Nagori SA, Jose A, Roy ID, Chattopadhyay PK, Roychoudhury A. Does methylprednisolone improve postoperative outcomes after mandibular third molar surgery? A systematic review and meta-analysis. Int J Oral Maxillofac Surg. 2018 Oct 9. pii: S0901-5027(18)30375-8. doi: 10.1016/j.ijom.2018.09.005. [Epub ahead of print] Review. PubMed PMID: 30314709.

This systematic review and meta-analysis was performed to investigate whether methylprednisolone (MP) administered via any route improves postoperative outcomes (pain, trismus, and oedema) following mandibular third molar surgery. An electronic search of the PubMed, Scopus, Cochrane CENTRAL, and Google Scholar databases was performed to identify studies published in English up until January 2018. A total of 28 studies were included in the review: 25 randomized clinical trials (RCTs) and three controlled clinical trials. Studies were grouped according to the route of administration of MP for qualitative and quantitative analysis. Three studies were of 'high' quality and 22 were of 'medium' quality; three studies had a high risk of bias. Within the purview of the limitations of this review, the results showed that MP administered via any route significantly improves oedema in the early postoperative period, but has no effect on late postoperative oedema. Oral and intra-masseteric MP also seems to reduce pain and trismus in the early postoperative period. The results also indicate that oral MP may reduce late postoperative pain, while intra-masseteric MP may improve the late trismus outcome. More high quality RCTs are required to provide stronger evidence on the use of MP in third molar surgery.

127: Nagori SA, Roy Chowdhury SK, Thukral H, Jose A, Roychoudhury A. Single puncture versus standard double needle arthrocentesis for the management of temporomandibular joint disorders: A systematic review. J Oral Rehabil. 2018 Oct;45(10):810-818. doi: 10.1111/joor.12665. Epub 2018 Jun 22. PubMed PMID: 29889989.

The aim of this systematic review was to investigate the current evidence in order to assess the efficacy of single puncture arthrocentesis vs standard double needle arthrocentesis in the management of temporomandibular joint(TMJ) disorders. An electronic search of the PubMed, Scopus, Cochrane CENTRAL and Google Scholar databases was performed to identify English studies published up until October 2017. Eligible studies were selected based on inclusion criteria and included randomised controlled trials(RCTs) comparing single puncture arthrocentesis and standard double needle arthrocentesis for the management TMJ disorders. The initial screening identified 984 records, of which only 5 fulfilled the inclusion criteria. A high degree of heterogeneity was found in the

5 studies with each reporting different sample selection and arthrocentesis protocol. All 5 studies reported no difference in reduction in pain intensity and improvement in maximal mouth opening between the single puncture technique and standard double needle technique. This review provides some evidence that single puncture arthrocentesis is clinically as efficacious as standard double needle arthrocentesis. There is a need of well-designed RCT with standard protocol of arthrocentesis comparing different single puncture techniques and standard double needle technique for the management of TMJ disorders.

128: Nair J, Velpandian T, Das US, Sharma P, Nag T, Mathur SR, Mathur R. Molecular and Metabolic Markers of Fructose Induced Hepatic Insulin Resistance in Developing and Adult Rats are Distinct and Aegle marmelos is an Effective Modulator. Sci Rep. 2018 Oct 29;8(1):15950. doi: 10.1038/s41598-018-33503-x. PubMed PMID: 30374065; PubMed Central PMCID: PMC6206063.

The time course of pathogenesis of fructose mediated hepatic insulin resistance (HepIR) is not well-delineated and we chronicle it here from post-weaning to adulthood stages. Weaned rats were provided for either 4 or 8 weeks, i.e., upto adolescence or adulthood, chow+drinking water, chow+fructose, 15% or chow+fructose, 15%+hydroalcoholic extract of leaves of Aegle marmelos (AM-HM, 500 mg/kg/d, po) and assessed for feed intake, fructose intake, body weight, fasting blood sugar, oral glucose tolerance test, HOMA-IR, insulin tolerance test and lipid profile. Activities of enzymes (glucose-6-phosphatase, hexokinase, phosphofructokinase, aldehyde dehydrogenase), hormones (leptin, ghrelin, insulin), insulin signaling molecules (Akt-PI3k, AMPK, JNK) hallmarks of inflammation (TNF-α), angiogenesis (VEGF), hypoxia (HIF-1), lipogenesis (mTOR) and regulatory nuclear transcription factors of de novo lipogenesis and hepatic insulin resistance gene (SREBP-1, FoxO1) that together govern the hepatic fructose metabolism, were also studied. The effect of fructose-rich environment on metabolic milieu of hepatocytes was confirmed using (human hepatocellular carcinoma) HepG2 cells. Using in vitro model, fructose uptake and glucose output from isolated murine hepatocytes were measured to establish the HepIR under fructose environment and delineate the effect of AM-HM. The leaves from the plant Aegle marmelos (L) Correa were extracted, fractionated and validated for rutin content using LC-MS/MS. The rutin content of extract was quantified and correlated with oral pharmacokinetic parameters in rat. The outcomes of the study suggest that the molecular and metabolic markers of fructose induced HepIR in developing and adult rats are distinct. Further, AM-HM exerts a multi-pronged attack by raising insulin secretion, augmenting insulin action, improving downstream signaling of insulin, reducing overall requirement of insulin and modulating hepatic expression of glucose transporter (Glut2). The butanol fraction of AM-HM holds promise for future development.

129: Nakra T, Jain D, Madan K, Mallick S, Mathur SR, Iyer VK, Ramteke P. Endobronchial ultrasound guided transbronchial needle aspirate from subcarinal lymph node: Mesothelial lesion, a diagnostic dilemma. Cytopathology. 2018 Oct;29(5):486-488. doi: 10.1111/cyt.12547. Epub 2018 May 24. PubMed PMID: 29797365.

130: Nambirajan A, Sashidharan A, Garg A, Dash D, Bhatia R, Sharma MC, Mathur SR. Cytological diagnosis of cerebrotendinous xanthomatosis in two siblings presenting with bilateral ankle swellings and neurological decline. Cytopathology. 2018 Oct;29(5):482-485. doi: 10.1111/cyt.12573. Epub 2018 Jun 14. PubMed PMID: 29737592.

OBJECTIVE: To observe changes in cystometric parameters in individuals with spinal cord injury (SCI) with neurogenic bladder practicing clean intermittent self-catheterization (CIC) and incidence of urinary tract infection (UTI) in such patients.
DESIGN: Prospective, observational study.
SETTING: Tertiary Urban Rehabilitation Hospital.

PARTICIPANTS: Persons with neurogenic bladder caused by traumatic SCI and practicing CIC.
INTERVENTIONS: Clinical evaluation, complete urine analysis, urine culture and sensitivity, ultrasonography of the abdomen and urodynamic study were evaluated at baseline and at follow-up (6 months to 1 year).
OUTCOME MEASURES: Detrusor pattern, cystometric capacity, detrusor compliance, detrusor leak point pressure, residual urine, incidence of UTI.
RESULTS: Thirty-one participants were included in the study. The baseline cystometric study showed that 15 had overactive detrusor and 16 had detrusor areflexia. The mean cystometric capacity decreased significantly between baseline and follow-up in both the groups but remained within the normal threshold limit, decline being more marked in the overactive detrusor group, who also had more marked decrease in compliance. Mean detrusor leak point pressure was below 40 cm H2O in all participants in both groups at baseline and follow-up. Mean residual urine improved at follow-up in both groups. Incidence of UTI was 2.29 episodes per patient per year, and more frequent in the overactive detrusor group. Escherichia coli was the causative agent in 45%.
CONCLUSION: The cystometric capacity and compliance decreased significantly though patients were doing regular CIC and managed on antimuscarinics for detrusor overactivity (DO). UTI is more common in individuals with SCI with DO and E. coli is the most common cause of UTI.

131: Neyaz O, Srikumar V, Equebal A, Biswas A. Change in urodynamic pattern and incidence of urinary tract infection in patients with traumatic spinal cord injury practicing clean self-intermittent catheterization. J Spinal Cord Med. 2018 Oct 2:1-6. doi: 10.1080/10790268.2018.1512729. [Epub ahead of print] PubMed PMID: 30277852.

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CONCLUSION: The cystometric capacity and compliance decreased significantly though patients were doing regular CIC and managed on antimuscarinics for detrusor overactivity (DO). UTI is more common in individuals with SCI with DO and E. coli is the most common cause of UTI.

132: Oleti T, Jeeva Sankar M, Thukral A, Sreenivas V, Gupta AK, Agarwal R, Deorari AK, Paul VK. Does ultrasound guidance for peripherally inserted central catheter (PICC) insertion reduce the incidence of tip malposition? - a randomized trial. J Perinatol. 2019 Jan;39(1):95-101. doi: 10.1038/s41372-018-0249-x. Epub 2018 Oct 22. PubMed PMID: 30348962.

OBJECTIVE: The aim of the study was to evaluate the incidence of peripheral inserted central catheter (PICC) tip malposition when the catheter is inserted under real-time ultrasound (RTUS) guidance when compared with conventional landmark (CL) technique in neonates. Additional objectives were to evaluate the PICC longevity and central line associated blood stream infections (CLABSI).
STUDY DESIGN: In this randomised controlled trial, neonates were randomised to 'RTUS' (n=40) or 'CL' (n=40) groups. PICC tip was placed under ultrasound guidance in lower third of superior vena cava in the RTUS group. In 'CL' group, PICC was inserted as calculated by anatomical landmarks.
RESULTS: The birth weight (1286 (926, 1662) vs. 1061 (889, 1636) g) and gestation (31.12 (3.1) vs. 31.4 (3.6) wks) were comparable among the groups. RTUS guidance during PICC insertion reduced incidence of tip malposition by 52% (67.5 vs. 32.5%; RR: 0.48; 95% CI: 0.29-0.79). The longevity of PICC and episodes of CLABSI were however similar in the two groups.
CONCLUSIONS: Real-time ultrasound guidance during PICC placement reduces the incidence of tip malposition.

133: Padhy S, Kumar V. Dramatic response to intravitreal Bevacizumab in hypertensive retinopathy. Indian J Ophthalmol. 2018 Oct;66(10):1494-1495. doi: 10.4103/ijo.IJO_214_18. PubMed PMID: 30249851; PubMed Central PMCID: PMC6173024.

Hypertensive retinopathy is seen frequently in patients with systemic hypertension and is usually asymptomatic. An acute rise in blood pressure may lead to exudative changes in the form of macular edema, hemorrhages, and serous macular detachment that can lead to visual decline. The authors report prompt resolution of exudative changes in a case of hypertensive retinopathy following intravitreal bevacizumab.

134: Padhy SK, Phuljhele S, Rathi A, Mandal S. Not just another diplopia: neurocysticercosis in a postpartum woman. BMJ Case Rep. 2018 Oct 25;2018. pii: bcr-2018-227388. doi: 10.1136/bcr-2018-227388. PubMed PMID: 30366900.

135: Padhy SK, Kumar V, Mandal S. Pigmentary retinopathy in Kearns-Sayre syndrome. BMJ Case Rep. 2018 Oct 2;2018. pii: bcr-2018-227394. doi: 10.1136/bcr-2018-227394. PubMed PMID: 30279266.

136: Pandav CS, Kumar R. Spiritual health: Need for its mainstreaming in health-care delivery in India. Indian J Public Health. 2018 Oct-Dec;62(4):251-252. doi: 10.4103/ijph.IJPH_319_18. PubMed PMID: 30539884.

137: Pandey NN, Rajagopal R, Sharma A, Kumar S. Shepherd's Crook Conal Artery: A Hitherto Unreported Variant. Ann Thorac Surg. 2019 Feb;107(2):e135. doi: 10.1016/j.athoracsur.2018.08.089. Epub 2018 Oct 23. PubMed PMID: 30365958.

138: Pandey NN, Sharma A, Jagia P. Unique retroinnominate course of the left brachiocephalic vein. BMJ Case Rep. 2018 Oct 28;2018. pii: bcr-2018-227558. doi: 10.1136/bcr-2018-227558. PubMed PMID: 30373901.

139: Pandey NN, Sinha M, Rajagopal R, Sharma A, Kumar S. Isolated aortic interruption complicated by type B aortic dissection: A rare case of "double trouble". J Cardiovasc Comput Tomogr. 2018 Oct 1. pii: S1934-5925(18)30350-2. doi: 10.1016/j.jcct.2018.09.011. [Epub ahead of print] PubMed PMID: 30297129.

140: Pandey RK, Baruah U, Oberoi R, Pangasa N, Hamshi N. Anesthetic management of a case of nesidioblastosis. Saudi J Anaesth. 2018 Oct-Dec;12(4):660-661. doi: 10.4103/sja.SJA_212_18. PubMed PMID: 30429762; PubMed Central PMCID: PMC6180697.

141: Panwar R, Singh PM. Author's reply to the Letter to the Editor for "Efficacy and safety of metallic stents in comparison to plastic stents for endoscopic drainage of peripancreatic fluid collections: a meta-analysis and trial sequential analysis". Clin J Gastroenterol. 2018 Oct;11(5):439-440. doi:

10.1007/s12328-018-0882-0. PubMed PMID: 29951849.

142: Patil S, Singh N. Spatially controlled functional group grafting of silk films to induce osteogenic and chondrogenic differentiation of human mesenchymal stem cells. Mater Sci Eng C Mater Biol Appl. 2018 Oct 1;91:796-805. doi: 10.1016/j.msec.2018.06.008. Epub 2018 Jun 12. PubMed PMID: 30033315.

