List of publications of AIIMS, New Delhi for the month of September, 2018 [Source: www.pubmed.com].

1: Adhikari N, Biswas A, Bakhshi S, Khanna G, Suri V. A rare case of paediatric primary central nervous system lymphoma treated with high-dose methotrexate and rituximab-based chemoimmunotherapy and whole brain radiotherapy followed by tumour bed boost with three-dimensional conformal radiation technique. Childs Nerv Syst. 2018 Sep;34(9):1777-1783. doi: 10.1007/s00381-018-3807-9. Epub 2018 May 9. PubMed PMID: 29744624.

BACKGROUND: Primary central nervous system lymphomas (PCNSL) are rare in the paediatric population.
CLINICAL CASE: A 12-year-old boy presented to our clinic with complaints of multiple episodes of generalised tonic-clonic seizures for 1 year and gradual loss of vision in both eyes for 3 months. Baseline magnetic resonance imaging (MRI) of the brain showed a large (7.2×7 cm) enhancing soft tissue lesion in the right frontal lobe causing mass effect and midline shift. With a radiological diagnosis of supratentorial primitive neuroectodermal tumour, he underwent subtotal resection of tumour. The post-operative histopathology revealed diffuse large B cell lymphoma (DLBCL). Systemic lymphoma workup was essentially normal. He received five cycles of chemoimmunotherapy with rituximab, high-dose methotrexate (HDMTX), vincristine and procarbazine and had complete radiological response (CR). This was followed by whole brain radiotherapy (WBRT) to a dose of 36 Gy in 20 fractions and sequential tumour bed boost to a dose of 9 Gy in 5 fractions by three-dimensional conformal technique. Subsequently, he received two cycles of consolidation chemotherapy with high-dose cytarabine. At completion of treatment, 3 and 6 months thereafter, MRI brain showed CR. At last follow-up visit, 13 months from the date of diagnosis, he was disease-free and asymptomatic with the exception of dimness of vision in both eyes due to long-standing bilateral optic atrophy.
CONCLUSION: This report highlights the fact that paediatric PCNSL may be effectively treated by a combination of HDMTX and rituximab-based chemoimmunotherapy followed by consolidation with conformal WBRT and tumour bed boost. Lack of awareness of this rare entity may lead to diagnostic delay and potential ramifications as exemplified by chronic atrophic papilloedema and visual loss in the illustrative case.

2: Agarwal N, Agrawal M, Sawarkar DP. Timing of Tracheostomy Procedures in Patients with Spinal Cord Injury Requiring Cervical Spine Surgery: Is Early Tracheostomy Really Associated with Fewer Wound Infections? World Neurosurg. 2018 Sep;117:469. doi: 10.1016/j.wneu.2018.05.204. PubMed PMID: 30149431.

3: Agrawal M, Jain N, Borkar SA. Unusual Clinical Presentation and Magnetic Resonance Imaging Findings in Supratentorial Epidermoid Cyst. World Neurosurg. 2018 Sep;117:229-230. doi: 10.1016/j.wneu.2018.05.200. Epub 2018 Jun 2. PubMed PMID: 29870837.

Epidermoid cysts in the lateral temporal lobe presenting with seizures are rare accounting for <5% of all intracranial epidermoid cysts. Preoperative diagnosis can be further confounded by unusual imaging as presented in this case, thus leading to the wrong preoperative diagnosis of the case as a neoplastic pathology.

4: Agrawal M, Garg M, Kumar A, Singh PK, Satyarthee GD, Agrawal D, Chandra PS, Kale SS. Management of Pediatric Posttraumatic Thoracolumbar Vertebral Body Burst Fractures by Use of Single-Stage Posterior Transpedicular Approach. World Neurosurg. 2018 Sep;117:e22-e33. doi: 10.1016/j.wneu.2018.05.088. Epub 2018 May 19. PubMed PMID: 29787879.

PURPOSE: The posterior transpedicular approach (PTA) is a posterior approach that has the advantage of achieving circumferential arthrodesis by a single posterior-only approach. The purpose of this study was to analyze our experience with PTA in the management of pediatric traumatic thoracolumbar burst fractures (TTLBFs).
METHODS: Consecutive pediatric patients (age ≤18 years) with TTLBFs treated with

PTA for 6 years were included in this retrospective study. Correction of kyphotic deformity and change in neurologic status were analyzed to assess outcome. The Cobb angle and American Spinal Injury Association (ASIA) grade were used for this purpose.
RESULTS: There were 6 male and 8 female patients. Five patients had complete injury (ASIA-A), and 9 had incomplete injury. The mean Thoracolumbar Injury Classification and Severity score was 6.71. The mean preoperative Cobb angle was 14.71° and improved to -3.35° postoperatively (mean kyphosis correction -18.05°). Two of the patients experienced iatrogenic nerve root injury. There was 1 postoperative mortality due to complications unrelated to the surgery. The mean Cobb angle was -0.07° at the 32.2-month follow-up visit. Six patients experienced cage subsidence, but none required revision surgery. Postoperatively, 11 (78.5%) patients showed neurologic improvement, and none experienced deterioration. The average ASIA score improved from 2.5 to 3.78. A fusion rate of 100% (n = 12) was observed at the last follow-up visit.
CONCLUSIONS: The present study demonstrates that PTA is a feasible approach in selected pediatric patients with unstable traumatic thoracolumbar burst fractures, with results comparable with those in the adult population. This study demonstrates in detail the procedure, along with the neurologic and radiologic outcomes of this approach in the pediatric population.

5: Albert V, Arulselvi S, Agrawal D, Pati HP, Pandey RM. Early posttraumatic changes in coagulation and fibrinolysis systems in isolated severe traumatic brain injury patients and its influence on immediate outcome. Hematol Oncol Stem Cell Ther. 2018 Sep 27. pii: S1658-3876(18)30097-9. doi: 10.1016/j.hemonc.2018.09.005. [Epub ahead of print] PubMed PMID: 30291825.

OBJECTIVE/BACKGROUND: Early coagulopathy in isolated severe traumatic brain injury occurs despite the lack of severe bleeding, shock, and fluid administration. We aimed to correlate coagulation activation/inhibition, thrombin generation and fibrinolysis with the development of acute trauma induced coagulopathy (TIC) and its effects on early mortality in isolated severe traumatic brain injury (iSTBI) patients.
METHODS: A prospective screening of iSTBI patients was done for two years. History of anticoagulants, liver disease, hypotension, extracranial injuries, transfusion, brain death were excluded. TIC was defined as international normalized ratio (INR) ≥ 1.27 and/or prothrombin time (PT) ≥ 16.7 seconds and/or activated partial thromboplastin Time (aPTT) ≥ 28.8 seconds on admission following iSTBI. Analysis of tissue factor (TF), tissue factor pathway inhibitor (TFPI), protein C (PC), protein S (PS), thrombin/antithrombin complex (TAT), soluble fibrin monomer (sFM), tissue plasminogen activator (tPA) and plasminogen activator inhibitor-1 (PAI-1) was done. Cases were categorized as presence or absence of TIC and 20 healthy controls participants were included.
RESULTS: A total of 120 cases met the inclusion criteria, aged 35.7 ± 12.12 years, 96% males. TIC was identified in 50 (41.6%). TIC occurred independently of age, sex, Glasgow coma scale (GCS) but was associated with acidosis (60%; p = .01). Following iSTBI significant decline was seen in coagulation activation. Thrombin generation and fibrinolysis were markedly increased. TF, TFPI, PC and PS were low in TIC compared with control. Significant depletion of PS was seen in TIC versus No-TIC. TBI patients with depleted PS had an odds ratio (OR) of 7.10 (1.61-31.2) for TIC. Receiver operating characteristic curve (ROC) analysis depicted area under the curve (AUC) of 0.73 (95% confidence interval [CI] 0.63-0.84) with a cut-off of ≥74 of PS (specificity 63.9%, sensitivity 72.7%). In-hospital mortality was higher in TIC group (44%) compared with no-TIC (20%) with OR of 4.73 (95% CI 1.68-13.3) and hazard ratio [HR] of 2.8 (95 % CI 1.2-6.4).
CONCLUSION: Incidence of TIC in iSTBI is 41.6%, with 4.7 times odds for mortality. Traumatic brain injury causes enhanced coagulation activation, inadequate inhibition, exacerbation of thrombin generation, and subsequent increased fibrinolysis. ROC curve analysis revealed a cut-off of PS ≤ 74 with specificity 63.8%, sensitivity 72.7% for development of TIC.