For tissue engineering, fabrication of appropriate biomaterials, which not only support cellular attachment and proliferation but also direct lineage-specific differentiation of stem cells is crucial. It is widely reported in literature that biomaterial surface chemistry modulates human mesenchymal stem cell (hMSC) differentiation in a lineage dependent manner. In recent years, natural materials such as silk have been used for hMSC culture because of its superior mechanical strength, biocompatibility, and biodegradability. We report here a simple strategy for differentiating hMSCs into two different lineages on the same surface. We have grafted functional groups such as acrylic acid and phosphates to guide the differentiation of hMSCs into chondrocytes and osteocytes respectively. Unlike other strategies, our strategy does not require growth factors and other added signals in the media and is initiated due to the difference of functional groups present on the surface. We believe this study will foster the development of effective silk based tissue engineered constructs.

143: Paudel YN, Shaikh MF, Shah S, Kumari Y, Othman I. Role of inflammation in epilepsy and neurobehavioral comorbidities: Implication for therapy. Eur J Pharmacol. 2018 Oct 15;837:145-155. doi: 10.1016/j.ejphar.2018.08.020. Epub 2018 Aug 17. Review. PubMed PMID: 30125565.

Epilepsy is a devastating condition affecting around 70 million people worldwide. Moreover, the quality of life of people with epilepsy (PWE) is worsened by a series of comorbidities. The neurobehavioral comorbidities discussed herein share a reciprocal and complex relationship with epilepsy, which ultimately complicates the treatment process in PWE. Understanding the mechanistic pathway by which these comorbidities are associated with epilepsy might be instrumental in developing therapeutic interventions. Inflammatory cytokine signaling in the brain regulates important brain functions including neurotransmitter metabolism, neuroendocrine function, synaptic plasticity, dopaminergic transmission, the kynurenine pathway, and affects neurogenesis as well as the neural circuitry of moods. In this review, we hypothesize that the complex relationship between epilepsy and its related comorbidities (cognitive impairment, depression, anxiety, autism, and schizophrenia) can be unraveled through the inflammatory mechanism that plays a prominent role in all these individual conditions. An ample amount of evidence is available reporting the role of inflammation in epilepsy and all individual comorbid condition but their complex relationship with epilepsy has not yet been explored through the prospective of inflammatory pathway. Our review suggests that epilepsy and its neurobehavioral comorbidities are associated with elevated levels of several key inflammatory markers. This review also sheds light on the mechanistic association between epilepsy and its neurobehavioral comorbidities. Moreover, we analyzed several anti-inflammatory therapies available for epilepsy and its neurobehavioral comorbidities. We suggest, these anti-inflammatory therapies might be a possible intervention and could be a promising strategy for preventing epileptogenesis and its related neurobehavioral comorbidities.

144: Paul D, Dixit A, Srivastava A, Tripathi M, Prakash D, Sarkar C, Ramanujam B, Banerjee J, Chandra PS. Altered transforming growth factor beta/SMAD3 signalling in patients with hippocampal sclerosis. Epilepsy Res. 2018 Oct;146:144-150. doi: 10.1016/j.eplepsyres.2018.08.004. Epub 2018 Aug 20. PubMed PMID: 30153648.

Transforming growth factor beta (TGFβ) signalling cascade has been implicated in enhancing neuronal excitability and excitatory synaptogenesis following blood brain barrier (BBB) damage and inflammation. We aimed to study if TGFβ signalling expression is altered in patients with Hippocampal Sclerosis (HS). We probed into

the protein expression level of the ligand transforming growth factor beta 1 (TGFβ1), transforming growth factor beta receptor II (TGFβRII) and downstream signalling molecule SMAD3 and phosphorylated SMAD3 (pSMAD3) on surgically resected hippocampal samples of thirty-four patients with HS through immuno-blotting. The increase in protein expression level of the ligand TGFβ1 was 285±1.15% higher and its receptor TGFβRII was 170±0.98% higher in hippocampus of patients with HS in comparison to the autopsy hippocampal control samples. The expression of the downstream signalling molecules, SMAD3 is 157±0.13% and 106±0.17% higher in patients with HS as compared to both types of non-seizure controls. The expression of active form of SMAD3, pSMAD3 (2.6010±1.2735) was significantly upregulated in hippocampus of patients with HS compared to autopsy hippocampal controls (0.7899±0.3688). While the expression of pSMAD3 (1.527±0.9425) was significantly upregulated in hippocampus of patients with HS with another type of non-seizure control viz. tumour periphery tissue (0.5791±0.2679), hence strongly supporting the altered expression of the pathway. This study provides the first evidence of alteration of TGFβ pathway in patients with HS which could be a potential therapeutic target.

145: Phillips LM, Vitola JV, Shaw LJ, Giubbini R, Karthikeyan G, Alexanderson E, Dondi M, Paez D, Peix A. Value of gated-SPECT MPI for ischemia-guided PCI of non-culprit vessels in STEMI patients with multivessel disease after primary PCI. J Nucl Cardiol. 2018 Oct;25(5):1616-1620. doi: 10.1007/s12350-018-1368-7. Epub 2018 Aug 1. PubMed PMID: 30069820.

There remains a clinical question of which patients benefit from revascularization of non-culprit coronary artery stenosis in the setting of acute ST-segment elevation myocardial infraction (STEMI). This is a large population of patients with prior studies showing 40 to 70% of patients with STEMI having non-culprit stenosis. This article reviews the current state of the literature evaluating outcomes of those previously randomized to revascularization of non-culprit stenosis around the time of the STEMI. We propose a new study design to utilize gated-SPECT in the decision process by using an ischemic burden of>5% as a cut-off for revascularization vs. complete revascularization without ischemia assessment.

146: Pollock JA, Sharma N, Ippagunta SK, Redecke V, Häcker H, Katzenellenbogen JA. Triaryl Pyrazole Toll-Like Receptor Signaling Inhibitors: Structure-Activity Relationships Governing Pan- and Selective Signaling Inhibitors. ChemMedChem. 2018 Oct 22;13(20):2208-2216. doi: 10.1002/cmdc.201800417. Epub 2018 Sep 13. PubMed PMID: 30117269.

The immune system uses members of the toll-like receptor (TLR) family to recognize a variety of pathogen- and host-derived molecules in order to initiate immune responses. Although TLR-mediated, pro-inflammatory immune responses are essential for host defense, prolonged and exaggerated activation can result in inflammation pathology that manifests in a variety of diseases. Therefore, small-molecule inhibitors of the TLR signaling pathway might have promise as anti-inflammatory drugs. We previously identified a class of triaryl pyrazole compounds that inhibit TLR signaling by modulation of the protein-protein interactions essential to the pathway. We have now systematically examined the structural features essential for inhibition of this pathway, revealing characteristics of compounds that inhibited all TLRs tested (pan-TLR signaling inhibitors) as well as compounds that selectively inhibited certain TLRs. These findings reveal interesting classes of compounds that could be optimized for particular inflammatory diseases governed by different TLRs.

147: Prabhu M, Jain D, Gupta SD, Bal C, Kumar R. Detection of Solitary Axillary Lymph Node Metastases from Hürthle Cell Carcinoma of the Thyroid on (18)F-FDG PET/CT. Nucl Med Mol Imaging. 2018 Oct;52(5):389-393. doi: 10.1007/s13139-018-0539-4. Epub 2018 Aug 27. PubMed PMID: 30344789; PubMed Central PMCID: PMC6177346.

Thyroid carcinoma is the most common neoplasm of endocrine malignancies. Differentiated thyroid carcinoma (DTC) constitutes 90% of the thyroid carcinomas, rest being medullary thyroid carcinoma (MTC), and anaplastic thyroid carcinoma (ATC). Distant metastases occur in up to 10% of patients with DTC. Metastases to axillary lymph nodes (ALN) are very rare. As per literature, only 25 cases have been reported. We report an unusual case of 47-year-old male with Hürthle cell carcinoma of the thyroid presenting with a solitary axillary lymph node metastasis 17 years after thyroidectomy, along with review of literature.

148: Pujari A, Swamy DR, Singh R, Mukhija R, Chawla R, Kumar A. Ultrasonographic assessment of ophthalmic diseases in low-income countries. Trop Doct. 2018 Oct;48(4):294-297. doi: 10.1177/0049475518787379. Epub 2018 Jul 17. PubMed PMID: 30012083.

We undertook a study between December 2016 and February 2017 on 1637 of 2101 patients with clearly documented findings. These underwent ocular B-scan ultrasonography (USG). Their ages were in the range of 10 days to 92 years; among these patients, 921 (56.26%) were male and 224 (13.68%) were children. Among the adults, 669 (40.86%) patients had anterior segment and 636 (38.85%) had posterior segment pathology. In addition, there were 108 (6.59%) with orbital pathology. Our experience is that USG is an effective, quick, low-cost and non-invasive diagnostic tool for the diagnosis of various ocular and orbital conditions in high patient volume centres (including children and adults) especially where resources are limited.

149: Raghav R, Jain R, Dhawan A, Roy TS, Kumar P. Chronic co-administration of nalbuphine attenuates the development of opioid dependence. Pharmacol Biochem Behav. 2018 Dec;175:130-138. doi: 10.1016/j.pbb.2018.10.001. Epub 2018 Oct 9. PubMed PMID: 30312633.

Nalbuphine is an agonist of κ-opioid receptors and a partial agonist of μ-opioid receptors, which can stimulate κ-receptors and antagonize the acute rewarding effects of morphine. It is widely used either as an analgesic or as an adjuvant with morphine. This present study aimed to compare the acute and chronic effects of nalbuphine on the naloxone-precipitated opiate-withdrawal in rats. Male adult Wistar albino rats (150-175 g, n = 160) were made physically dependent by administrating increasing dose of morphine (5-25 mg/kg; i.p.). Motor activity was measured for 25 min at five-minute intervals on days 0, 1, 3, 5, and 6 using Activity Monitor (Coulbourn Instruments, Inc. USA) and True-scan software. The withdrawal was precipitated with intraperitoneal injections of naloxone (1 mg/kg) 4 h after the last injection of morphine. Somatic signs of withdrawal were scored using the global Gellert-Holtzman rating scale. Nalbuphine was co-administered acutely and chronically at various doses (0.1, 0.3, 1.0, and 3.0 mg/kg; i.p.) with morphine. In general, the opiate-dependent rats showed a significant increase in motor activity and Gellert-Holtzman score. Animals co-administered with chronic doses of nalbuphine showed a significant decrease in motor activity and naloxone-precipitated opiate withdrawal, but acute nalbuphine treatment did not attenuate the development of opioid dependence. These findings suggest that nalbuphine could be used as an effective pharmacological adjunct in the treatment of opioid addiction.

150: Rai V, Bose S, Saha S, Kumar V, Chakraborty C. Delineating metabolic dysfunction in cellular metabolism of oral submucous fibrosis using (1)H nuclear magnetic resonance spectroscopy. Arch Oral Biol. 2019 Jan;97:102-108. doi: 10.1016/j.archoralbio.2018.10.016. Epub 2018 Oct 21. PubMed PMID: 30384150.

OBJECTIVE: To delineate the metabolism involved in oral submucous fibrosis progression towards carcinogenesis by 1H nuclear magnetic resonance spectroscopy. METHODS: The proposed study was designed using 1H-NMR by comparing the metabolites in the serum sample of oral submucous fibrosis (n = 20) compared to the normal group (n = 20) using 1H nuclear magnetic resonance spectroscopy.

Various statistical analysis like multivariate statistical analysis, Principle component analysis, Partial least squares Discriminant Analysis, Hierarchical cluster analysis was applied to analyze potential serum metabolites.
RESULTS: The results generated from the principle component analysis, partial least squares discriminant analysis and hierarchical cluster analysis are sufficient to distinguish between oral submucous fibrosis group and normal group. A total of 15 significant metabolites associated with main pathways were identified, which correlated with the progression of cancer. Up-regulation of glucose metabolism-related metabolites indicated the high energy demand due to enhanced cell division rate in the oral submucous fibrosis group. A significant increase in lipid metabolism-related metabolites revealed the reprogramming of the fatty acids metabolic pathway to fulfilling the need for cell membrane formation in cancer cells. On the other hand, metabolites related to choline phosphocholine, the metabolic pathway was also altered.
CONCLUSION: Our findings could identify the differentiating metabolites in the oral submucous fibrosis group. Significant alteration in metabolites in the oral submucous fibrosis group exhibited deregulation in metabolic events. The findings reported in the study can be beneficial to further explain the molecular aspects that lead to the progression of oral submucous fibrosis towards carcinogenesis.

151: Raina R, Krishnappa V, Blaha T, Kann T, Hein W, Burke L, Bagga A. Atypical Hemolytic-Uremic Syndrome: An Update on Pathophysiology, Diagnosis, and Treatment. Ther Apher Dial. 2019 Feb;23(1):4-21. doi: 10.1111/1744-9987.12763. Epub 2018 Oct 29. Review. PubMed PMID: 30294946.

Atypical hemolytic uremic syndrome (aHUS), a rare variant of thrombotic microangiopathy, is characterized by microangiopathic hemolytic anemia, thrombocytopenia, and renal impairment. The condition is associated with poor clinical outcomes with high morbidity and mortality. Atypical HUS predominantly affects the kidneys but has the potential to cause multi-organ system dysfunction. This uncommon disorder is caused by a genetic abnormality in the complement alternative pathway resulting in over-activation of the complement system and formation of microvascular thrombi. Abnormalities of the complement pathway may be in the form of mutations in key complement genes or autoantibodies against specific complement factors. We discuss the pathophysiology, clinical manifestations, diagnosis, complications, and management of aHUS. We also review the efficacy and safety of the novel therapeutic agent, eculizumab, in aHUS, pregnancy-associated aHUS, and aHUS in renal transplant patients.