6: 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.

7: Arora R, Kumar R, Agarwal A, Reeta KH, Gupta YK. Comparison of three different extracts of Centella asiatica for anti-amnesic, antioxidant and anticholinergic activities: in vitro and in vivo study. Biomed Pharmacother. 2018 Sep;105:1344-1352. doi: 10.1016/j.biopha.2018.05.156. Epub 2018 Jun 27. PubMed PMID: 30021372.

Centella asiatica (CA) has been used by Ayurvedic medical practitioners in India for almost 3000 years. The neuropharmacological properties of CA and its constituents have been studied extensively. Anti-oxidant, free radical scavenging and cholinergic modulatory activities are the reported mechanisms of action for its efficacy in memory disorders. Its medicinal values are mainly attributed to the presence of several triterpenes, namely asiatic acid, madecassic acid, asiaticoside, and madecassoside. The present study was aimed to investigate the role of these triterpenes content in CA extract on the antioxidant, cholinesterase modulation and anti-amnesic properties. The fractions of CA extract enriched for (CAE-EF) and depleted/freed of (CAE-FF) triterpenes contents were compared with methanolic extract (CAE). Both in vitro and in vivo methods for evaluation of antioxidant and anticholinergic activities were used. In vitro, free radical scavenging assays (ABTS, DPPH, NO, NORAC, and ORAC) and cholinesterase (AChE and BuChE) inhibition assays were used. For evaluation of anti-amnesic effect, scopolamine induced amnesia in rats, as the acute model of memory loss was used. Following behavioural assessments (MWM, PA, EPM), biomarkers of oxidative stress (reduced GSH, MDA and SOD activity) and

cholinesterase (AChE and BuChE) status were also estimated in cerebral cortex and hippocampus of rat brain. The methanolic extract (CAE) was found to perform best among all three fractions for in vitro free radical scavenging, cholinesterase inhibition, improvement of scopolamine-induced amnesia and also in vivo antioxidant effect and cholinesterase inhibitory activities. Interestingly triterpenes free fraction (CAE-FF) showed better antioxidant activity than triterpenes enriched fraction (CAE-EF) along with comparable anti-amnesic effect. This indicates that triterpenes are not solely responsible for antioxidant activity, cholinesterase inhibitory and anti-amnesic effect of CA.

8: Bajpai S, Tripathi M, Pandey RM, Dey AB, Nehra A. Development and validation of Cognitive Training Intervention for Alzheimer's disease (CTI-AD): A picture-based interventional program. Dementia (London). 2018 Sep 4:1471301218797043. doi: 10.1177/1471301218797043. [Epub ahead of print] PubMed PMID: 30180764.

Introduction Alzheimer's disease is a gradual and progressive disorder which cripples the person's functionality due to cognitive decline. Many clinicopathological and pharmacological therapy has the potential to slow down the progression of the disease but has limited efficacy. One complimentary approach that has emerged is cognitive training interventions which have shown synergistic effect with the drug therapy. Nevertheless, many cognitive interventions lack on specificities of the intervention due to which its efficacy gets scrutinized. Objective To describe the foundation, content, and development of Cognitive Training Intervention for Alzheimer's disease (CTI-AD) along with the treatment feasibility based on a pilot study. Materials and methods A culture-specific picture-based eight weeks cognitive training manual was developed based on extensive review and focused group discussions. It was standardized on 63 older participants (48 healthy controls (HC); 15 early Alzheimer's disease cases). Results All the tasks were progressive in nature and were found effective in discriminating the cognitive performance of early Alzheimer's disease and HC throughout the intervention period. Moreover, it also improved early Alzheimer's disease performance on the memory (HC: 1st week/8th week=21.6±5.7/57.3±19.0; early Alzheimer's disease: 1st week/8th week=48.5±22.9/60.5±21.8); attention (HC: 1st week/8th week=90.2±18.0/196.9±28.0; early Alzheimer's disease: 1st week/8th week=216.6±78.2/286.8±87.0) and language (HC: 1st week/8th week=29.8±9.4/115.3±31.1; early Alzheimer's disease: 1st week/8th week=211.8±68.4/270.4±104.9) domains, respectively, from the baseline level. Conclusion The current manual (CTI-AD) is one of the first promising non-pharmacological program developed nationally with a strong theoretical base to cater to the tertiary needs of the older adults with early Alzheimer's disease.

9: Balaji V, Kapil A, Shastri J, Pragasam AK, Gole G, Choudhari S, Kang G, John J. Longitudinal Typhoid Fever Trends in India from 2000 to 2015. Am J Trop Med Hyg. 2018 Sep;99(3_Suppl):34-40. doi: 10.4269/ajtmh.18-0139. Epub 2018 Jul 24. PubMed PMID: 30047367; PubMed Central PMCID: PMC6128365.

A very high incidence of typhoid was described in studies conducted in urban locations on the Indian subcontinent at the end of the twentieth century. Despite their availability, licensed immunogenic conjugate typhoid vaccines have not been introduced in the national immunization program, in part, because of a lack of understanding of where and for whom prevention is most necessary. Uncertainty regarding the burden of disease is based on the lack of reliable, recent estimates of culture-confirmed typhoid and an observed trend of low isolations of Salmonella Typhi and fewer complications at large referral hospitals in India. In this article, we examine the trends of S. Typhi isolation at three large tertiary care centers across India over 15 years and describe trends of recognized risk factors for typhoid from published literature. There appears to be a decline in the isolation of S. Typhi in blood cultures, which is more apparent in the past 5 years. These trends are temporally related to economic improvement, female

literacy, and the use of antibiotics such as cephalosporins and azithromycin. The analysis of trends of culture-confirmed typhoid may not accurately capture the typhoid incidence trends if antibiotic use confounds the burden of disease presenting to larger facilities. Emerging antimicrobial resistance may result in a resurgence of disease if the underlying incidence and transmission of typhoid are not adequately addressed through public health approaches.

10: Balhara YPS, Bhargava R, Pakhre A, Bhati N. The "Blue Whale Challenge"?: The first report on a consultation from a health care setting for carrying out "tasks" accessed through a mobile phone application. Asia Pac Psychiatry. 2018 Sep;10(3):e12317. doi: 10.1111/appy.12317. Epub 2018 Mar 13. PubMed PMID: 29532627.

11: Banerjee J, Satapathy S, Upadhyay AD, Dwivedi SN, Chatterjee P, Kumar L, Rath GK, Dey AB. A short geriatric assessment tool for the older person with cancer in India-Development and psychometric validation. J Geriatr Oncol. 2019 Mar;10(2):222-228. doi: 10.1016/j.jgo.2018.09.001. Epub 2018 Sep 15. PubMed PMID: 30224183.

INTRODUCTION: With rise in incidence and prevalence of cancers in the ageing population, the need for an age sensitive comprehensive assessment measure has been felt. Comprehensive Geriatric Assessment (CGA) is often difficult to implement due to time and logistic constraints. A brief assessment tool encompassing the specific domains of the CGA would be a better way to assess older adults with cancer. These tools exist but have not necessarily been culturally adapted. The main aim of the study was to develop a culturally relevant short geriatric assessment tool and explore its psychometric properties.
METHODOLOGY: An initial item pool was formed after review of the literature and study of the existing scales. This draft tool was then pre and pilot tested to finalize the items and check the feasibility of application. The final tool was validated by exploratory factor analysis on a sample of 100 older patients with cancer.
RESULTS: After pre and pilot study on fifteen and thirty older patients with cancer respectively, this tool consisting of a total of 38 items spread over eight domains was developed and validated on a sample of 100 subjects. Due to co-linearity, three items were deleted after exploratory factor analysis, bringing the final item number to35. The Cronbach's alpha was 0.93 and the intra-class correlation co-efficient (ICC) was 0.94. Thus, the final tool had 13 questions with sub-parts (35 items in total). The time taken to administer the tool was around 25 min.
CONCLUSION: The tool developed is valid and reliable and can be used for the initial assessment and further care planning of older Indian patients with cancer.

12: Banik S, Rath GP, Ramsal R, Singh GP. Balloon-assisted coil embolization of intracranial aneurysm and zero bispectral index. Neurol India. 2018 Sep-Oct;66(5):1501-1502. doi: 10.4103/0028-3886.241341. PubMed PMID: 30233035.