152: Rajagopal R, Sinha M, Pandey NN, Bhambri K, Kumar S. Tetralogy of fallot with pulmonary atresia and aorto-pulmonary window: Or is it truncus arteriosus? J Cardiovasc Comput Tomogr. 2018 Oct 26. pii: S1934-5925(18)30310-1. doi: 10.1016/j.jcct.2018.10.022. [Epub ahead of print] PubMed PMID: 30385324.

153: Rajan R, Pandey S, Anandapadmanabhan R, Srivastava AK. Interrater and intrarater agreement on the 2018 consensus statement on classification of tremors. Mov Disord. 2018 Dec;33(12):1966-1967. doi: 10.1002/mds.27513. Epub 2018 Oct 17. PubMed PMID: 30329183.

154: Ram Purakayastha D, Vishnubhatla S, Rai SK, Broor S, Krishnan A. Estimation of Burden of Influenza among under-Five Children in India: A Meta-Analysis. J Trop Pediatr. 2018 Oct 1;64(5):441-453. doi: 10.1093/tropej/fmx087. PubMed PMID: 29112737.

Background: We estimated the burden of influenza-related acute respiratory tract infection (ARI) among under-fives in India through meta-analysis.
Methodology: We estimated pooled incidence and proportional positivity of laboratory-diagnosed influenza among under-fives using data from observational studies published from 1 January 1961 to 31 December 2016. Death due to influenza was estimated using a multiplier model.
Results: Influenza-associated ARI incidence was estimated as 132 per 1000 child-years (115-149). The patients positive for influenza among ARI in

outpatients and inpatients were estimated to be 11.2% (8.8-13.6) and 7.1% (5.5-8.8), respectively. We estimated total influenza cases during 2016 as 16 009 207 (13 942 916-18 082 769) in India. Influenza accounted for 10 913 476 (9 504 666-12 362 310) outpatient visits and 109 431 (83 882-134 980) hospitalizations. A total of 27 825 (21 382-34 408) influenza-associated under-five deaths were estimated in India in 2016.
Conclusion: Influenza imposes a substantial burden among under-fives in India. Public health approach for its prevention and control needs to be explored.

155: Ramananda K, Sundar M D, Mandal S, Ravani R, Kumar V. Platelet Transfusion Related Panophthalmitis and Endophthalmitis in Patients with Dengue Hemorrhagic Fever. Am J Trop Med Hyg. 2018 Oct;99(4):1053-1054. doi: 10.4269/ajtmh.18-0079. PubMed PMID: 30062992; PubMed Central PMCID: PMC6159591.

Dengue is a vector-borne viral illness of major public health importance. It is endemic in many parts of India and also causes frequent epidemics. Platelet transfusions are given in severe cases of dengue fever to treat and prevent hemorrhagic complications. Here, we report three patients in North India with development of panophthalmitis and endophthalmitis shortly after receiving platelet transfusion.

156: Ramanujam B, Dash D, Tripathi M. Can home videos made on smartphones complement video-EEG in diagnosing psychogenic nonepileptic seizures? Seizure. 2018 Nov;62:95-98. doi: 10.1016/j.seizure.2018.10.003. Epub 2018 Oct 3. PubMed PMID: 30316048.

PURPOSE: To assess the contribution home-videos made on mobile phones can make to the diagnosis of Psychogenic Nonepileptic Seizures (PNES).
METHODS: Consecutive patients 10-50 years old, with episodes of altered behavior or abnormal movements, unresponsiveness, or falls, were recruited after they had obtained 'good' or 'fair' quality (quality of video scale (QOV)) home-videos of their episodes on personal mobile phones; these subjects underwent video-electroencephalography (VEEG). Diagnoses of PNES, other physiological events or epileptic seizure (ES) on home-videos (by the epilepsy fellow, step 1) and on VEEGs (by a fully trained epileptologist unaware of the home-video recording, step 2) were compared.
RESULTS: We screened 783 patients, and finally analyzed 269; 155 subjects had `fair' (QOV 5-7) and 114 had 'good'(QOV 8-10) quality home-videos. Concordance between steps 1 and 2 was seen in 261 of 269 (97.2%) subjects, and no significant difference was noted between the two modalities in diagnosing PNES. Differentiation between PNES, ES and other physiological events using home-videos was correct in 49.1% subjects if 532 (all subjects asked to make home-videos) and 70.7% if 369 (subjects with 'good' or 'fair' home videos), were used as denominators. Home-videos diagnosed PNES with the sensitivity of 95.4% (95% CI: 87.2%-99.1%), specificity of 97.5% (95% CI: 94.3%-99.2%), positive and negative predictive values of 92.65% (95% CI: 84.1%-96.8%) and 98.5% (95% CI: 95.6%-99.5%) respectively.
CONCLUSION: Home-videos of good quality can complement VEEG in diagnosing PNES in a cost-effective way and help initiate appropriate management.

157: Rani D, Saxena R, Nayak B, Srivastava S. Cloning and expression of truncated ORF2 as a vaccine candidate against hepatitis E virus. 3 Biotech. 2018 Oct;8(10):414. doi: 10.1007/s13205-018-1437-2. Epub 2018 Sep 15. PubMed PMID: 30237961; PubMed Central PMCID: PMC6139098.

Hepatitis E virus infection is responsible for acute viral hepatitis and associated with high mortality and still birth in pregnant women in developing countries. We report expression of truncated forms of HEV ORF2 as potential vaccine candidates for nanoparticle-based delivery. These two truncated ORF2 proteins (54 kDa and 26 kDa) have been reported to be highly immunogenic and can be used as nanoparticle-based vaccine candidate. The bacterial expressed protein was purified by affinity chromatography and further confirmed by western blot

using anti-HEV antibody. The chitosan nanoemulsion was synthesized using ultrasonic waves. The nanoparticle size was found to be 120-160 nm and the entrapment efficiency of purified truncated ORF2 proteins within these nanoparticles was 70% (26 kDa) and 59% (54 kDa). In cell cytotoxicity analysis, 100 µg/mL nanoemulsion was found suitable for cell viability in both HeLa and THP1 cell lines. Release kinetics of encapsulated proteins at physiological pH 7.4 showed 26-59% and 9.7-40% release of 26 kDa and 54 kDa protein within 1 h that gradually increased with time (48 h). Encapsulated proteins were found to be unstable at pH 1.2.

158: Rani L, Gogia A, Singh V, Kumar L, Sharma A, Kaur G, Gupta R. Comparative assessment of prognostic models in chronic lymphocytic leukemia: evaluation in Indian cohort. Ann Hematol. 2019 Feb;98(2):437-443. doi: 10.1007/s00277-018-3525-0. Epub 2018 Oct 18. PubMed PMID: 30338367.

Prognostic indices combining several clinical and laboratory parameters have been proposed for prognostication in chronic lymphocytic leukemia (CLL). Recently, international consortium on CLL proposed an international prognostic index (CLL-IPI) integrating clinical, molecular, and genetic parameters. The present study was designed to evaluate the reproducibility of CLL-IPI in Indian CLL cohort. The prognostic ability of CLL-IPI in terms of overall survival (OS) and time to first treatment (TTFT) was investigated in treatment-naive CLL patients and also compared with other existing prognostic scores. For assigning scores, clinical and laboratory details were obtained from medical records, and IGHV gene mutation status, β2-microglobulin levels, and copy number variations were determined using c-DNA, ELISA, and multiplex ligation-dependent probe amplification (MLPA), respectively. The scores were generated as per the weighted grades assigned to each variable involved in score categorization. The predictive value of prognostic models was assessed and compared using Harrell's C-index and Akaike's information criterion (AIC). Stratification of patients according to CLL-IPI yielded significant differences in terms of OS and TTFT ($p < 0.001$). Comparative assessment of scores for OS suggested better performance of CLL-IPI ($C = 0.64$, $AIC = 740$) followed by Barcelona-Brno ($C = 0.61$, $AIC = 754$) and MDACC score ($C = 0.59$, $AIC = 759$). Comparison of predictive value of prognostic scores for TTFT illustrated better performance of CLL-IPI ($C = 0.72$, $AIC = 726$) followed by Barcelona-Brno ($C = 0.68$, $AIC = 743$), modified GCLLSG ($C = 0.66$, $AIC = 744$), and O-CLL1 index ($C = 0.55$, $AIC = 773$). The results suggest better performance of CLL-IPI in terms of both OS and TTFT as compared to other available scores in our cohort.

159: Rastogi N, Khurana S, Veeraraghavan B, Yesurajan Inbanathan F, Rajamani Sekar SK, Gupta D, Goyal K, Bindra A, Sokhal N, Panda A, Malhotra R, Mathur P. Epidemiological investigation and successful management of a Burkholderia cepacia outbreak in a neurotrauma intensive care unit. Int J Infect Dis. 2019 Feb;79:4-11. doi: 10.1016/j.ijid.2018.10.008. Epub 2018 Oct 17. PubMed PMID: 30342249.

OBJECTIVE: The detailed epidemiological and molecular characterization of an outbreak of Burkholderia cepacia at a neurotrauma intensive care unit of a level 1 trauma centre is described. The stringent infection control interventions taken to successfully curb this outbreak are emphasized.
METHODS: The clinical and microbiological data for those patients who had more than one blood culture that grew B. cepacia were reviewed. Bacterial identification and antimicrobial susceptibility testing was done using automated Vitek 2 systems. Prospective surveillance, environmental sampling, and multilocus sequence typing (MLST) were performed for extensive source tracking. Intensive infection control measures were taken to further control the hospital spread.
RESULTS: Out of a total 48 patients with B. cepacia bacteraemia, 15 (31%) had central line-associated blood stream infections. Two hundred and thirty-one environmental samples were collected and screened, and only two water samples grew B. cepacia with similar phenotypic characteristics. The clinical strains

characterized by MLST typing were clonal. However, isolates from the water represented a novel strain type (ST-1289). Intensive terminal cleaning, disinfection of the water supply, and the augmentation of infection control activities were done to curb the outbreak. A subsequent reduction in bacteraemia cases was observed.
CONCLUSION: Early diagnosis and appropriate therapy, along with the rigorous implementation of essential hospital infection control practices is required for successful containment of this pathogen and to curb such an outbreak.

160: Ray MD, Jakhetiya A, Kumar S, Mishra A, Singh S, Shukla NK. Minimizing Post-operative Complications of Groin Dissection Using Modified Skin Bridge Technique: A Single-Centre Descriptive Study Showing Post-operative and Early Oncological Outcomes. World J Surg. 2018 Oct;42(10):3196-3201. doi: 10.1007/s00268-018-4604-z. PubMed PMID: 29654358.

INTRODUCTION: Historically, groin dissections are associated with high morbidity. Various modifications have been described in the literature with inconsistent outcomes. The aim of this paper is to highlight modified skin bridge technique to minimize all post-operative complications of groin dissection without compromising early oncological outcomes.
METHODS: A retrospective descriptive study of the computerized cancer database was performed to retrieve details of all the cancer patients who had undergone groin dissections during January 2012 to September 2016. Data pertaining to clinical profile including demographics, clinical and histopathological details, treatment profile, procedure-related morbidity and relapse patterns were extracted and analysed.
RESULTS: A total of 75 patients underwent 105 groin dissections during this period. Out of 105 groin dissections, 43 were inguinal lymph node dissection (ILND) and 62 were combined ilio-inguinal lymph node dissection (IILND). The most common diagnosis was carcinoma penis (25%) followed by malignant melanoma (14.6%) and squamous cell carcinoma (13.33%) of lower extremities. Overall, the most common complications were seroma (14.28%) and skin edge necrosis (7.61%) followed by surgical site infection (4.76%). After a median follow-up of 17.64 months (IQR 5-61.53), a total of 18 patients (24%) developed recurrence.
CONCLUSION: Groin dissection still remains an important diagnostic as well as therapeutic procedure justifying its potential of morbidity. Modified skin bridge technique is a very effective method to minimize all post-operative complications with optimal early oncological outcomes.

161: Reed GM, Keeley JW, Rebello TJ, First MB, Gureje O, Ayuso-Mateos JL, Kanba S, Khoury B, Kogan CS, Krasnov VN, Maj M, de Jesus Mari J, Sharan P, Stein DJ, Zhao M, Akiyama T, Andrews HF, Asevedo E, Cheour M, Domínguez-Martínez T, El-Khoury J, Fiorillo A, Grenier J, Gupta N, Kola L, Kulygina M, Leal-Leturia I, Luciano M, Lusu B, Martínez-López JNI, Matsumoto C, Odunleye M, Onofa LU, Paterniti S, Purnima S, Robles R, Sahu MK, Sibeko G, Zhong N, Gaebel W, Lovell AM, Maruta T, Pike KM, Roberts MC, Medina-Mora ME. Clinical utility of ICD-11 diagnostic guidelines for high-burden mental disorders: results from mental health settings in 13 countries. World Psychiatry. 2018 Oct;17(3):306-315. doi: 10.1002/wps.20581. PubMed PMID: 30192090; PubMed Central PMCID: PMC6127762.

In this paper we report the clinical utility of the diagnostic guidelines for ICD-11 mental, behavioural and neurodevelopmental disorders as assessed by 339 clinicians in 1,806 patients in 28 mental health settings in 13 countries. Clinician raters applied the guidelines for schizophrenia and other primary psychotic disorders, mood disorders (depressive and bipolar disorders), anxiety and fear-related disorders, and disorders specifically associated with stress. Clinician ratings of the clinical utility of the proposed ICD-11 diagnostic guidelines were very positive overall. The guidelines were perceived as easy to use, corresponding accurately to patients' presentations (i.e., goodness of fit), clear and understandable, providing an appropriate level of detail, taking about the same or less time than clinicians' usual practice, and providing useful guidance about distinguishing disorder from normality and from other disorders.