13: Behera C, Devassy S, Mridha AR, Chauhan M, Gupta SK. Leg massage by mother resulting in fatal pulmonary thromboembolism. Med Leg J. 2018 Sep;86(3):146-150. doi: 10.1177/0025817217706645. Epub 2017 Apr 26. PubMed PMID: 28441907.

We report the sudden death of a 23-year-old male with hairline ankle fracture after massage of the leg by his mother. Autopsy confirmed the cause of death as pulmonary thromboembolism due to deep vein thrombosis of the leg veins which was dislodged and travelled to his lungs consequent to the leg massage. The treating doctors did not warn the patient of the risk of developing pulmonary thromboembolism.

14: Bergaal SK, Gagrani M, Pujari A, Chawla R. Ultrasonographic assessment of the lens. BMJ Case Rep. 2018 Sep 4;2018. pii: bcr-2018-226205. doi:

10.1136/bcr-2018-226205. PubMed PMID: 30181404.

15: Bhardwaj N, Kakkar A, Irugu DVK. Small Cell Neuroendocrine Carcinoma: A Rare Nasopharyngeal Malignancy with Aggressive Clinical Course. Indian J Otolaryngol Head Neck Surg. 2018 Sep;70(3):454-458. doi: 10.1007/s12070-018-1344-1. Epub 2018 Apr 12. PubMed PMID: 30211108; PubMed Central PMCID: PMC6127052.

Primary small cell neuroendocrine carcinoma is uncommon in head and neck region, with occasional cases in nasopharynx. Distinction from other round cell tumors is imperative to ensure optimal patient management. We present a case of a 30-year-old woman who presented with a rapidly growing nasopharyngeal mass.

16: Bhatia A, Sharma RK, Tewari S, Narula SC, Khurana H. Periodontal status in chronic periodontitis depressed patients on desvenlafaxine: An observational study. J Indian Soc Periodontol. 2018 Sep-Oct;22(5):442-446. doi: 10.4103/jisp.jisp_219_18. PubMed PMID: 30210195; PubMed Central PMCID: PMC6128120.

Background: A wide variety of drugs have the potential to affect immune and inflammatory responses of periodontium. A class of antidepressant drug, selective serotonin and norepinephrine reuptake inhibitors, has shown anti-inflammatory function. The aim of the present study is to explore the effect of desvenlafaxine on clinical periodontal parameters in patients with chronic periodontitis.
Materials and Methods: The patients were divided into two groups as follows: test group (n = 63) comprised of participants on 50 mg once-daily dose of desvenlafaxine for ≥2 months and control group (n = 72) included participants who were yet to be prescribed medication for depression. Periodontal parameters of both the groups were analyzed and compared statistically.
Results: Participants taking desvenlafaxine revealed lower values of periodontal parameters as compared to those in control group. The number of pockets with greater depth and clinical attachment loss was greater in control group.
Conclusion: In our study, patients on desvenlafaxine were associated with less pocket depth and bleeding on probing.

17: Bhatia M, Mishra B, Loomba PS, Dogra V. A pilot study for evaluation of knowledge and common practises of nursing staff regarding use of multidose injection vials and their microbial contamination rate in a super-specialty hospital. J Educ Health Promot. 2018 Sep 14;7:120. doi: 10.4103/jehp.jehp_73_18. eCollection 2018. PubMed PMID: 30271805; PubMed Central PMCID: PMC6149120.

CONTEXT: Multidose injection vials (MDVs) are prone to bacterial contamination, and their use has been reported to be a potential source of infections.
AIMS: The aim of this study was to evaluate the knowledge and common practises of nursing staff regarding the use of MDVs and its microbial contamination rate.
SETTINGS AND DESIGN: A pilot study was conducted in a super-specialty hospital from June to December 2016.
SUBJECTS AND METHODS: Information about knowledge and common practises of 100 nursing staff posted in various Intensive Care Units (ICUs) with respect to the usage of single and MDVs, respectively, was obtained and assessed. About 40 in-use multidose injection vials containing some remnants were collected from different ICUs. The volume of 1 ml content of each of these vials was inoculated into a tube containing 15 ml thioglycolate broth and incubated at 37°C for 10 days. The broth was visually examined every day and subcultured onto blood, chocolate, and Sabouraud Dextrose agar plates on alternate days within 10 days or any time that the appearance seemed turbid. The microbial isolates thus obtained were identified using standard guidelines and recorded.
STATISTICAL ANALYSIS USED: Descriptive statistics were used.
RESULTS: The study group members had sufficient knowledge about various aspects of handling single and MDVs, respectively, such as hand hygiene, disinfection, checking of vial labels, and expiry date. Low hand hygiene compliance rate of 55% was observed in all ICUs visited during this study. The contamination rate of

MDVs injection vials was 25% with Coagulase-negative Staphylococcus spp. being the most common isolate.
CONCLUSIONS: The use of MDVs is associated with the risk of contamination and nosocomial outbreaks of life-threatening bloodstream infections. Healthcare professionals must strictly adhere to basic infection control practises as per standard guidelines to minimize the incidence of hospital-acquired infections.

18: Bisht S, Chawla B, Dada R. Oxidative Stress and Polymorphism in MTHFR SNPs (677 and 1298) in Paternal Sperm DNA is Associated with an Increased Risk of Retinoblastoma in Their Children: A Case-Control Study. J Pediatr Genet. 2018 Sep;7(3):103-113. doi: 10.1055/s-0038-1667037. Epub 2018 Jul 11. PubMed PMID: 30105117; PubMed Central PMCID: PMC6087474.

Sperm DNA is considered as the most vulnerable to oxidative stress-induced damage that also impairs global sperm DNA methylation leading to sperm-associated pathologies. C677T and A1298C polymorphisms of the methylene tetrahydrofolate reductase (MTHFR) gene affect MTHFR enzyme activity. This study was planned as a case-control study to determine the MTHFR gene polymorphisms in the fathers of children affected with sporadic nonfamilial heritable retinoblastoma in an Indian population. MTHFR polymorphisms for single nucleotide polymorphisms 677 and 1298 were also determined in sporadic nonfamilial heritable retinoblastoma patients to estimate the risk for retinoblastoma development and to evaluate the role of MTHFR in retinoblastoma pathogenesis.

19: 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.).

20: Chandra P, Kumawat D, Tewari R, Panyala RR, Sreeshankar SS. Reducing Waiting-time of Preterm Babies at a Retinopathy of Prematurity Clinic: A Quality Improvement Project. Indian Pediatr. 2018 Sep 15;55(9):776-779. PubMed PMID: 30345984.

OBJECTIVE: To decrease the waiting time for preterm babies visiting the Retinopathy of prematurity clinic in a tertiary eye hospital.
DESIGN: Interventional study.
SETTING: Tertiary eye care hospital.
PATIENTS: All preterm babies reporting for screening and follow up at Retinopathy of prematurity clinic.
INTERVENTION/PROCEDURE: A quality improvement team comprising of a faculty (team leader), two senior residents, two junior residents, one nursing officer, and a registration staff was constituted. Fish bone analysis was done to understand various reasons for the high waiting time for preterm babies. Baseline data was collected followed by multiple Plan-Do-Study- Act (PDSA) cycles.
MAIN OUTCOME MEASURE: Average waiting-time, maximum waiting-time, and last baby entry-time were measured.
RESULTS: The median average waiting-time, maximum waiting-time and last baby entry-time at baseline were 90.5 min (range 74.1 to 118.8 min), 177.5 min (range 160 to 190 min) and 111 min (90 to 118 min), respectively. At the end of 3rd PDSA cycle, these reduced to 77.6 min (range 55.2 to 94.3 min), 122 min (range 110 to 135 min), and 60 min (range 45 to 80 min), respectively and were sustained; the decrease from baseline being 14.3%, 31.2%, and 46%, respectively.
CONCLUSION: The time spent in the waiting area at the Retinopathy of Prematurity clinic was significantly reduced by simple changes in the process flow.

21: Chandra P, Tewari R, Dolma Y, Das D, Kumawat D. Reducing Preoperative Waiting-time in a Pediatric Eye Operation Theater by Optimizing Process Flow: A Pilot Quality Improvement Project. Indian Pediatr. 2018 Sep 15;55(9):773-775. PubMed PMID: 30345983.