Clinicians evaluated the guidelines as less useful for treatment selection and assessing prognosis than for communicating with other health professionals, though the former ratings were still positive overall. Field studies that assess perceived clinical utility of the proposed ICD-11 diagnostic guidelines among their intended users have very important implications. Classification is the interface between health encounters and health information; if clinicians do not find that a new diagnostic system provides clinically useful information, they are unlikely to apply it consistently and faithfully. This would have a major impact on the validity of aggregated health encounter data used for health policy and decision making. Overall, the results of this study provide considerable reason to be optimistic about the perceived clinical utility of the ICD-11 among global clinicians.

162: Relan J, Gupta SK, Saxena A. Right superior caval vein to the left atrium in a child with vein of Galen malformation. Echocardiography. 2018 Nov;35(11):1868-1871. doi: 10.1111/echo.14165. Epub 2018 Oct 16. PubMed PMID: 30328159.

Vein of Galen malformation (VGM) is a rare intracranial vascular malformation. High output heart failure is common in infancy and is characterized by dilatation of all the cardiac chambers. We report an unusual case of VGM in a 3-month-old infant without dilatation of the right-sided cardiac chambers. We then demonstrate importance of comprehensive evaluation in detecting rare coexistence of anomalous right superior caval vein connection to the left atrium.

163: Rizwan M, Kumar KR, Dass C, Parthiban M. Perioperative management of a neonate with Cantrell's pentalogy. Indian J Anaesth. 2018 Oct;62(10):827-829. doi: 10.4103/ija.IJA_341_18. PubMed PMID: 30443074; PubMed Central PMCID: PMC6190419.

164: Saeed M, Imran M, Baig MH, Kausar MA, Shahid S, Ahmad I. Virtual screening of natural anti-filarial compounds against glutathione-S-transferase of Brugia malayi and Wuchereria bancrofti. Cell Mol Biol (Noisy-le-grand). 2018 Oct 30;64(13):69-73. PubMed PMID: 30403598.

Glutathione-S-transferase also referred as GST is one of the major detoxification enzymes in parasitic helminths. The crucial role played by GST in various chronic infections has been well reported. The dependence of nematodes on detoxification enzymes to maintain their survival within the host established the crucial role of GST in filariasis and other related diseases. Hence, this well-established role of GST in filariasis along with its greater nonhomology with its human counterpart makes it an important therapeutic drug target. Here in this study, we have tried to explore the inhibitory potential of some of the well-reported natural ant-filarial compounds against the GST from Wuchereria bancrofti (W.bancrofti) and Brugia malayi (B.malayi). In silico virtual screening, approach was used to screen the selected natural compounds against GST from W.bancrofti and B.malayi. On the basis of our results, here we are reporting some of the natural compounds which were found to be very effective against GSTs. Along with we have also revealed the characteristic of the active site of BmGST and WbGST and the role of important active site residues involve in the binding of natural compounds within the active site of GSTs. This information will oped doors for using natural compounds as anti-filarial therapy and will also be helpful for future drug discovery.

165: Sahay P, Dhanda S, Singhal D, Maharana PK, Titiyal JS, Sharma N. Scleritis in congenital erythropoietic porphyria - infective or inflammatory? Indian J Ophthalmol. 2018 Oct;66(10):1467-1468. doi: 10.4103/ijo.IJO_513_18. PubMed PMID: 30249837; PubMed Central PMCID: PMC6173006.

166: Sahu GK, Meena DS, Saini S, Aravindan A, Datta PK. Comparison of Two Different Volumes of Ropivacaine Used in Nerve Stimulator Guided Inter-scalene

Block for Arthroscopic Shoulder Surgery - A Randomized Controlled Trial. Anesth Essays Res. 2018 Oct-Dec;12(4):786-791. doi: 10.4103/aer.AER_122_18. PubMed PMID: 30662108; PubMed Central PMCID: PMC6319060.

Background: This study was conducted to compare the analgesic efficacy of 10 ml versus 20 mL of 0.5% ropivacaine in nerve stimulator guided interscalene brachial plexus block, in patients undergoing arthroscopic shoulder surgery.
Methods: A total of 70 American Society of Anesthesiologists physical status classes 1 and 2 patients, aged 18-65 years, undergoing unilateral arthroscopic shoulder surgery, were randomized into two groups. Group A received single shot inter-scalene block with 20 mL of 0.5% ropivacaine whereas Group B received the same with 10 mL. The primary outcome was difference in the total postoperative fentanyl consumption over 24 h. Secondary outcomes were difference in block onset, intra-operative hemodynamic parameters, intra-operative fentanyl consumption, duration of effective analgesia, visual analogue scale (VAS) scores at various time intervals, duration of motor block, and incidence of hemidiaphragmatic (HD) palsy.
Results: Total 24 h fentanyl consumption was significantly higher in Group B (558 ± 112 mcg) compared to Group A (296 ± 88 μg). Block onset was slower in Group B than Group A. There was no difference in intra-operative fentanyl consumption. Postoperative VAS scores were significantly higher in Group B compared to Group A, at 6 h and thereafter. Duration of motor block was significantly shorter in Group B (6.25 ± 1.25 h) compared to Group A. HD palsy was seen in all the cases in both the groups.
Conclusion: Single shot nerve stimulator guided interscalene block with 10 ml of 0.5% ropivacaine was inferior to 20 mL of 0.5% ropivacaine with respect to postoperative analgesic efficacy.

167: Sameera V, Pandia MP, Bindu B, Goyal K. Anesthetic considerations and successful management of a patient with permanent pacemaker for cervical spine instrumentation. Saudi J Anaesth. 2018 Oct-Dec;12(4):634-636. doi: 10.4103/sja.SJA_125_18. PubMed PMID: 30429749; PubMed Central PMCID: PMC6180689.

Patients with permanent pacemaker posted for cervical spine instrumentation pose special challenges for modern-day anesthesiologist since the field of surgery is in proximity to the pacing apparatus. The important considerations in this regard are pacemaker dependency, prior reprogramming to asynchronous mode, perioperative interference with pacemaker function due to electrolyte, acid-base disturbances, and electromagnetic interference leading to pacemaker failure and hemodynamic compromise. We report successful anesthetic management of a patient of postlaminectomy kyphosis with compressive myelopathy with permanent pacemaker in situ who underwent C5-C6 corpectomy and instrumentation under general anesthesia.

168: Sankar J, Das RR. Asthma - A Disease of How We Breathe: Role of Breathing Exercises and Pranayam. Indian J Pediatr. 2018 Oct;85(10):905-910. doi: 10.1007/s12098-017-2519-6. Epub 2017 Dec 16. Review. PubMed PMID: 29247426.

To describe the role of breathing exercises or yoga and/or pranayama in the management of childhood asthma. We conducted an updated literature search and retrieved relevant literature on the role of breathing exercises or yoga and/or pranayama in the management of childhood asthma. We found that the breathing exercises or yoga and/or pranayama are generally multi-component packaged interventions, and are described as follows: Papworth technique, Buteyko technique, Yoga and/or Pranayam. These techniques primarily modify the pattern of breathing to reduce hyperventilation resulting in normalisation of CO2 level, reduction of bronchospasm and resulting breathlessness. In addition they also change the behaviour, decrease anxiety, improve immunological parameters, and improve endurance of the respiratory muscles that may ultimately help asthmatic children. We found 10 clinical trials conducted in children with asthma of varying severity, and found to benefit children with chronic (mild and moderate) and uncontrolled asthma, but not acute severe asthma. Breathing exercises or yoga and/or pranayama may benefit children with chronic (mild and moderate) and

uncontrolled asthma, but not acute severe asthma. Before these techniques can be incorporated into the standard care of asthmatic children, important outcomes like quality of life, medication use, and patient reported outcomes need to be evaluated in future clinical trials.

169: Satyarthee GD, Chipde H. Diencephalic Syndrome as Presentation of Giant Childhood Craniopharyngioma: Management Review. J Pediatr Neurosci. 2018 Oct-Dec;13(4):383-387. doi: 10.4103/JPN.JPN_179_17. Review. PubMed PMID: 30937076; PubMed Central PMCID: PMC6413612.

Diencephalic syndrome (DES) is an extremely uncommon occurrence, and approximately 100 cases have been reported. It presents as a failure to thrive in infants and children but rarely occurs in adult population. The characteristic clinical features of DES include severely emaciated body, normal linear growth and normal or precocious intellectual development, hyperalertness, hyperkinesis, and euphoria usually associated with intracranial sellar-suprasellar mass lesion, usually optico-chiasmatic glioma or hypothalamic mass. DES as a presentation of craniopharyngioma is extremely uncommon but can also occur with brain stem mass. Detailed PubMed and MEDLINE search for craniopharyngioma associated with DES yielded only six cases in children below 6 years of age. Thus, we reviewed a total of seven cases including previously published six cases and added additional our own case. Overall, the mean age at diagnosis was 4.15 years with male:female ratio of 4:3, the mean time interval between symptom of DES appearance and final diagnosis was 6.6 months. The most commonly observed symptom of DES was weight loss (85%). The clinical feature, imaging, and management of such rare syndrome along with pertinent literature are briefly reviewed.

170: Saxena AK, Jain PN, Bhatnagar S. The Prevalence of Chronic Pain among Adults in India. Indian J Palliat Care. 2018 Oct-Dec;24(4):472-477. doi: 10.4103/IJPC.IJPC_141_18. PubMed PMID: 30410260; PubMed Central PMCID: PMC6199848.

Background: The prevalence of chronic pain (CP) is well described in Europe, America, and Australia. However, little knowledge is available of the prevalence of CP within Asia or Southeast Asia. Given the cultural and genetic variation in pain causation, manifestation, and reporting, the findings of previous western studies cannot be extrapolated to Asian countries. A prevalence study was needed to be carried out to quantify the magnitude and impact of CP in the adult population in India.
Methods: Two sets of questionnaires were designed. The first, a screening questionnaire was used telephonically to identify the prevalence of CP, and should there be CP; the second, a detailed questionnaire was administered, to characterize the features and impact of pain. The interviews were carried out face-to-face.
Results: A total of 4326 Indian patients were screened, and 836 completed a detailed pain questionnaire during 2006. The prevalence of CP was found to be 19.3% (n = 836). There was a higher prevalence in females (25.2%). Pain prevalence increased steeply beyond the age of 65 years old. There was a significant impact of CP on work and daily function.
Conclusion: This Indian adults' population survey about CP found a higher prevalence of CP as compared to other Asian pain prevalence studies; however, the impact of pain was just as significant. In a rapidly aging population, CP is emerging as a significant healthcare problem which may likely to exert an increasing toll on the existing social infrastructure within the next two decades.

171: Saxena R, Singh D, Sharma M, James M, Sharma P, Menon V. Steroids versus No Steroids in Nonarteritic Anterior Ischemic Optic Neuropathy: A Randomized Controlled Trial. Ophthalmology. 2018 Oct;125(10):1623-1627. doi: 10.1016/j.ophtha.2018.03.032. Epub 2018 Apr 25. PubMed PMID: 29705054.

PURPOSE: To examine the role of oral steroid therapy in the treatment of nondiabetic cases of acute nonarteritic anterior ischemic optic neuropathy (NAAION).
DESIGN: Randomized double-blind clinical trial.
PARTICIPANTS: Thirty-eight patients with acute nondiabetic NAAION divided into 2 arms of 19 patients each. One arm constituted the cases and the other constituted the controls.
METHODS: Cases received oral steroid therapy and were designated the steroid group, whereas controls received placebo and were designated the nonsteroid group. Best-corrected visual acuity (BCVA), visual evoked response (VER), and OCT were performed at baseline, 1 month, 3 months, and 6 months after recruitment into the trial.
MAIN OUTCOME MEASURES: Best-corrected visual acuity, VER, and retinal nerve fiber layer changes on OCT.
RESULTS: Both groups showed significant improvement in BCVA, VER latency, and resolution of disc edema on OCT parameters over 6 months. Final outcome showed no statistically significant difference with regard to visual acuity, although VER was better in the steroid group (P = 0.011). Best-corrected visual acuity, VER amplitude, and VER latency (P = 0.02, P = 0.02, and P = 0.04, respectively) showed a greater percentage improvement in the steroid group, which also saw a faster resolution of disc edema on OCT (1-month follow-up).
CONCLUSIONS: Oral steroids in acute NAAION did not improve the visual acuity significantly at 6 months. However, they improved resolution of disc edema significantly and enabled a greater improvement in VER parameters. This subtle benefit of oral steroids in NAAION is clinically unimportant and does not provide support for its use.

172: Sebastian S, Malhotra R, Dhawan B. Prosthetic joint infection: A major threat to successful total joint arthroplasty. Indian J Med Microbiol. 2018 Oct-Dec;36(4):475-487. doi: 10.4103/ijmm.IJMM_19_11. Review. PubMed PMID: 30880693.

Total joint arthroplasty (TJA) is one of the most common and reliable orthopaedic procedures that has significantly improved the quality of life of patients with degenerative joint diseases. Following the increase in the ageing population, availability of trained orthopaedic surgeons and advances in implantation procedures, demand for TJA both globally and in India is significantly increasing. Though TJA is one of the most cost-successful orthopaedic procedures, prosthetic joint infection (PJI) is one of the major complications of joint arthroplasty. Accurate diagnosis of PJI is challenging. Since total hip and knee arthroplasties comprises the majority of TJAs, this review focuses on the current understanding of incidence, risk factors, pathogenesis, causative microorganisms, diagnosis, treatment and prevention of PJI related to these two procedures.

173: Segal L, Agarwal D, Isaacson KJ, Oehmke TB, Kumar B, Chen JS, Cusimano JM, Negi S, Tiper I, Bakermans AJ, Jensen MM, Sanganyado E, Zaidi SS, Romero-Molina C, Martínez SE, Anderson SM, Santos GM, De Lella Ezcurra AL, Farragher J, Sharma V, Duncan G, Dutton-Regester K, Kim SA, Yu S, Schwendimann BA, Reichardt JKV, Halder A, Dennis AF, Ellwanger JH, Chiu YH, Kerman BE. NextGen Voices: Quality mentoring. Science. 2018 Oct 5;362(6410):22-24. doi: 10.1126/science.aav5914. PubMed PMID: 30287645.