OBJECTIVE: To decrease the preoperative area waiting-time for children posted for eye surgery.
METHODS: A pilot quality improvement project was conducted in a single paediatric eye operation theatre in our tertiary-care hospital. Operation theatre process flow was analyzed, baseline data was collected, and two Plan-Do-Study-Act cycles were performed on consecutive days. Average and maximal waiting-time were recorded across six operation theatre days.
RESULTS: The average and maximal waiting time at baseline were 221 and 390 minutes, respectively. After two rapid Plan-Do-Study-Act cycles, these were reduced to 29 (87% reduction) and 52 minutes (87% reduction) from baseline, respectively, and could subsequently be sustained.
CONCLUSION: Preoperative waiting time in ophthalmic operation theatre was significantly reduced by simple process flow optimization, thereby improving quality of care.

22: Chatterjee P, Kumar P, Kandel R, Madan R, Tyagi M, Kumar DA, Khan MA, Desai G, Chaudhary P, Gupta S, Grover K, Dey AB. Nordic walking training and nutritional supplementation in pre-frail older Indians: an open-labelled experimental pre-test and post-test pilot study to develop intervention model. BMC Geriatr. 2018 Sep 14;18(1):212. doi: 10.1186/s12877-018-0890-4. PubMed PMID: 30217182; PubMed Central PMCID: PMC6137891.

BACKGROUND: Identifying and treating people in a pre-frail state may be an effective way to prevent or delay frailty and preserve their functional capacity. This study aimed to assess the efficacy of, and compliance with, a 12 week individualized nutritional supplementation (INS) and Nordic walking (NW) program in pre-frail older Indians. The primary measure is physical performance, as indicated by Fried's Frailty scale. Other measures include: cognition, as indicated by the Hindi Mental Status Examination; mood, by the Geriatric Depression Scale; and nutritional status, by the Mini Nutritional Assessment.
METHODS: This is an open-labeled experimental pre-test and post-test study, which took place from October 2012 to December 2014. The study was approved by Institute Ethics committee (IEC/NP-350/2012/RP-26/2012) at the All India Institute of Medical Sciences (AIIMS), New Delhi. Participants were sixty-six pre-frail elderly, who were randomly allocated into three subgroups, namely: A

(NW only), B (INS only), and C (NW and INS). One-way ANOVA was used to statistically assess differences in baseline characteristics for quantitative variables, with the Chi-Square/Fischer exact test utilized for qualitative variables. Paired t-tests were used to assess pre and post intervention difference within the group for quantitative variables, with McNemar's Chi-Square test used for qualitative variables. Kruskal Wallis test was used to assess significant intervention effects among the groups. A p-value <0.05 was considered as statistically significant.
RESULTS: There was significant effect of intervention in gait speed in group A ($p=0.001$) and C ($p=0.002$), but not in group B ($p=0.926$). While there was no significant change in grip strength in Group A ($p=0.488$) and B ($p=0.852$), a statistically significant increase was observed in group C ($p=0.013$). Mood significantly improved in group B ($p= 0.025$) and C ($p=0.021$). No significant difference was noted in cognitive status across groups. Following the interventions, a total of 18.18% of pre-frail participants were classified as non-frail.
CONCLUSIONS: Combining NW and INS provides a simple, pragmatic intervention with efficacy in the management of functionally vulnerable older adults, and allows their maintained independence. Future studies should replicate this readily applicable intervention in a larger cohort with a longer follow-up period.
TRIAL REGISTRATION: Clinical Trial Registry-India CTRI/2016/05/006937 [Registered on: 16/05/2016]; Trial was Registered Retrospectively.

23: Deepti S, Juneja R, Devarajan Sebastian LJ. Endovascular management of vein of Galen aneurysmal malformation in a neonate. Ann Pediatr Cardiol. 2018 Sep-Dec;11(3):304-307. doi: 10.4103/apc.APC_33_18. PubMed PMID: 30271022; PubMed Central PMCID: PMC6146857.

A term baby presented on the 7th day of life in cardiogenic shock due to vein of Galen aneurysmal malformation. A successful embolization of the malformation was performed through transarterial route on day 12 of life after a period of initial stabilization.

24: Deepti S, Roy A, Patel CD, Tandon N, Naik N, Singh S, Sharma G, Bahl VK. Assessment of asymptomatic ischemic heart disease using stress myocardial perfusion imaging in patients with type 2 diabetes mellitus. Indian Heart J. 2018 Dec;70 Suppl 3:S157-S160. doi: 10.1016/j.ihj.2018.08.023. Epub 2018 Sep 19. PubMed PMID: 30595249; PubMed Central PMCID: PMC6310734.

BACKGROUND: Coronary artery disease (CAD) is the leading cause of death in patients with type 2 diabetes mellitus (T2DM) and may be asymptomatic.
OBJECTIVE: The objective of this study was to assess the prevalence of asymptomatic myocardial ischemia in patients with T2DM using stress myocardial perfusion imaging.
METHODS: We evaluated 97 consecutive patients with T2DM without clinical evidence of CAD presenting to Cardiology and Endocrinology clinics using Tc-99m MIBI gated single-photon emission-computed tomography (SPECT) myocardial perfusion imaging for the presence of asymptomatic CAD.
RESULTS: Abnormal myocardial perfusion was observed in 10 patients (10.3%). Of these, one half of patients had reversible myocardial perfusion defects suggestive of inducible myocardial ischemia. The other half had fixed perfusion defects suggestive of previous silent myocardial infarctions. Small and moderate reversible perfusion defects were observed in 3 and 2 patients, respectively. The fixed perfusion defects observed in 5 patients were medium sized. The presence of asymptomatic ischemia was significantly associated with age and smoking but not with other traditional cardiac risk factors.
CONCLUSION: Ten percent of patients with T2DM with no clinical evidence of CAD were found to have evidence of asymptomatic ischemia or infarction.

25: Devnani B, Kumar R, Pathy S, Phulware RH, Mathur S, Kumar L. Cutaneous metastases from neuroendocrine carcinoma of the cervix-An unusual metastatic lesion from an uncommon malignancy. Curr Probl Cancer. 2018 Sep;42(5):527-533.

doi: 10.1016/j.currproblcancer.2018.04.004. Epub 2018 May 23. PubMed PMID: 29937242.

Neuroendocrine carcinoma (NEC) is an uncommon and aggressive type of small cell cervical cancer. NECs mostly arise from gastro-entero-pancreatic tract and the lung, but rarely from other organs like cervix. NEC of the cervix is a rare malignancy and constitutes 0.9%-1.5% of cervical tumors. NECs of cervix are common in perimenopausal females and present with abnormal vaginal bleeding and mimic squamous cell cancers, usually with no distinguishing features. On Immunohistochemistry, presence of chromogranin, synaptophysin, and CD-56 is necessary to make a diagnosis of small cell carcinoma. These tumors are notorious for local as well as distant relapses in comparison to their squamous and adenocarcinoma counterpart. NECs are characterized by highly aggressive clinical behavior and carry a poor prognosis. They commonly metastases to lung, liver, brain, and bones even in early stages of the disease. Metastasis to skin is a rare occurrence. We herein report a case of a NEC of the uterine cervix with multiple cutaneous metastases. After the initial diagnosis of NEC of cervix, the patient received concurrent chemoradiation followed by intracavitary brachytherapy. On subsequent follow-up, the patient developed multiple cutaneous metastasis along with liver metastases. This case is reported in view of rarity of the case with skin metastases. To the best of our knowledge, only 3 cases of cutaneous metastases from NEC of the cervix are reported till date. Being a rare malignancy, evidence in the literature is in form of case reports and small case series. Thus, the optimal treatment strategy varies for these patients. Multimodality management with teamwork is necessary to manage individual patients.

26: Dhiman A, Haldar S, Mishra SK, Sharma N, Bansal A, Ahmad Y, Kumar A, Sharma TK, Tyagi JS. Generation and application of DNA aptamers against HspX for accurate diagnosis of tuberculous meningitis. Tuberculosis (Edinb). 2018 Sep;112:27-36. doi: 10.1016/j.tube.2018.07.004. Epub 2018 Jul 10. PubMed PMID: 30205966.