174: Shah D, Makharia GK, Ghoshal UC, Varma S, Ahuja V, Hutfless S. Burden of gastrointestinal and liver diseases in India, 1990-2016. Indian J Gastroenterol. 2018 Sep;37(5):439-445. doi: 10.1007/s12664-018-0892-3. Epub 2018 Oct 10. PubMed PMID: 30306342.

There is no comprehensive report on the burden of gastrointestinal (GI) and liver diseases in India. In this study, we estimated the age-standardized prevalence, mortality, and disability adjusted life years (DALY) rates of GI and liver diseases in India from 1990 to 2016 using data from the Global Burden of Disease (GBD) Study, which systematically reviews literature and reports for

international disease burden trends. Despite a decrease in the overall burden from GI infectious disorders since 1990, they still accounted for the majority of DALYs in 2016. Among noncommunicable disorders (NCDs), there were increases in the prevalence and mortality rates for pancreatitis, liver cancer, paralytic ileus and intestinal obstruction, gallbladder and biliary tract cancer, vascular intestinal disorders, colorectal cancer, and inflammatory bowel disease. Prevalence and mortality rates decreased for peptic ulcer disease, hernias, appendicitis, and stomach and esophageal cancer. For gastritis and duodenitis, cirrhosis and other chronic liver diseases, and gallbladder and biliary tract diseases, there was an increase in prevalence but a decrease in mortality while the opposite was true for pancreatic cancer (decreased prevalence, increased mortality). Indian gastroenterologists and hepatologists must continue to attend to the large majority of patients with infectious diseases while also managing the increasing number of GI and liver diseases, noncommunicable nonmalignant and malignant.

175: Sharma A, Biradar B, Malhi AS, Kumar S. Subtotal Cor Triatriatum on Dual-Source Computed Tomography. Ann Thorac Surg. 2019 Mar;107(3):e213. doi: 10.1016/j.athoracsur.2018.09.029. Epub 2018 Oct 31. PubMed PMID: 30391251.

176: Sharma A, Pandey NN, Kumar S. Imaging of coronary artery fistulas by multidetector CT angiography using third generation dual source CT scanner. Clin Imaging. 2019 Jan - Feb;53:89-96. doi: 10.1016/j.clinimag.2018.09.019. Epub 2018 Oct 8. PubMed PMID: 30317136.

Coronary artery fistulas are rare cardiac conditions which constitute a subgroup of anomalies of the coronary arteries. Though majority are asymptomatic, they may be associated with high prevalence of late symptoms and complications. Accurate identification of the fistulas, their hemodynamic significance and associated conditions generally influence management strategies. Dual source computed tomographic evaluation is valuable in delineating its precise morphology with identification and characterization of associated anomalies, thereby assisting in mapping the ideal treatment option.

177: Sharma A, Pandey NN, Kumar S. Pulmonary capillary haemangiomatosis causing pulmonary arterial hypertension: a clinician's conundrum. BMJ Case Rep. 2018 Oct 7;2018. pii: bcr-2018-227393. doi: 10.1136/bcr-2018-227393. PubMed PMID: 30297486.

178: Sharma A, Duraisamy S, Pandey NN, Kumar S. Hitherto unreported involvement pattern of Carvajal phenotype of cardiocutaneous syndrome: evaluation on cardiac MRI. BMJ Case Rep. 2018 Oct 24;2018. pii: bcr-2018-227332. doi: 10.1136/bcr-2018-227332. PubMed PMID: 30361455.

179: Sharma BS, Sawarkar DP, Verma SK. Endoscopic Management of Fourth Ventricle Neurocysticercosis: Description of the New Technique in a Case Series of 5 Cases and Review of the Literature. World Neurosurg. 2019 Feb;122:e647-e654. doi: 10.1016/j.wneu.2018.10.117. Epub 2018 Oct 26. Review. PubMed PMID: 30814022.

BACKGROUND: Around 7%-33% of cases of neurocysticercosis (NCC) have intraventricular involvement, and the fourth ventricle is the most frequent site. Medical management and various surgical approaches have been described for treating this disease. The objective of this study was to describe technical modification for endoscopic fourth ventricular NCC removal in a series of 5 cases.
METHODS: In this study (January 1, 2016, to December 31, 2017), all cases of fourth ventricular NCC which were treated with a special technique (endoscopic transcortical transforaminal transaqueductal approach) using a rigid endoscope system and 6-French infant feeding tube (IFT) were included in the study. The IFT was passed through the main channel, the cyst was engaged at the tip by applying gentle suction with a 20 cm3 syringe, and the cyst was removed along with the whole endoscopic assembly. Patient's clinical, radiologic, and follow-up data

were retrieved from the department database records.
RESULTS: Five patients (3 men, 2 women; mean age, 20 years; range, 11-27 years) were enrolled. All patients had features of raised intracranial pressure. Two patients also had drop attacks, and one presented with altered sensorium and one had upgaze palsy. Duration of symptoms ranged from 3 months to 3 years. All patients had isolated fourth ventricular NCC with obstructive hydrocephalus. Complete removal of the neurocysticercal cyst could be performed in all patients without any injury to the periaqueductal region or fornix. There was no intraoperative rupture of the neurocysticercal cyst. On follow-up (range, 12-28 months; mean, 19.4 months), all patients had relief of symptoms and imaging showed no cyst and hydrocephalus.
CONCLUSIONS: We conclude that our endoscopic approach is safe, simple, cost-effective, and allows minimally invasive removal of the fourth ventricle cyst and treatment of hydrocephalus without any morbidity.

180: Sharma N, Singhal D, Maharana PK, Jain R, Sahay P, Titiyal JS. Response to comment on: Continuous intraoperative optical coherence tomography-guided shield ulcer debridement with tuck in multilayered amniotic membrane transplantation. Indian J Ophthalmol. 2018 Oct;66(10):1521-1522. doi: 10.4103/ijo.IJO_1029_18. PubMed PMID: 30249864; PubMed Central PMCID: PMC6173021.

181: Sharma N, Mohanty S, Jhanji V, Vajpayee RB. Amniotic membrane transplantation with or without autologous cultivated limbal stem cell transplantation for the management of partial limbal stem cell deficiency. Clin Ophthalmol. 2018 Oct 17;12:2103-2106. doi: 10.2147/OPTH.S181035. eCollection 2018. PubMed PMID: 30410305; PubMed Central PMCID: PMC6200088.

Purpose: To compare the outcomes of amniotic membrane transplantation (AMT) vs cultivated limbal stem cell transplantation (LSCT) in eyes with partial limbal stem cell deficiency (LSCD) following chemical burns.
Methods: Eyes with unilateral partial LSCD (#180° involvement) were randomized in two groups to undergo either pannus resection combined with AMT or pannus resection combined with LSCT in a tertiary eye care hospital. Primary outcome measures were time to corneal epithelialization and absence of conjunctivalization of the cornea. Patients were followed up at 1 week, 1, 3, 6, and 12 months after the surgical procedure.
Results: There was no difference between mean age (30.85±5.8 vs 28.64±6.4 years, P=0.40) and sex distribution of patients between the two groups at baseline. Mean time to corneal epithelialization was 10.45±5.8 days in the AMT group and 11±3.9 days in the LSCT group (P=0.43). At the end of 1 year, there was no significant difference between the degree of conjunctivalization of cornea, (P=0.06) corneal vascularization, (P=0.08), and clarity (P=0.07) in both groups.
Conclusion: Our study showed that AMT alone is a useful therapeutic modality in cases with partial LSCD due to ocular chemical injury. Stem cell transplantation may not be required in these cases.

182: Sharma S, Gupta DK. Early vaginal replacement in cloacal malformation. Pediatr Surg Int. 2019 Feb;35(2):263-269. doi: 10.1007/s00383-018-4407-1. Epub 2018 Oct 30. PubMed PMID: 30377758.

PURPOSE: We assessed the surgical outcome of cloacal malformation (CM) with emphasis on need and timing of vaginal replacement.
METHODS: An ambispective study of CM was carried out including prospective cases from April 2014 to December 2017 and retrospective cases that came for routine follow-up. Early vaginal replacement was defined as that done at time of bowel pull through. Surgical procedures and associated complications were noted. The current state of urinary continence, faecal continence and renal functions was assessed.
RESULTS: 18 patients with CM were studied with median age at presentation of 5 days (1 day-4 years). 18;3;2 babies underwent colostomy; vaginostomy; vesicostomy. All patients underwent posterior sagittal

anorectovaginourethroplasty (PSARVUP)/ Pull through at a median age of 13 (4-46) months. Ten patients had long common channel length (>3 cm). Six patients underwent early vaginal replacement at a median age of 14 (7-25) months with ileum; sigmoid colon; vaginal switch; hemirectum in 2;2;1;1. Three with long common channel who underwent only PSARVUP had inadequate introitus at puberty. Complications included anal mucosal prolapse, urethrovaginal fistula, perineal wound dehiscence, pyometrocolpos, bladder injury and pelvic abscess. Persistent vesicoureteric reflux remained in 8. 5;2 patients had urinary; faecal incontinence. 2 patients of uterus didelphys are having menorrhagia. One patient succumbed to sepsis at 7 months age. Renal functions remained normal in 16. One patient is undergoing dialysis.
CONCLUSION: Early vaginal replacement in CM is feasible. Patients with inadequate introitus may suffer from menorrhagia. A regular follow-up is mandatory.

183: Sharma S, Gupta DK. Male Cloaca - An Additional Rare Variant of Anorectal Malformation. J Indian Assoc Pediatr Surg. 2018 Oct-Dec;23(4):241-242. doi: 10.4103/jiaps.JIAPS_82_18. PubMed PMID: 30443128; PubMed Central PMCID: PMC6182954.

184: Shashni A, Pujari A, Bajaj MS, Kumar P. Superior oblique muscle cysticercosis: importance of long-term assessment by a single observer. Can J Ophthalmol. 2018 Oct;53(5):e193-e195. doi: 10.1016/j.jcjo.2017.11.007. Epub 2018 Feb 13. PubMed PMID: 30340741.

185: Sihota R, Kumar S, Sidhu T, Midha N, Sharma A, Yadav S, Gupta V, Dada T. Is combined mechanism glaucoma a distinct entity? Graefes Arch Clin Exp Ophthalmol. 2018 Oct;256(10):1961-1969. doi: 10.1007/s00417-018-4050-5. Epub 2018 Jun 20. PubMed PMID: 29922891.

PURPOSE: Primary adult glaucomas that have an occludable angle with peripheral anterior synechiae which are too few to account for the chronically raised IOP, or the glaucomatous optic neuropathy, do not fit the definition of either POAG or PACG and can be considered as combined mechanism glaucoma (CMG). We aimed to compare the clinical features and anatomical parameters of combined mechanism glaucoma with age, sex, and refraction-matched POAG and chronic PACG eyes.
METHODS: Consecutive adult patients with definitive optic nerve head and perimetric changes of glaucoma were screened at a tertiary care center. All glaucomatous eyes having an IOP >22 mmHg on at least three separate occasions and glaucomatous optic neuropathy consistent with moderate visual field loss in the eye were divided as POAG, PACG, and CMG. Eyes with occludable angles having <90° of goniosynechiae were diagnosed as CMG. A detailed clinical examination, ocular biometry, and ASOCT were performed in the better eye of all individuals.
RESULTS: A total of 93 patients with similar visual field index or pattern standard deviation on perimetry were evaluated: 32 POAG, 31 CMG, and 30 PACG. The mean anterior chamber depth was 3.47±0.37 mm in POAG, 2.81±0.32 mm in PACG, and 3.06±0.26 mm in CMG ($p<0.0001$). Mean lens thickness was 4.22±0.27 mm in POAG, 4.53±0.35 mm in PACG, and 4.44±0.29 mm in CMG ($p=0.0004$). Iridotrabecular contact on ASOCT was nil in POAG, a mean of 87.60±12.802% in PACG eyes, and 15.23±14.19% in CMG eyes, $p<0.0001$. CMG was similar to PACG in terms of corneal diameters and lens thickness and had an axial length in between PACG and POAG. On ASOCT, all parameters had highest values in POAG eyes and the least in PACG eyes, with CMG eyes having values in between the other two groups, p value of <0.0001 between each group for all parameters.
CONCLUSION: This study has demonstrated significantly different anatomical parameters in eyes with CMG, in addition to the differences on gonioscopy and iridotrabecular contact, indicating that CMG is discernibly dissimilar to PACG and POAG.

186: Singh A, Kumar R, Irugu DVK, Kumar R, Sagar P. Morphometric analysis of arcuate eminence: A distinctive landmark for middle cranial fossa approach. J

Craniomaxillofac Surg. 2018 Oct;46(10):1703-1706. doi: 10.1016/j.jcms.2018.07.013. Epub 2018 Jul 25. PubMed PMID: 30100384.