Tuberculous meningitis (TBM) is the most severe manifestation of tuberculosis and its diagnosis remains a challenge even today due to the lack of an adequate test. HspX antigen of Mycobacterium tuberculosis was previously established as a reliable diagnostic biomarker for TBM in an ELISA test format using anti-HspX polyclonal antibodies. Towards overcoming the limitations of batch-to-batch variation and challenges of scalability in antibody generation, we utilized Systematic Evolution of Ligands by EXponential enrichment (SELEX) to develop high affinity DNA aptamers against HspX as an alternative diagnostic reagent. Post-SELEX optimization of the best-performing aptamer candidate, H63, established its derivative H63 SL-2 M6 to be superior to its parent. Aptamer H63 SL-2 M6 displayed a specific and high affinity interaction with HspX (Kd ~9.0×10-8 M). In an Aptamer Linked Immobilized Sorbent Assay (ALISA), H63 SL-2 M6 significantly differentiated between cerebrospinal fluid specimens from TBM and non-TBM subjects (n = 87, ***p < 0.0001) with ~100% sensitivity and ~91% specificity. Notably, ALISA exhibited comparable performance with previously reported antibody-based ELISA and qPCR. Altogether, our findings establish the utility of HspX aptamer for the reliable diagnosis of TBM and pave the way for developing an aptamer-based point-of-care test for TBM.

27: Dhiman R, Meel R. Giant Ocular Surface Squamous Neoplasia Wrapping the Whole Cornea. Eye Contact Lens. 2018 Sep;44 Suppl 1:S374-S375. doi: 10.1097/ICL.0000000000000473. PubMed PMID: 30157161.

28: Dhiman R, Singh D, Gantayala SP, Ganesan VL, Sharma P, Saxena R. Neuro-Ophthalmology at a Tertiary Eye Care Centre in India. J Neuroophthalmol. 2018 Sep;38(3):308-311. doi: 10.1097/WNO.0000000000000586. PubMed PMID: 29135814.

BACKGROUND: Neuro-ophthalmology as a specialty is underdeveloped in India. The aim of our study was to determine the spectrum and profile of patients presenting

to a tertiary eye care center with neuro-ophthalmic disorders.
METHODS: A retrospective hospital-based study was conducted, and records of all patients seen at the neuro-ophthalmology clinic of Dr. Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi, India, over a 1-year period were retrieved and evaluated.
RESULTS: Of a total of 30,111 patients referred to various specialty clinics in a span of 1 year, 1597 (5%) were referred for neuro-ophthalmology evaluation. The mean patient age was 30.8 ± 19.5 years, with a male dominance (M:F = 2.02:1). Among these patients, optic nerve disorders were noted in 63.8% (n = 1,020), cranial nerve palsy in 7% (n = 114), cortical visual impairment in 6.5% (n = 105), and others (eye/optic nerve hypophasia, blepharospasm, and optic disc drusen) in 6% (n = 95). Among the patients with optic nerve disorders, optic neuropathy without disc edema/(traumatic optic neuropathy, hereditary, tumor-related, retrobulbar neuritis, toxic, and idiopathic) was noted in 42.8% (n = 685) and optic neuropathy with disc edema (ischemic optic neuropathy, papilledema, post-papilledema optic atrophy, papillitis, neuroretinitis, and inflammatory optic neuropathy) in 20.9% (n = 335). Sixteen percent of patients (n = 263) were incorrect referrals.
CONCLUSION: The neuro-ophthalmic clinic constitutes a significant referral unit in a tertiary eye care center in India. Traumatic and ischemic optic neuropathies are the most common diagnoses. Neuro-ophthalmology requires further development as a subspecialty in India to better serve the nation's population.

29: Elavarasi A, Goyal V, Vishnu V, Singh MB, Srivastava P. Chronic Inflammatory Demyelinating Polyneuropathy: A Case Series. Indian J Pediatr. 2018 Sep;85(9):790-791. doi: 10.1007/s12098-017-2536-5. Epub 2017 Nov 16. PubMed PMID: 29143254.

30: Ganesh GS, Sahu PK, Das SP, Mishra C, Dhiman S. A subgroup analysis to compare patients with acute low back pain classified as per treatment-based classification. Physiother Res Int. 2019 Jan;24(1):e1747. doi: 10.1002/pri.1747. Epub 2018 Sep 18. PubMed PMID: 30226651.

OBJECTIVES: The evidence for the effectiveness of interventions targeting acute low back pain (LBP) is suboptimal. It is difficult to identify those patients who are more likely to develop chronic pain and disability after an acute episode of LBP. These shortcomings may be attributed to considering LBP as one homogenous condition.
METHODS: In this quasi-experimental study, we examined and analysed a prospective cohort of 267 patients with first-onset LBP and classified them into one of the groups based on treatment-based classification: direction-specified exercises (Group 2), manipulation (Group 3), stabilization exercises (Group 4), traction (Group 5), and a physician care group (Group 1). Disability and pain were assessed at baseline, after treatment, and at 6 months using the Oswestry Disability Index and the Numerical Rating Scale, respectively. Comparisons were made between the groups, and we predicted measures of disability and pain intensity at 6 months with age, gender, fear avoidance behaviour, centralization phenomenon (CP), expectations about recovery, CP, group classification, baseline pain, and disability.
RESULTS: Analysis showed that all the heterogeneous groups of LBP improved their outcomes with the respective treatment provided. However, when the entire sample was considered as one homogenous group of LBP, the results showed improvement with time ($p < 0.05$) only and no difference was found between groups ($p > 0.05$). None of the studied factors, except baseline pain ($R = 0.227$, $R2 = 0.051$, $p < 0.05$), were able to accurately predict the development of chronic pain in our study sample.
CONCLUSION: Though our results showed no differences between the subgroups in the reduction of pain and disability, we conclude that classifying and treating patients with LBP into subgroups based on signs and symptoms produce better outcomes. Baseline pain alone may predict a small percentage of people who may develop chronic pain.

31: Garg G, Kataria K, Bansal N, Singh I. Rare cause of gastric outlet obstruction: xanthogranulomatous cholecystitis. BMJ Case Rep. 2018 Sep 10;2018. pii: bcr-2018-226580. doi: 10.1136/bcr-2018-226580. PubMed PMID: 30206069.

32: Garg H, Nayak B, Singh P. Re: Tom J.H. Arends, Ofer Nativ, Massimo Maffezzini, et al. Results of a Randomised Controlled Trial Comparing Intravesical Chemohyperthermia with Mitomycin C Versus Bacillus Calmette-Guerin for Adjuvant Treatment of Patients with Intermediate- and High-risk Non-Muscle-invasive Bladder Cancer. Eur Urol 2016;69:1046-52. Eur Urol. 2019 Feb;75(2):e25. doi: 10.1016/j.eururo.2018.08.046. Epub 2018 Sep 17. PubMed PMID: 30237025.

33: Garg S, Malhotra RK, Khan SI, Sarkar S, Susrutha PN, Singh V, Goyal S, Nag TC, Ray R, Bhatia J, Arya DS. Fisetin attenuates isoproterenol-induced cardiac ischemic injury in vivo by suppressing RAGE/NF-Î°B mediated oxidative stress, apoptosis and inflammation. Phytomedicine. 2018 Sep 19;56:147-155. doi: 10.1016/j.phymed.2018.09.187. [Epub ahead of print] PubMed PMID: 30668335.

BACKGROUND: The therapeutic options for the reducing the damage caused by myocardial ischemia are limited and not devoid of adverse effects. The role of the flavanoid, fisetin, predominantly found in strawberry and apple, is yet to be explored in the heart.
STUDY DESIGN: Male Wistar rats (n = 48) were administered fisetin (10, 20 & 40 mg/kg/day, orally) or vehicle for 28 days while ISO, 85 mg/kg, subcutaneously, was also administered at 24 h interval on the 27th and 28th day. On the 29th day, rats were anaesthetized and right carotid artery was cannulated to record hemodynamic parameters. Subsequently, blood sample was collected and heart was removed to evaluate various parameters.
RESULTS: Fisetin at doses of 10 and 20 mg/kg reversed ISO induced detrimental alterations in blood pressure and left ventricular pressures and reduced the myocardial injury markers CK-MB and LDH in the serum. These findings were supported by amelioration of ISO induced histological and ultrastructural damage by fisetin. The disequilibrium in the levels of pro and anti oxidants in the myocardial tissue caused by ISO was also normalized Furthermore, apoptosis was evident from enhanced DNA fragmentation and raised pro-apoptotic proteins (bax, caspase-3, cytochrome-c) as well as suppressed anti-apoptotic protein (Bcl-2) in case of ISO treatment which again was reversed by fisetin. A molecular mechanism for this protection was elucidated as downregulation of RAGE and NF-κB However fisetin at 40 mg/kg revealed a deteriorating effect which was similar to ISO group of rats.
CONCLUSION: Hence, through our study, the role of fisetin in cardioprotection has been uncovered via a molecular pathway.

34: Gaur N, Meel R, Anjum S, Singh P. Hereditary sensory and autonomic neuropathy in a male child: 'The other side of not feeling pain'. BMJ Case Rep. 2018 Sep 4;2018. pii: bcr-2018-226873. doi: 10.1136/bcr-2018-226873. PubMed PMID: 30181410.

35: Goyal K, Hazarika A, Khandelwal A, Sokhal N, Bindra A, Kumar N, Kedia S, Rath GP. Non- Neurological Complications after Traumatic Brain Injury: A Prospective Observational Study. Indian J Crit Care Med. 2018 Sep;22(9):632-638. doi: 10.4103/ijccm.IJCCM_156_18. PubMed PMID: 30294128; PubMed Central PMCID: PMC6161576.

Introduction and Aims: Recognizing and treating nonneurological complications occurring in traumatic brain injury (TBI) patients during intensive care unit (ICU) stay are challenging. The aim is to estimate various nonneurological complications in TBI patients. The secondary aim is to see the effect of these complications on ICU stay, disability, and mortality.
Materials and Methods: This was a prospective observational study at the neuro-ICU of a Level-I trauma center. A total of 154 TBI patients were enrolled. The period of the study was from admission to discharge from ICU or demise.

Inclusion criteria were patients aged >16 years and patients with severe TBI (Glasgow coma score [GCS] ≤8). Nonneurological complications were frequent in TBI patients.
Results: We observed respiratory complications to be the most common (61%). Other complications, in the decreasing order, included dyselectrolytemia (46.1%), cardiovascular (34.4%), coagulopathy (33.1%), sepsis (26%), abdominal complications (17.5%), and acute kidney injury (AKI, 3.9%). The presence of systemic complications except AKI was found to be significantly associated with increased ICU stay. Most of the patients of AKI died early in ICU. Respiratory dysfunction was found to be independently associated with 3.05 times higher risk of worsening clinical condition (disability) (P < 0.018). The presence of cardiovascular complications during ICU stay (4.2 times, P < 0.005), AKI (24.7 times, P < 0.02), coagulopathy (3.13 times, P < 0.047), and GCS <6 (4.2 times, P < 0.006) of TBI was independently associated with significantly increased risk of ICU mortality.
Conclusion: TBI patients tend to have poor outcome due to concomitant nonneurological complications. These have significant bearing on ICU stay, disability, and mortality.

36: Gulati S. Dietary Therapies: Emerging Paradigms in Therapy of Drug Resistant Epilepsy in Children : Based on 6th Dr. I. C. Verma Excellence in Research Award Oration. Indian J Pediatr. 2018 Nov;85(11):1000-1005. doi: 10.1007/s12098-018-2779-9. Epub 2018 Sep 21. Review. PubMed PMID: 30242606.

About one-third of childhood epilepsy ultimately becomes drug resistant epilepsy. Only about one-third of drug resistant epilepsy is amenable for epilepsy surgery. Epilepsy surgery and vagal nerve stimulation is still beyond the reach of huge proportion of children with pharmacoresistant epilepsy. Ketogenic diet (KD) has been in use for almost a century now all over the world for drug resistant epilepsy, although in between there was a decline in its popularity with advent of newer antiepileptic drugs like valproate, phenytoin and carbamazepine. Again from 1990s there was resurgence of interest in KD for pharmacoresistant epilepsy and in the last two decades several randomized controlled trials and systemic reviews have proved its efficacy beyond any suspicion. Ketogenic diet is a high fat low carbohydrate and low protein diet, which has been found to reduce epileptogenesis in body most probably by production of ketone bodies. Modified Atkin's Diet (MAD) first introduced in 2003 and Low Glycemic Index Treatment (LGIT) first introduced in 2005 are another two dietary therapies, which are less restrictive, more palatable with fewer adverse effects and comparable efficacy. MAD is also a high fat, low carbohydrate diet, in which high sugar foods are discouraged and protein and fluids are unrestricted. In LGIT, only carbohydrates with Glycemic Index <50 are allowed and carbohydrate intake is restricted to 40-60 g per day. Medium Chain Triglyceride KD (MCT KD) is another alternative, in which there are more food choices as compared to classic KD, with comparable efficacy.

37: Guleria P, Phulware R, Agarwal S, Jain D, Mathur SR, Iyer VK, Ballal S, Bal CS. Cytopathology of Solid Variant of Papillary Thyroid Carcinoma: Differential Diagnoses with other Thyroid Tumors. Acta Cytol. 2018;62(5-6):371-379. doi: 10.1159/000493081. Epub 2018 Sep 25. PubMed PMID: 30253413.

OBJECTIVES: Solid variant of papillary thyroid carcinoma (SVPTC) is rare, differing from classical PTC (cPTC) in architecture and outcome. We evaluated the cytomorphology of SVPTC cases to assess the feasibility of a preoperative diagnosis.
STUDY DESIGN: SVPTC cases were evaluated for architecture, nuclear features, and Bethesda category and were compared with noninvasive follicular thyroid neoplasm with papillary-like nuclear features/follicular variant of PTC (NIFTP/FVPTC), cPTC, and poorly differentiated thyroid carcinoma (PDTC).
RESULTS: Nine SVPTCs, 29 NIFTP/FVPTCs, 12 cPTCs, and 4 PDTCs were included. The predominant architecture in most SVPTCs was solid fragment, which is helpful in differentiating them from NIFTP/FVPTC (p < 0.001) and cPTC (p = 0.006) but not

from PDTC. The presence of microfollicles led to misinterpretation as NIFTP/FVPTC/follicular neoplasm in 4 patients. All but 1 SVPTC showed diffuse nuclear features. Intranuclear pseudoinclusions (INIs) were seen in 67% of SVPTCs as compared to 83% of cPTCs, 14% of NIFTP/FVPTCs (p = 0.005), and none of PDTCs. SVPTC cases were commonly (78%) categorized as intermediate/suspicious.
CONCLUSIONS: The presence of solid fragments and lack of true papillae are helpful in differentiating SVPTC from cPTC. Solid fragments, trabeculae, the extent of nuclear features, and INIs should be looked for in cases with prominent microfollicles for distinguishing SVPTC from NIFTP/FVPTC. None of the features were helpful in differentiating SVPTC from PDTC.

38: Gupta A, Kapil R, Kapil U. Reduction in prevalence of anaemia in pregnant women. Indian J Med Res. 2018 Sep;148(3):345-346. doi: 10.4103/ijmr.IJMR_1429_18. PubMed PMID: 30425227; PubMed Central PMCID: PMC6251274.

39: Gupta M, Aggarwal M, Bhari N. Acneiform eruptions: An unusual dermatological side effect of ribavirin. Dermatol Ther. 2018 Sep;31(5):e12679. doi: 10.1111/dth.12679. Epub 2018 Sep 19. PubMed PMID: 30230152.

40: Gupta N, Kumar R, Ramteke P, Soneja M. Look before you leap: A case series of conidiobolomycosis from the Indian subcontinent. J Family Med Prim Care. 2018 Sep-Oct;7(5):1113-1115. doi: 10.4103/jfmpc.jfmpc_167_18. PubMed PMID: 30598971; PubMed Central PMCID: PMC6259523.

Conidiobolomycosis is an extremely rare subcutaneous rhinofacial indolent infection caused by Conidiobolus coronatus and Conidiobolus incongruus. It is reported mainly from the tropical and subtropical parts of the world, mostly in form of isolated case reports or small case series. Two immunocompetent male patients presented to our center with indolent nasal swelling and features of nasal obstruction. They were treated outside with antibiotics and/or steroids and were referred to us with nonresolving symptoms. Both of them were diagnosed based on the characteristic histopathological findings and were successfully treated with saturated solution of potassium iodide. Conidiobolomycosis is an important differential in patients presenting with centrofacial swelling. Early suspicion and timely referral by the primary care physicians will help in early diagnosis and treatment of this disease.

41: Gupta N, Razik A, Soneja M. Staring at the stars: a case of gastrointestinal basidiobolomycosis from the Indian subcontinent. BMJ Case Rep. 2018 Sep 5;2018. pii: bcr-2018-226693. doi: 10.1136/bcr-2018-226693. PubMed PMID: 30185455.