BACKGROUND: The arcuate eminence (AE) is a bony prominence on the middle fossa plate of the temporal bone, hypothesized to be variably associated with superior semicircular canal (SSC) relief, temporal lobe sulcus, and subjacent air cells. We present various morphometric parameters of the AE, as seen using a middle fossa approach.
MATERIALS AND METHODS: The study used 18 formalin-preserved cadaveric human temporal bones. Various morphological and morphometric parameters pertaining to topographic orientation of the AE in relation to surrounding landmarks used in a middle mossa approach were noted, before and after microdissection of the AE under a Leica M320 F12 microscope, using otologic microdrills and suction irrigation. The morphometric parameters were analyzed using ImageJ 1.46r software.
RESULTS: The overall incidence of AE was 83% (n = 15/18). The most common shape and pattern noted were linear (53.3%, 8/15) and dual arc (46.7%, 7/15), respectively. Mean angle between the AE and SSC was 19°, with a standard deviation of 15° and a range of 2-49°. The AE overlapped the SSC in 40% (6/15) of bones, and did not correspond to the SSC in 7% of cases. A partially overlapping positional correspondence was noted in 53.3% (8/15).
CONCLUSION: When present, the AE corresponds to the SSC in 40% of cases, but it can serve as a rough guide to the SSC in up to 93% of cases. Surgeons need to be familiar with the varying morphology of AEs in order to execute a rapid and safe dissection during middle fossa approaches.

187: Singh M, Prasad CP, Singh TD, Kumar L. Cancer research in India: Challenges & opportunities. Indian J Med Res. 2018 Oct;148(4):362-365. doi: 10.4103/ijmr.IJMR_1711_18. PubMed PMID: 30665997; PubMed Central PMCID: PMC6362726.

188: Singh MB. Telephonic review of patients with epilepsy - An underutilized resource. Epilepsy Behav. 2018 Oct;87:246. doi: 10.1016/j.yebeh.2018.08.015. Epub 2018 Aug 18. PubMed PMID: 30131225.

189: Singh NP, Makkar JK, Wourms V, Singh PM. Topical benzydamine for preventing postoperative sore throat. Anaesthesia. 2018 Oct;73(10):1297. doi: 10.1111/anae.14437. Erratum in: Anaesthesia. 2019 Jan;74(1):113. PubMed PMID: 30216428.

190: Singh PM, Borle A, Panwar R, Makkar JK, McGrath I, Trikha A, Sinha A. Perioperative antiemetic efficacy of dexamethasone versus 5-HT3 receptor antagonists: a meta-analysis and trial sequential analysis of randomized controlled trials. Eur J Clin Pharmacol. 2018 Oct;74(10):1201-1214. doi: 10.1007/s00228-018-2495-4. Epub 2018 Jun 1. Review. PubMed PMID: 29858921.

BACKGROUND: Dexamethasone has many desirable pharmacologic properties for perioperative use. Its antiemetic potential has been a focus of many recent trials.
METHODS: Trials comparing dexamethasone to 5-HT3-receptor antagonists (5HT3-RA) for 24 h postoperative vomiting incidences published till August 2017 were searched in the medical database. Comparisons for antiemetic efficiency variables (vomiting incidence, nausea incidence, rescue antiemetic need, and patients with complete response) during early (until 6 h) and late postoperative phase were made. Comparative analgesic requirements were also evaluated.
RESULTS: Twenty randomized controlled double-blinded trials were included in the final analysis. Twenty-four-hour vomiting incidence was similar (Fixed-effects, $P=0.86$, $I2=2.94\%$). Trial sequential analysis (TSA) confirmed non-inferiority of dexamethasone for 24-h vomiting incidence. ($\alpha=5\%$, $\beta=20\%$, $\delta=10\%$) with "information size" being 1619 (required >573). Equivalence was also verified from early and delayed nausea rate as well using TSA. Pooled results did not

demonstrate superiority/inferiority of 5-HT3-RAs over dexamethasone in all other antiemetic efficacy variables (early and delayed). Heterogeneity was found to be low in all of the comparisons. Linear-positive dose-response curve for dexamethasone 24-h vomiting and nausea incidence was seen (correlation coefficient being 0.21 and 0.28, respectively). Dexamethasone reduced the analgesic need (MH-odds of 0.64 (95% CI being 0.44 to 0.93) P=0.02, I2=0)). Possibility of publication bias could not be ruled out (Egger's test, X-intercept=1.41, P=0.04).
CONCLUSIONS: Dexamethasone demonstrates equal antiemetic efficacy compared to 5-HT3 receptor antagonists. The agents perform equally well both in early postoperative phase and up to 24 h after surgery. Use of dexamethasone replacing 5-HT3 RAs offers an additional advantage of lowering the opioid requirements during the perioperative period.

191: Singh S, Khandpur S, Agarwal S. Verruciform xanthoma overlying inflammatory linear verrucous epidermal nevus and in broad segmental distribution. BMJ Case Rep. 2018 Oct 17;2018. pii: bcr-2018-225964. doi: 10.1136/bcr-2018-225964. PubMed PMID: 30337284.

A 17-year-old woman presented with moderately itchy, non-progressive, linearly arranged verrucous plaques over dorsum of left foot since early childhood. Two years ago, she developed slowly increasing, verrucous exophytic growth in posterior most aspect of linear verrucous plaque. One year ago, she also developed multiple, linearly arranged, fleshy plaques with surface crusting over lateral aspect of right leg extending to thigh. Biopsy from both verrucous lesion on left foot and fleshy plaque on right leg showed an exophytic growth with significant papillomatosis, neutrophils in stratum corneum, acanthosis and infiltration of papillary dermis with foamy macrophages that were CD 68 positive, features compatible with verruciform xanthoma (VX). Biopsy from linear verrucous plaque over left foot was consistent with inflammatory linear verrucous epidermal nevus (ILVEN). A diagnosis of segmental VX and VX overlying ILVEN was made.

192: Sofi R, Qureshi T, Gupta V. Electric cataracts: a cause of bilateral blindness in Kashmir. Eye (Lond). 2018 Oct;32(10):1676-1677. doi: 10.1038/s41433-018-0128-x. Epub 2018 May 23. PubMed PMID: 29795130; PubMed Central PMCID: PMC6189119.

193: Suhani. Harmonic scalpel versus conventional diathermy: Is one really better than the other? Indian J Cancer. 2018 Oct-Dec;55(4):359-360. doi: 10.4103/ijc.IJC_551_18. PubMed PMID: 30829270.

194: Takkar B, Goel G, Rathi A, Dube M. Atypical histopathology findings in presumed epibulbar cysticercosis. BMJ Case Rep. 2018 Oct 21;2018. pii: bcr-2018-227534. doi: 10.1136/bcr-2018-227534. PubMed PMID: 30344162.

195: Takkar B, Saxena H, Sharma B, Rathi A. Generalised nevus flammeus, episcleral capillary malformation and glaucoma. BMJ Case Rep. 2018 Oct 21;2018. pii: bcr-2018-227248. doi: 10.1136/bcr-2018-227248. PubMed PMID: 30344159.

196: Takkar B, Venkatesh P, Gaur N, Garg SP, Vohra R, Ghose S. Patterns of uveitis in children at the apex institute for eye care in India: analysis and review of literature. Int Ophthalmol. 2018 Oct;38(5):2061-2068. doi: 10.1007/s10792-017-0700-6. Epub 2017 Aug 31. Review. PubMed PMID: 28861733.

AIM: To study patterns of uveitis in Indian children and compare with data sets published earlier in the literature.
METHODS: Consecutive patients below 16 years of age presenting to the uvea clinic of a tertiary eye care center were included prospectively through the period of July 2009-August 2013. Children with retinal vasculitis, exogenous endophthalmitis and masquerade syndromes were excluded from analysis. Uveitis was

classified as per the nomenclature system adopted by the International Uveitis Study Group. Hemogram, Mantoux test and chest X-ray were done for each patient, along with tailored investigations and pediatric review as per clinical profile. Clinical pattern and etiology were the main outcome measures.
RESULTS: One hundred and thirty-four children were analyzed. Anterior uveitis (40%) was the commonest pattern followed by intermediate uveitis (25%), panuveitis (18%) and posterior uveitis (17%). Bilateral disease was present in 54%, 15% had infectious uveitis, 10% had granulomatous uveitis and 54% had idiopathic uveitis. Complications were present in half of the patients. Juvenile idiopathic arthritis (22), followed by toxoplasmosis (10) and tuberculosis (5), was the commonest etiology. Intermediate uveitis, non-granulomatous inflammation and older onset of disease had the high odds ratio of having idiopathic disease.
CONCLUSION: Patterns of pediatric uveitis can vary between regions from even within the same geopolitical region. Anterior uveitis is commonest, and juvenile idiopathic arthritis and toxoplasmosis are the most frequent etiologies. Diagnosis of pediatric ocular tuberculosis is more difficult than in adults and needs better and well-defined criteria.

197: Takkar B, Saxena H, Rathi A, Singh R. Autoimmune thyroiditis and central serous chorioretinopathy may have a relation. Med Hypotheses. 2018 Dec;121:180-182. doi: 10.1016/j.mehy.2018.10.003. Epub 2018 Oct 6. PubMed PMID: 30396476.

Autoimmune thyroiditis (AT) is an important cause of hypothyroidism, and central serous chorioretinopathy (CSCR) is an independent disease of the choroid and retina that leads to accumulation of fluid beneath the retina. While AT has been associated with multiple antibodies, CSCR is still regarded as idiopathic despite extensive research. We hypothesize a causative association between these 2 conditions on the basis of our experience of a case where both CSCR and AT presented simultaneously and depicted a parallel course. CSCR was documented with retinal imaging while AT was documented with serum antibody titers. Further, we discuss the possible mechanisms that may be involved in this intriguing association.

198: Talwar S, Mathew AB, Bhoje A, Makhija N, Choudhary SK, Airan B. Extracardiac Fontan With Direct Inferior Vena Cava to Main Pulmonary Artery Connection Without Cardiopulmonary Bypass. World J Pediatr Congenit Heart Surg. 2018 Oct 10:2150135118765870. doi: 10.1177/2150135118765870. [Epub ahead of print] PubMed PMID: 30304976.

199: Talwar S, Gupta A, Choudhary SK. d-transposition of great arteries, dextrocardia with aberrant origin of right subclavian artery from pulmonary artery. J Card Surg. 2018 Oct;33(10):691-692. doi: 10.1111/jocs.13812. Epub 2018 Sep 11. PubMed PMID: 30206995.

200: Talwar S, Chigurupati BS, Choudhary SK. Ruptured sinus of Valsalva aneurysm with tetralogy of Fallot in an adult. J Card Surg. 2018 Oct;33(10):688-690. doi: 10.1111/jocs.13803. Epub 2018 Sep 2. PubMed PMID: 30175470.

201: Tan D, Lee JH, Chen W, Shimizu K, Hou J, Suzuki K, Nawarawong W, Huang SY, Sang Chim C, Kim K, Kumar L, Malhotra P, Chng WJ, Durie B; Asian Myeloma Network. Recent advances in the management of multiple myeloma: clinical impact based on resource-stratification. Consensus statement of the Asian Myeloma Network at the 16th international myeloma workshop. Leuk Lymphoma. 2018 Oct;59(10):2305-2317. doi: 10.1080/10428194.2018.1427858. Epub 2018 Feb 2. PubMed PMID: 29390932.

Predicated on our improved understanding of the disease biology, we have seen remarkable advances in the management of multiple myeloma over the past few years. Recently approved drugs have radically transformed the treatment paradigm and improved survivals of myeloma patients. The progress has necessitated revision of the diagnostic criteria, risk-stratification and response definition. The huge disparities in economy, healthcare infrastructure and access to novel

drugs among different Asian countries will hinder the delivery of optimum myeloma care to patients managed in resource-constrained environments. In the light of the tremendous recent changes and evolution in myeloma management, it is timely that the resource-stratified guidelines from the Asian Myeloma Network be revised to provide updated recommendations for Asia physicians practicing under various healthcare reimbursement systems. This review will highlight the most recent advances and our recommendations on how they could be integrated in both resource-abundant and resource-constrained facilities.

202: Thakran S, Gupta PK, Kabra V, Saha I, Jain P, Gupta RK, Singh A. Characterization of breast lesion using T(1)-perfusion magnetic resonance imaging: Qualitative vs. quantitative analysis. Diagn Interv Imaging. 2018 Oct;99(10):633-642. doi: 10.1016/j.diii.2018.05.006. Epub 2018 Jun 14. PubMed PMID: 29910171.

OBJECTIVES: The objective of this study was to quantify the hemodynamic parameters using first pass analysis of T1-perfusion magnetic resonance imaging (MRI) data of human breast and to compare these parameters with the existing tracer kinetic parameters, semi-quantitative and qualitative T1-perfusion analysis in terms of lesion characterization.
MATERIALS AND METHODS: MRI of the breast was performed in 50 women (mean age, 44±11 [SD] years; range: 26-75) years with a total of 15 benign and 35 malignant breast lesions. After pre-processing, T1-perfusion MRI data was analyzed using qualitative approach by two radiologists (visual inspection of the kinetic curve into types I, II or III), semi-quantitative (characterization of kinetic curve types using empirical parameters), generalized-tracer-kinetic-model (tracer kinetic parameters) and first pass analysis (hemodynamic-parameters). Chi-squared test, t-test, one-way analysis-of-variance (ANOVA) using Bonferroni post-hoc test and receiver-operating-characteristic (ROC) curve were used for statistical analysis.
RESULTS: All quantitative parameters except leakage volume (Ve), qualitative (type-I and III) and semi-quantitative curves (type-I and III) provided significant differences ($P<0.05$) between benign and malignant lesions. Kinetic parameters, particularly volume transfer coefficient (Ktrans) provided a significant difference ($P<0.05$) between all grades except grade-II vs III. The hemodynamic parameter (relative-leakage-corrected-breast-blood-volume [rBBVcorr) provided a statistically significant difference ($P<0.05$) between all grades. It also provided highest sensitivity and specificity among all parameters in differentiation between different grades of malignant breast lesions.
CONCLUSION: Quantitative parameters, particularly rBBVcorr and Ktrans provided similar sensitivity and specificity in differentiating benign from malignant breast lesions for this cohort. Moreover, rBBVcorr provided better differentiation between different grades of malignant breast lesions among all the parameters.