42: Gupta P, Parshad R, Balakrishna P, Saraya A, Makharia GK, Sachdeva S, Sharma R. Angle of His Accentuation Is a Viable Alternative to Dor Fundoplication as an Adjunct to Laparoscopic Heller Cardiomyotomy: Results of a Randomized Clinical Study. Dig Dis Sci. 2018 Sep;63(9):2395-2404. doi: 10.1007/s10620-018-5130-4. Epub 2018 May 24. PubMed PMID: 29796913.

BACKGROUND: There is no consensus regarding the type of anti-reflux procedure to be used as an adjunct to laparoscopic Heller cardiomyotomy (LHCM). The aim of this study was to compare Angle of His accentuation (AOH) with Dor Fundoplication (Dor) as an adjunct to LHCM.
METHODS: A total of 110 patients with achalasia cardia presenting for LHCM from March 2010 to July 2015 were randomized to Dor and AOH. Symptom severity, achalasia-specific quality of life (ASQOL), new onset heartburn, and patient satisfaction were assessed using standardized scores preoperatively, at 3, 6 months, and then yearly. The primary outcome was relief of esophageal symptoms while secondary outcomes were new onset heartburn and ASQOL.
RESULTS: Both groups were comparable with respect to the baseline demographic characteristics. There was no conversion to open and no mortality in either group. Median operative time was 128 min in AOH and 144 min in Dor group ($p < 0.01$). Mean follow-up was 36 months and was available in 98% patients. There was significant improvement in esophageal symptoms in both groups with no

statistically significant difference between the two groups (p>0.05). There was no difference in cumulative symptom scores between the two groups over the period of follow-up. New onset heartburn was seen in 11% in AOH and 9% in Dor group. Mean ASQOL score improved in both groups with no difference between the two groups (p=0.83). Patient satisfaction was similar in both groups.
CONCLUSION: AOH is similar to Dor as an adjunct to LHCM in safety and efficacy and can be performed in shorter time.
CLINICAL REGISTRATION NUMBER: CTRI: REF/2014/06/007146.

43: Gupta R, Dahiya M, Kumar L, Shekhar V, Sharma A, Ramakrishnan L, Sharma OD, Begum A. Prevalence of Monoclonal Gammopathy of Undetermined Significance in India-A Hospital-based Study. Clin Lymphoma Myeloma Leuk. 2018 Sep;18(9):e345-e350. doi: 10.1016/j.clml.2018.06.005. Epub 2018 Jun 12. PubMed PMID: 29980412.

BACKGROUND: We sought to determine the prevalence of monoclonal gammopathy of undetermined significance (MGUS) in a hospital-based cohort in India.
PATIENTS AND METHODS: From March 2015 to May 2015, 3429 patients (age range, 40-88 years) were enrolled in the present study. Of the 3429 enrolled patients, 2354 (68.6%) were men and 1075 (31.4%) were women. Serum samples were collected from all patients and analyzed using serum protein electrophoresis (SPEP). The positive SPEP samples were subjected to immunofixation. The patients with positive results for both SPEP and immunofixation were registered in the oncology department and investigated further for plasma cell dyscrasias.
RESULTS: Of the 3429 study patients, 49 (1.43%) were found to have MGUS, and multiple myeloma was diagnosed in another 6 (0.17%). The prevalence rate of MGUS in patients aged 40 to 49, 50 to 59, 60 to 69, and 70 to 80 years was 0.83%, 1%, 2.62%, and 1.75%, respectively. Of the 49 MGUS patients, 5 (10.2%) were in the high-intermediate risk category using the Mayo Clinic criteria for risk stratification. At 30 months of follow-up, 1 patient in the high-intermediate category had developed multiple myeloma.
CONCLUSION: To the best of our knowledge, the present study is the first systematic study on the prevalence of MGUS in an Indian population. The overall prevalence of MGUS was 1.43% in the evaluated Indian cohort, lower than that reported for white and black populations. The incidental detection of 6 subjects with multiple myeloma of 3429 screened subjects in our study was high compared with the reported incidence of multiple myeloma in India of only 1.9 per 100,000 persons. This finding indicates the need to create awareness about myeloma-related symptoms and screening studies in appropriate age groups, at least in the hospital-based setting.

44: Gupta RK, Batra VV, Singh D, Sharma MC, Kumar V. Is spindle cell oncocytoma a true entity or a variant of pituicytoma? A case report with review of literature. Neurol India. 2018 Sep-Oct;66(5):1413-1418. doi: 10.4103/0028-3886.241353. PubMed PMID: 30233016.

Spindle cell oncocytoma (SCO) is a newly described rare entity simulating clinicoradiological features of a nonfunctional pituitary adenoma and is corresponding to the category of World Health Organization grade I tumor. However, because of the reported incidence of recurrence and invasive presentation in some cases, its categorization as a low grade tumor is questionable. Earlier, it was thought to arise from the folliculostellate cells of adenohypophysis. Recently, few reports have described expression of thyroid transcription factor-1 [TTF-1], which is a specific marker for pituicytes of neurohypophysis, suggesting this tumor to be a variant of pituicytoma. We describe a case of SCO in a 28-year-old young female patient with TTF-1 immunopositivity, and ultra-structurally showing abundant mitochondria along with few neurosecretory granules.

45: Gupta S, Lodha R, Kabra SK. Antimicrobial Therapy in Community-Acquired Pneumonia in Children. Curr Infect Dis Rep. 2018 Sep 20;20(11):47. doi: 10.1007/s11908-018-0653-6. Review. PubMed PMID: 30238375.

PURPOSE OF REVIEW: Empirical antibiotic therapy remains the cornerstone of treatment in community-acquired pneumonia (CAP). However, the best option for empirical antibiotics for treatment on an ambulatory basis, as well as in those requiring hospitalization, is still unclear. This review tries to answer the question regarding the most appropriate antibiotics in different settings in children with CAP as well as duration of therapy.
RECENT FINDINGS: Recent studies have provided insights regarding use of oral antibiotics in children with mild to moderate CAP, and severe CAP with lower chest retractions but no hypoxia. In view of rapidly emerging resistance among various causative pathogens, several new drugs have been currently approved, or are under trial for CAP in children. Current knowledge suggests that the choice of antibiotics for ambulatory treatment of CAP is oral amoxicillin with a duration of 3-5 days. Children with CAP with lower chest retractions but no hypoxia can be treated with oral amoxicillin. Severe pneumonia can be treated with intravenous antibiotics consisting of penicillin/ampicillin with or without an aminoglycoside. Several new drugs have been developed and approved for use in CAP caused by multidrug-resistant organisms, but these should be used judiciously to avoid emergence of further resistance. Future research is needed regarding the safety and efficacy of newer drugs in children.

46: Gupta SK, Kothari SS, Ramakrishnan S, Saxena A. Large ventricular septal defect and coexisting chronic constrictive pericarditis: "reversible Eisenmenger syndrome"-5 years after corrective surgery. Catheter Cardiovasc Interv. 2018 Sep 1;92(3):E210-E211. doi: 10.1002/ccd.27028. Epub 2017 Mar 17. PubMed PMID: 28303664.

47: Gupta V, Sreenivas V, Mehta M, Ramam M. What do Vitiligo Impact Scale-22 scores mean? Studying the clinical interpretation of scores using an anchor-based approach. Br J Dermatol. 2019 Mar;180(3):580-585. doi: 10.1111/bjd.17040. Epub 2018 Sep 26. PubMed PMID: 30085349.

BACKGROUND: The Vitiligo Impact Scale (VIS)-22 is a vitiligo-specific quality-of-life instrument. Its criterion, convergent and known-groups validity, test-retest reliability and responsiveness have been studied previously in an Indian population. The clinical meaning of VIS-22 scores has not yet been analysed.
OBJECTIVES: To assign clinical meaning to VIS-22 scores using anchor-based methods.
METHODS: This was a cross-sectional study conducted in a large teaching hospital in North India. Patients with vitiligo > 15 years of age (n = 391) completed the VIS-22 and Dermatology Life Quality Index (DLQI) questionnaires, and answered a Global Question (GQ) on the effect of vitiligo on their lives on a five-point Likert scale. Multiple band sets of VIS-22 scores were devised using GQ as the anchor. A weighted kappa-coefficient was calculated to estimate the level of agreement between different band sets of VIS-22 and GQ. VIS-22 and DLQI were compared based on their degree of correlation and agreement with GQ.
RESULTS: The mean ± SD of VIS-22 scores was 24·8 ± 14·0 (range 0-61). VIS-22 scores showed good correlation with GQ (r = 0·76). Of the various VIS-22 band sets tested, the following was chosen: 0-5, 6-15, 16-25, 26-40 and 41-66 (weighted κ = 0·57), corresponding to the five categories of GQ. The degree of correlation (VIS-22, r = 0·77; DLQI, r = 0·69) and agreement (VIS-22, 51·6%; DLQI, 36·1%; P < 0·001) of VIS-22 with GQ was higher than that with DLQI.
CONCLUSIONS: VIS-22 scores can be used to stratify the impairment of vitiligo-related quality of life.