203: Tolahunase MR, Sagar R, Dada R. 5-HTTLPR and MTHFR 677C>T polymorphisms and response to yoga-based lifestyle intervention in major depressive disorder: A randomized active-controlled trial. Indian J Psychiatry. 2018 Oct-Dec;60(4):410-426. doi: 10.4103/psychiatry.IndianJPsychiatry_398_17. PubMed PMID: 30581206; PubMed Central PMCID: PMC6278208.

Background: There is growing evidence suggesting that both genetic and environmental factors modulate treatment outcome in, a highly heterogeneous, major depressive disorder (MDD). 5-HTTLPR variant of the serotonin transporter gene (SLC6A4) and MTHFR 677C>T polymorphisms have been linked to the pathogenesis of MDD, and antidepressant treatment response. The evidence is lacking on the clinical utility of yoga in patients with MDD who have 5-HTTLPR and MTHFR 677C>T polymorphisms and less likely to respond to medications (SSRIs).
Aims: We aimed to examine the impact of YBLI in those who have susceptible 5-HTTLPR and MTHFR 677C>T polymorphisms and are less likely to drug therapy with SSRIs.
Settings and Design: In a 12 week randomized active-controlled trial, MDD

patients (n = 178) were randomized to receive YBLI or drug therapy.
Methods: Genotyping was conducted using PCR-based methods. The clinical remission was defined as BDI-II score ≤ 9.
Statistical Analysis Used: An intent-to-treat analysis was performed, and the association of genotype with treatment remission consisted of the logistic regression model. A P value of <0.05 was considered statistically significant.
Results: Multivariate logistic regression models for remission including either 5-HTTLPR or MTHFR 677C>T genotypes showed statistically significant odds of remission in YOGA arm vs. DRUG arm. Neither 5-HTTLPR nor MTHFR 677C>T genotype showed any influence on remission to YBLI (P = 0.73 and P = 0.64, respectively). Further analysis showed childhood adversity interact with 5-HTTLPR and MTHFR 677C>T polymorphisms to decrease treatment response in DRUG treatment arm, but not in YOGA arm.
Conclusions: YBLI provides MDD remission in those who have susceptible 5-HTTLPR and MTHFR 677C>T polymorphisms and are resistant to SSRIs treatment. YBLI may be therapeutic for MDD independent of heterogeneity in its etiopathogenesis.

204: Tomar GS, Singh GP, Lahkar D, Sengar K, Nigam R, Mohan M, Anindya R. New biomarkers in brain trauma. Clin Chim Acta. 2018 Dec;487:325-329. doi: 10.1016/j.cca.2018.10.025. Epub 2018 Oct 19. Review. PubMed PMID: 30342876.

Brain-specific biomolecules are being increasingly investigated as a viable alternative to the clinical scores and radiological features, on which we still rely upon for stratification, therapy and predicting outcome in traumatic brain injury (TBI). TBI generally leads to release of various chemical compound within the cerebrospinal fluid (CSF) or blood depending on the severity of injury, which were studied variedly in last decades. However, most of these compounds being non-specific to brain, their applicability was challenged further. This review encompasses the novel and promising biomarkers being studied in the present decade, with encouraging results in laboratory and animal or human models.

205: Tripathi P, Gupta A, Tyagi S. Compound Heterozygote of Hb D-Punjab and Hb D-Iran; An Interesting Finding. Indian J Hematol Blood Transfus. 2019 Jan;35(1):172-173. doi: 10.1007/s12288-018-1021-2. Epub 2018 Oct 1. PubMed PMID: 30828167; PubMed Central PMCID: PMC6369074.

206: Tullus K, Webb H, Bagga A. Management of steroid-resistant nephrotic syndrome in children and adolescents. Lancet Child Adolesc Health. 2018 Dec;2(12):880-890. doi: 10.1016/S2352-4642(18)30283-9. Epub 2018 Oct 18. Review. PubMed PMID: 30342869.

More than 85% of children and adolescents (majority between 1-12 years old) with idiopathic nephrotic syndrome show complete remission of proteinuria following daily treatment with corticosteroids. Patients who do not show remission after 4 weeks' treatment with daily prednisolone are considered to have steroid-resistant nephrotic syndrome (SRNS). Renal histology in most patients shows presence of focal segmental glomerulosclerosis, minimal change disease, and (rarely) mesangioproliferative glomerulonephritis. A third of patients with SRNS show mutations in one of the key podocyte genes. The remaining cases of SRNS are probably caused by an undefined circulating factor. Treatment with calcineurin inhibitors (ciclosporin and tacrolimus) is the standard of care for patients with non-genetic SRNS, and approximately 70% of patients achieve a complete or partial remission and show satisfactory long-term outcome. Additional treatment with drugs that inhibit the renin-angiotensin axis is recommended for hypertension and for reducing remaining proteinuria. Patients with SRNS who do not respond to treatment with calcineurin inhibitors or other immunosuppressive drugs can show declining kidney function and are at risk for end-stage renal failure. Approximately a third of those who undergo renal transplantation show recurrent focal segmental glomerulosclerosis in the allograft and often respond to combined treatment with plasma exchange, rituximab, and intensified immunosuppression.

207: Vaidyanathan S, Menon V, Sarkar S. Identifying patient profiles suitable for

cognitive behavior Therapy: The role of psychological mindedness. J Neurosci Rural Pract. 2018 Oct-Dec;9(4):654-655. doi: 10.4103/jnrp.jnrp_100_18. PubMed PMID: 30271073; PubMed Central PMCID: PMC6126311.

208: Vallonthaiel AG, Yadav R, Jain D, Mathur SR, Iyer VK. Mucinous adenocarcinoma of gallbladder: Subcategorisation on fine-needle aspiration cytology. Diagn Cytopathol. 2019 Feb;47(2):110-113. doi: 10.1002/dc.24102. Epub 2018 Oct 30. PubMed PMID: 30375181.

BACKGROUND: Mucinous adenocarcinoma (MC) of gallbladder is a rare histological subtype of gallbladder carcinoma (CaGB) which presents at an advanced stage and is associated with a poor prognosis compared to the conventional CaGB. This variant has been described mostly as reports or series, except for a single detailed histological and immunohistochemical analysis. Till date, there are no studies describing the cytomorphology of MC in detail. Hence, we undertook this study to analyse the cytomorphological features of MC.
METHODS: A retrospective cytomorphological analysis was performed on MC identified out of all CaGB diagnosed on cytology over a period of last 4 years. The architectural and cellular features were recorded in a structured proforma.
RESULTS: Thirty-three cases (33/987, 3.3%) were identified as MC. Extracellular mucin >90% was seen only in 3 cases whereas the remaining 30 had 50%-90% mucin. The predominant architectural pattern was tight epithelial fragments (14/33). The tumour cells were mostly of intermediate size (31/33) and had moderate amount of cytoplasm (31/33). Majority of the cases showed moderate nuclear pleomorphism (28/33) and nuclear chromatin was fine granular (17/33) or vesicular (14/33). Most of the cases had single and small nucleoli (26/33). Presence of inflammation composed predominantly of polymorphs was noted in 25 cases. Majority of the cases showed no (15/33) or scant necrosis (13/33).
CONCLUSION: The morphological features of MC can very well be demonstrated on cytology. As they are associated with poor prognosis compared to conventional CaGB, cytopathologists should try to document the subtype.

209: Varshney A, Dhua AK, Jain V, Agarwala S, Bhatnagar V. Whipple's Pancreaticoduodenectomy in Pediatric Patients: An Experience from a Tertiary Care Center. J Indian Assoc Pediatr Surg. 2018 Oct-Dec;23(4):212-215. doi: 10.4103/jiaps.JIAPS_35_18. PubMed PMID: 30443117; PubMed Central PMCID: PMC6182939.

Purpose: Whipple's pancreaticoduodenectomy (WPD) is rarely required in children. However, WPD is the only option with pathologies involving the head of the pancreas requiring surgical excision. The objective of our study was to review our experience with WPD performed on children.
Materials and Methods: A retrospective analysis of case records was conducted on all patients <18 years of age, who underwent WPD at our center over the last 20 years. Data regarding demographics, signs, and symptoms at presentation, diagnostic imaging and procedures, pathologic reports, surgical and medical treatment, and follow-up were collected to study the indications and safety and outcomes of WPD in children.
Results: Five patients had been planned for a WPD during the study (1995-2015); but in one patient, the procedure was abandoned, the rest four patients formed the study group. Male to female ratio was 3:1. Median age at the time of surgery was 9 years (11 months-12 years). The most common presentation was obstructive jaundice (50%, 2/4). Radiological imaging was able to accurately predict the surgical procedure required in all except one case. The mean operating time was 205 min (180-240 min). There were no intraoperative complications. The mean intraoperative blood loss was 85 mL (20-150 mL). The youngest patient requiring WPD was an 11-month-old child. Oral feeding was established by the 7th postoperative day (range 5-7 days) in all cases. There were no cases of anastomotic leak or pancreatic or jejunal fistulae. One patient developed features of subacute intestinal obstruction after discharge and required re-exploration. There was no intra- or post-operative mortality.
Conclusion: WPD is safe and efficacious procedure in a selected group of

children. The overall efficacy of surgical treatment combined with the relatively low severity of complications leads us to recommend WPD in children when indicated.

210: Vashist A, Malhotra V, Sharma G, Tyagi JS, Clark-Curtiss JE. Interplay of PhoP and DevR response regulators defines expression of the dormancy regulon in virulent Mycobacterium tuberculosis. J Biol Chem. 2018 Oct 19;293(42):16413-16425. doi: 10.1074/jbc.RA118.004331. Epub 2018 Sep 4. PubMed PMID: 30181216; PubMed Central PMCID: PMC6200940.

The DevR response regulator of Mycobacterium tuberculosis is an established regulator of the dormancy response in mycobacteria and can also be activated during aerobic growth conditions in avirulent strains, suggesting a complex regulatory system. Previously, we reported culture medium-specific aerobic induction of the DevR regulon genes in avirulent M. tuberculosis H37Ra that was absent in the virulent H37Rv strain. To understand the underlying basis of this differential response, we have investigated aerobic expression of the Rv3134c-devR-devS operon using M. tuberculosis H37Ra and H37Rv devR overexpression strains, designated as LIX48 and LIX50, respectively. Overexpression of DevR led to the up-regulation of a large number of DevR regulon genes in aerobic cultures of LIX48, but not in LIX50. To ascertain the involvement of PhoP response regulator, also known to co-regulate a subset of DevR regulon genes, we complemented the naturally occurring mutant phoPRa gene of LIX48 with the WT phoPRv gene. PhoPRv dampened the induced expression of the DevR regulon by >70-80%, implicating PhoP in the negative regulation of devR expression. Electrophoretic mobility shift assays confirmed phosphorylation-independent binding of PhoPRv to the Rv3134c promoter and further revealed that DevR and PhoPRv proteins exhibit differential DNA binding properties to the target DNA. Through co-incubations with DNA, ELISA, and protein complementation assays, we demonstrate that DevR forms a heterodimer with PhoPRv but not with the mutant PhoPRa protein. The study puts forward a new possible mechanism for coordinated expression of the dormancy regulon, having implications in growth adaptations critical for development of latency.

211: Velpandian T, Halder N, Nath M, Das U, Moksha L, Gowtham L, Batta SP. Un-segregated waste disposal: an alarming threat of antimicrobials in surface and ground water sources in Delhi. Environ Sci Pollut Res Int. 2018 Oct;25(29):29518-29528. doi: 10.1007/s11356-018-2927-9. Epub 2018 Aug 22. PubMed PMID: 30136185.

Exposure of active pharmaceutical compounds (APCs) to the environment during human use is of potential importance in the emergence of drug resistance, changing soil microbiota and their residual effect on living organisms. Thus, this study aimed to assess the extent of exposure of APCs in the hydrologic cycle in and around New Delhi. This study analyzed the presence of 28 drugs from different classes in the surface water (river Yamuna) and aquifers collected from 48 places in Delhi (within the radius of 40 km). The collected water samples were quantified for APCs content using LC-MS/MS. This study revealed that aquifers are extensively affected in most areas based on the accumulation of APCs in water resources to the levels >0.01 μg/L. Interestingly, a geographical plot of total APCs studied indicated clustering in aquifers with such high levels closer to an unscientific landfill. This 30-year-old un-segregated landfill is found to drain leachate into surface water that had high APCs. This study further revealed that apart from therapeutic usage, the main source of ecological exposure could be due to the disposal of unused and expired pharmaceutical compounds into landfills. For the first time, this study revealed the existence of antimicrobial agents and other APCs in the aquifers of Delhi with levels >0.1 μg/L, which is a matter of serious concern in terms of multi-drug resistance and other environmental perils. This study warrants the enforcement of regulations for the disposal of unused/expired APCs in high-density population areas.

212: Verma P, Kureel AK, Saini S, Prakash S, Kumari S, Kottarath SK, Srivastava SK, Bhat M, Dinda AK, Thakur CP, Sharma S, Rai AK. Leishmania donovani reduces the levels of retinoic acid-synthesizing enzymes in infected macrophages and favoring its own survival. Parasitol Res. 2019 Jan;118(1):63-71. doi: 10.1007/s00436-018-6115-0. Epub 2018 Oct 18. PubMed PMID: 30338372.

People suffering from malnutrition become susceptible to the infection like Leishmania sp., as it results in a compromised immune response. Retinoic acid (RA), an important constituent of nutrition, shows an immune-modulatory activity. However, its role in the containment of infection is not yet ascertained, particularly in case of visceral leishmaniasis (VL). VL patients (n = 10) and healthy endemic controls (n = 9) were recruited to measure the serum levels of RA. An in vitro model of Leishmania infection using the murine mφ cell line J774.1 was used to investigate the RA-synthesizing enzymes (RALDH-1 and RALDH-2). Parasite loads among infected mφ were measured by quantitative expression of kDNA in the presence of an inhibitor of the RALDH-2 enzyme. We found a significant decrease in the serum levels of RA in VL cases. Importantly, we observed decreased levels of RALDH-1 and RALDH-2 among L. donovani-infected mφ along with simultaneous decrease as well as increase in the Th-1 and Th-2-associated factors, respectively. Furthermore, the pretreatment of mφ with an RALDH-2 inhibitor improved parasite in vitro infection. Our findings show impaired RA pathway among infected mφ and indicate that an intact RA pathway is critical for anti-Leishmania immune response. Graphical abstract .

213: Verma R, Kumar N, Mahapatra A, Shah B. Effectiveness of tDCS augmentation for co-morbid obsessive compulsive disorder in chronic schizophrenia: A case report. Asian J Psychiatr. 2018 Dec;38:9-11. doi: 10.1016/j.ajp.2018.10.013. Epub 2018 Oct 11. PubMed PMID: 30359846.

Management of obsessive compulsive disorder (OCD) remains a challenge, particularly in individuals having co-existing psychotic symptoms. Even in patients with schizophrenia having a fair to good response in psychotic symptoms, these obsessive-compulsive symptoms defy response to antipsychotic and anti-obsessive pharmaco-therapeutic approach to a great extent. Recently developed neuromodulation techniques such as transcranial direct current stimulation (tDCS) can serve a viable and effective approach to manage such cases. The present paper documents the first utilization of tDCS (cathode: supplementary motor area; anode: right occipital cortex) as an add-on approach to pharmacotherapy to manage co-morbid OCD in a case of chronic schizophrenia.

214: Vignarajan CP, Malhotra N, Singh N. Ovarian Reserve and Assisted Reproductive Technique Outcomes After Laparoscopic Proximal Tubal Occlusion or Salpingectomy in Women with Hydrosalpinx Undergoing in Vitro Fertilization: A Randomized Controlled Trial. J Minim Invasive Gynecol. 2018 Oct 24. pii: S1553-4650(18)31318-9. doi: 10.1016/j.jmig.2018.10.013. [Epub ahead of print] PubMed PMID: 30366115.

STUDY OBJECTIVE: To evaluate the outcomes of assisted reproductive technology (ART) after proximal tubal occlusion (PTO) or salpingectomy in patients with hydrosalpinx undergoing in vitro fertilization-embryo transfer (IVF-ET).
DESIGN: Randomized controlled trial (Canadian Task Force classification I).
SETTING: All India Institute of Medical Sciences, New Delhi, India.
PATIENTS: A total of 165 patients were randomized and subsequently allocated to a PTO group (n = 83) or a salpingectomy group (n = 82).
INTERVENTIONS: PTO and salpingectomy.
MEASUREMENTS AND MAIN RESULTS: Following surgery, compared with the PTO group, the salpingectomy group showed significant decreases in the ovarian reserve parameters serum anti-Müllerian hormone (AMH; 3.7 ng/mL vs 2.6 ng/mL; $p < .001$) and antral follicle count (AFC; 10.6 vs 8.6; $p < .001$). The salpingectomy group also required a significantly higher dose of gonadotropins (3901 vs 3260; $p < .001$) and more days of stimulation (11.3 vs 10.2; $p < .001$) compared with the PTO

group. The salpingectomy group had a significantly lower fertilization rate (0.74 vs 0.83; p < .001) and a lower number of grade 1 embryos (4.1 vs 5.6; p = .02); however, there was no significant difference between the 2 groups with respect to rates of implantation (22.8% vs 23.7%; p = .87), clinical pregnancy (26.3% vs 33.7%, p = .25), live birth (27.5% vs 32.5%; p = .42), and miscarriage (4.7% vs 3.5%; p = .90) CONCLUSIONS: PTO is a superior to salpingectomy for the surgical management of patients with hydrosalpinx undergoing IVF-ET in terms of ovarian reserve. However, the 2 surgical techniques are associated with comparable pregnancy rates.

215: Vijay G, Mandal A, Sankar J, Kapil A, Lodha R, Kabra SK. Ventilator Associated Pneumonia in Pediatric Intensive Care Unit: Incidence, Risk Factors and Etiological Agents. Indian J Pediatr. 2018 Oct;85(10):861-866. doi: 10.1007/s12098-018-2662-8. Epub 2018 Apr 4. PubMed PMID: 29616405.

OBJECTIVES: To study the incidence, etiology and risk factors associated with ventilator associated pneumonia (VAP) in children.
METHODS: This prospective cohort study was conducted on patients admitted to the Pediatric Intensive Care Unit (PICU) of a tertiary care institute of North India, from June 2012 through March 2014, who received mechanical ventilation for more than 24 h. All enrolled children were assessed daily for development of ventilator associated pneumonia (VAP) using the case definition given by Centers for Disease Control and Prevention (CDC). Chest radiograph and microbiologic samplings were performed in children suspected to have VAP. Risk factors associated with VAP were calculated by doing bivariate and multivariate analysis.
RESULTS: A total of 128 patients were screened and 86 were enrolled (median age 30 mo 95% CI 4.0-84.0; 72% boys). The most common admitting diagnosis was sepsis (16%) followed by acyanotic congenital heart disease with pneumonia (14%) and the most common indication for ventilation was respiratory failure (45.3%). The incidence of VAP according to CDC criteria was 38.4%, while the incidence of microbiologically confirmed VAP was 24.4%. The incidence of ventilator associated tracheobronchitis (VAT) was found to be 11.6%. Acinetobacter was the most frequently isolated organism (47%) followed by Pseudomonas (28%), Klebsiella (15%), E. coli (5%) and Enterobacter (5%). Risk factors for VAP on bivariate analysis were use of proton pump inhibitor (PPI) (p = 0.027, OR 5.2, 95% CI 1.1-24.3), enteral feeding (p < 0.001, OR 6.5, 95% CI 2.1-19.4) and re-intubation (p = 0.024, OR 3.3 and 95% CI 1.1-9.6). On multivariate analysis, use of PPI (p = 0.03, OR 8.47, 95% CI 1.19-60.33) and enteral feeding (p < 0.001, OR 12.2, 95% CI 2.58-57.78) were identified as independent risk factors for VAP.
CONCLUSIONS: Ventilator associated pneumonia is an important complication in children receiving mechanical ventilation in PICU and Gram negative bacilli (Acinetobacter and Pseudomonas) being the important causative agents. Ventilator associated tracheobronchitis is an emerging entity; recognition and treatment of same might prevent the development of VAP.

216: Vispute T; Suhani, Seenu V, Parshad R, Hari S, Thulkar S, Mathur S. Comparison of resection margins and cosmetic outcome following intraoperative ultrasound-guided excision versus conventional palpation-guided breast conservation surgery in breast cancer: A randomized controlled trial. Indian J Cancer. 2018 Oct-Dec;55(4):361-365. doi: 10.4103/ijc.IJC_2_18. PubMed PMID: 30829271.

INTRODUCTION: Use of intraoperative ultrasound (IOUS) has been shown to help achieve satisfactory cosmesis and negative margins in breast conserving surgery (BCS). This study has been done to compare the oncological and cosmetic outcomes following BCS using conventional palpatory method and IOUS.
MATERIALS AND METHODS: This is a prospective randomized controlled trial conducted at a tertiary care teaching and research institute in India. Patients with early operable breast cancer willing for BCS were included. Tumors were excised with 1 cm margin. In palpatory group, tumor was palpated and 1 cm margin

was taken with a measuring scale while in the second group, IOUS was used to mark the margins. Histopathological evaluation was done to assess margins and cosmesis was assessed by patient, resident doctor, and nurse independently.
RESULTS: Sixty patients were included, 32 in the ultrasonography-guided and 28 in palpation-guided wide local excision. The mean age of patients was 48.78 years. In both groups, mean tumor size was 3.18 cm. Margin thickness and positivity was higher in palpatory group (though P > 0.05). Most patients were satisfied with cosmesis. There was no significant difference in complications and specimen volume in both groups. Presence of ductal carcinoma in situ component and expression of Her2neu by tumor cells had a significant impact on margin positivity.
CONCLUSIONS: Intraoperative use of ultrasound offers a real-time assessment of margin status and may reduce the margin positivity rate compared to conventional palpation-guided method.

217: Viswanathan S, Hung SKY, Goyal V, Apiwattanakul M, Thirugnanam UN, Abdullah S, Aye SMM, Ohnmar O, Si LT, Keosodsay S, Estiasari R, Khalife N, Hiew FL. Second regional plasmapheresis conference and workshop for Southeast Asia (SEA) on the immunomodulatory role of plasma exchange in central and peripheral nervous system disorders, Kuala Lumpur, Malaysia, 9th December 2017. J Clin Apher. 2018 Oct;33(5):559-568. doi: 10.1002/jca.21630. Epub 2018 Apr 6. Review. PubMed PMID: 29626354.

In December 2017, 79 delegates attended the 2nd regional plasmapheresis conference and workshop for Southeast Asia (SEA) on the immunomodulatory role of plasma exchange in central and peripheral nervous system disorders in Kuala Lumpur, Malaysia. This meeting featured 6 plenary lectures, interactive sessions dedicated for experience sharing, case presentations, and a practical session for paramedics. Clinical experts and researchers from 7 SEA countries and India shared experience and challenges in treating autoimmune neurological disorders. While the spectrum of diseases and neurology practice remained largely similar, there was great disparities in accessibility of therapeutic plasma exchange (TPE) within SEA countries and between urban or rural settings. Costs, human resources, and healthcare policies are common challenges in providing sustainable TPE services. Novel techniques and innovative ideas in performing TPE were explored. A working consortium comprising of key opinion leaders was proposed to improve standards of TPE and enhance future research.

218: Yadav D, Agarwal S, Sharma A, Malik E, Kandasamy D, Thakar A, Yadav R, Barward A, Kini L. Synovial sarcoma masquerading as medullary thyroid carcinoma. Cytopathology. 2018 Oct;29(5):468-470. doi: 10.1111/cyt.12582. Epub 2018 Jul 18. PubMed PMID: 29873853.

219: Yadav VS, Das BK, Gautam H, Sood S, Kapil A, Mohapatra S. Chryseobacterium indologenes: An emerging uropathogen among hematological malignancy patients. South Asian J Cancer. 2018 Oct-Dec;7(4):218. doi: 10.4103/sajc.sajc_53_18. PubMed PMID: 30430085; PubMed Central PMCID: PMC6190398.

220: Yagnick NS, Singh R, Tripathi M, Mohindra S, Deora H, Suri A, Gupta SK. Need for Grass Root Innovation in Developing Countries: Case for Stationary Binder Clips in Scalp Hemostasis. World Neurosurg. 2019 Jan;121:222-226. doi: 10.1016/j.wneu.2018.09.182. Epub 2018 Oct 4. PubMed PMID: 30292660.

OBJECTIVE: The primary training in any surgical practice starts with tissue handling and effective hemostasis. Neurosurgical procedures start with an incision in the scalp and require summative use of mechanical hemostats and bipolar coagulation to achieve hemostasis. Though Raney clips are the most popular and effective in maintaining hemostasis, their high cost and nonreusability become deterrents for routine use in resource-stricken environments.
METHODS: We have compared stationery binder clips of different sizes with Raney clips on the parameters of effectiveness, availability, and cost. Binder clips

were also used in intraoperative settings for scalp hemostasis. The comparative efficacy, additional usage of cautery, and need for sterilization are also discussed.
RESULTS: We describe our experience with simple stationery metal binder clips in maintaining effective hemostasis in a cost-effective manner. The 25-mm size binder clip exerts same force as a Raney clip without any tissue injury. Practical application revealed effective scalp hemostasis up to blood pressure of 150 mm Hg.
CONCLUSIONS: Stationery binder clips are a cost-effective, ready-to-use alternative for standard Raney clips.

221: Yenamandra VK, Vellarikkal SK, Chowdhury MR, Jayarajan R, Verma A, Scaria V, Sivasubbu S, Ray SB, Dinda AK, Kabra M, Sharma VK, Sethuraman G. Genotype-Phenotype Correlations of Dystrophic Epidermolysis Bullosa in India: Experience from a Tertiary Care Centre. Acta Derm Venereol. 2018 Oct 10;98(9):873-879. doi: 10.2340/00015555-2929. PubMed PMID: 29963685.

Recent advances in the field of genomics have seen the successful implementation of whole exome sequencing as a rapid and efficient diagnostic strategy in several genodermatoses. The aim of this study was to explore the potential of molecular studies in dystrophic epidermolysis bullosa (DEB) in India. Whole exome sequencing was performed using genomic DNA from each case of epidermolysis bullosa, followed by massively parallel sequencing. Resulting reads were mapped to the human reference genome hg19. Sanger sequencing subsequently confirmed the potentially pathogenic mutations. Whole exome sequencing of 18 patients with DEB from 17 unrelated Indian families revealed 20 distinct sequence variants in the COL7A1 gene including 2 widely prevalent mutations. Dominant inheritance was seen in 7 patients, while 11 patients showed a highly variable recessive DEB. This preliminary study using exome sequencing is clearly encouraging and will serve as the basis for future large-scale molecular studies to actively identify and understand DEB in the Indian population.

222: Zeitler P, Arslanian S, Fu J, Pinhas-Hamiel O, Reinehr T, Tandon N, Urakami T, Wong J, Maahs DM. ISPAD Clinical Practice Consensus Guidelines 2018: Type 2 diabetes mellitus in youth. Pediatr Diabetes. 2018 Oct;19 Suppl 27:28-46. doi: 10.1111/pedi.12719. PubMed PMID: 29999228.