48: 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.

49: Jain D, Roy-Chowdhuri S. Molecular Pathology of Lung Cancer Cytology

Specimens: A Concise Review. Arch Pathol Lab Med. 2018 Sep;142(9):1127-1133. doi: 10.5858/arpa.2017-0444-RA. Epub 2018 Mar 16. PubMed PMID: 29547001.

CONTEXT: - There has been a paradigm shift in the understanding of molecular pathogenesis of lung cancer. A number of oncogenic drivers have been identified in non-small cell lung carcinoma, such as the epidermal growth factor receptor (EGFR) mutation and anaplastic lymphoma kinase (ALK) gene rearrangement. Because of the clinical presentation at an advanced stage of disease in non-small cell lung carcinoma patients, the use of minimally invasive techniques is preferred to obtain a tumor sample for diagnosis. These techniques include image-guided biopsies and fine-needle aspirations, and frequently the cytology specimen may be the only tissue sample available for the diagnosis and molecular testing for these patients.
OBJECTIVE: - To review the current literature and evaluate the role of cytology specimens in lung cancer mutation testing. We reviewed the types of specimens received in the laboratory, specimen processing, the effect of preanalytic factors on downstream molecular studies, and the commonly used molecular techniques for biomarker testing in lung cancer.
DATA SOURCES: - PubMed and Google search engines were used to review the published literature on the topic.
CONCLUSIONS: - Mutation testing is feasible on a variety of cytologic specimen types and preparations. However, a thorough understanding of the cytology workflow for the processing of samples and appropriate background knowledge of the molecular tests are necessary for triaging, and optimum use of these specimens is necessary to guide patient management.

50: Jain V, Sangdup T, Agarwala S, Bishoi AK, Chauhan S, Dhua A, Jana M, Kandasamy D, Malik R, Kothari SS, Patcharu R, Varshney A, Bhatnagar V. Abernethy malformation type 2: varied presentation, management and outcome. J Pediatr Surg. 2018 Sep 5. pii: S0022-3468(18)30561-X. doi: 10.1016/j.jpedsurg.2018.08.053. [Epub ahead of print] PubMed PMID: 30262201.

PURPOSE: To study the varied presentations and the outcomes in children with Type 2 Abernethy malformation following shunt ligation.
MATERIAL AND METHODS: Children with Type 2 Abernethy who had had been operated between 2013 and 2017 were included in the study. The diagnosis had been confirmed on ultrasonography, CECT or angiography. All patients underwent laparotomy. The shunt was identified, clamped and the bowel congestion was noted. The shunt was ligated if the bowel congestion was not significant or had improved. Relevant follow-up investigations were done to document the resolution or amelioration of symptoms and the patency of the shunt.
RESULTS: Five patients were included in the study with a median age of 6 years. Hepatopulmonary syndrome was the presentation in 4 patients while one patient presented with liver tumor. Ultrasonography and CECT were able to diagnose Type 2 malformation in 4 patients whereas in 1 patient the distal portal vein was not seen. The postoperative period was complicated in 3 patients. At the median follow up at 14 months, good intrahepatic portal flow in all patients. All patients demonstrated improvement/ resolution of symptoms.
CONCLUSION: Abernethy is rare malformation which can have a varied presentation. Additional investigations may be needed to confirm the diagnosis of Type 2 variety. Most patients have gradual improvement of symptoms.
LEVEL OF EVIDENCE: Level IV/ Treatment study.

51: Jain V, Jana M, Upadhyay B, Ahmad N, Jain O, Upadhyay AD, Ramakrishnan L, Vikram NK. Prevalence, clinical & biochemical correlates of non-alcoholic fatty liver disease in overweight adolescents. Indian J Med Res. 2018 Sep;148(3):291-301. doi: 10.4103/ijmr.IJMR_1966_16. PubMed PMID: 30425219; PubMed Central PMCID: PMC6251268.

52: Jana M, Gupta AK. Expanding Applications of Prenatal MR Imaging: Detection of Complex Multisystem Anomalies Made Easy. Indian J Pediatr. 2018 Sep;85(9):716-717. doi: 10.1007/s12098-018-2726-9. Epub 2018 Jun 15. Review.

PubMed PMID: 29948737.

53: Jolly S, Uppal S, Bhatla N, Johnston C, Maturen K. Improving Global Outcomes in Cervical Cancer: The Time Has Come for International Federation of Gynecology and Obstetrics Staging to Formally Incorporate Advanced Imaging. J Glob Oncol. 2018 Sep;4:1-6. doi: 10.1200/JGO.2016.007534. Epub 2017 Mar 21. PubMed PMID: 30241155; PubMed Central PMCID: PMC6180790.

54: Jose A, Nagori SA, Roy ID, Roychoudhury A. Orthodromic transfer of the temporalis tendon with extension of the fascia lata to reanimate the smile in facial palsy. Br J Oral Maxillofac Surg. 2018 Nov;56(9):890-892. doi: 10.1016/j.bjoms.2018.08.011. Epub 2018 Sep 3. PubMed PMID: 30190089.

55: Joshi M, Sahoo T, Thukral A, Joshi P, Sethi A, Agarwal R. Improving Duration of Kangaroo Mother Care in a Tertiary-care Neonatal Unit : A Quality Improvement Initiative. Indian Pediatr. 2018 Sep 15;55(9):744-747. PubMed PMID: 30345976.

OBJECTIVE: To increase the duration of Kangaroo mother care (KMC) in preterm infants from an average of 3 hours/day to at least 6 hours/day over 7 weeks through a Quality improvement (QI) approach in a tertiary-care neonatal unit.
METHODS: Preterm mother-infant dyads who were admitted in the Neonatal intensive care unit and KMC ward were enrolled in this study. A QI team comprising of nurses, nurse educators, resident physicians and nursing-in-charge of unit was formed. The potential barriers for prolonged KMC were evaluated using fish bone analysis. A variety of measures (allowing family members including male members during night for doing KMC, making KMC an integral part of treatment order, introducing the concept of weekly KMC champions, etc.) were introduced and subsequently tested by multiple Plan-do-study-act (PDSA) cycles. Data on duration of KMC per day was measured by bedside nurses on daily basis.
RESULTS: 20 eligible mother-infant dyads were studied during implementation period (50 d). The mean (SD) weight and gestation of infants were 1199 (356) g and 31.1 (2.3) wks, respectively. We achieved our goal by step-wise implementation of changes through construction of 3 PDSA cycles. The duration of KMC increased to 6 hours-a-day over a period of 7 weeks. Evaluation at 6 and 12 months in the post-implementation phase suggested sustenance of improved KMC duration up to 9 h/day in the unit.
CONCLUSIONS: Ongoing quality improvement measures increased the duration of KMC from a baseline of 3 h to 6 h in eligible preterm infants, and the results were sustained at 6-12 month.

56: Kalra S, Balhara YPS, Bathla M. Euthymia in Diabetes. Eur Endocrinol. 2018 Sep;14(2):18-19. doi: 10.17925/EE.2018.14.2.18. Epub 2018 Sep 10. PubMed PMID: 30349589; PubMed Central PMCID: PMC6182925.

Euthymia, or optimal mood, is an integral part of health. A diagnosis of diabetes poses multiple challenges to mental and emotional health and may lead to psychological and psychiatric dysfunction. Such conditions influence glycaemic control negatively and may act as barriers to achievement of desired biomedical outcomes. This article describes the concept of euthymia in diabetes and calls for euthymia to be accepted as a target, as well as a tool, in modern diabetes care.

57: Kalsi AK, Halder A, Jain M, Chaturvedi PK, Sharma JB. Prevalence and reproductive manifestations of macroprolactinemia. Endocrine. 2019 Feb;63(2):332-340. doi: 10.1007/s12020-018-1770-6. Epub 2018 Sep 29. PubMed PMID: 30269265.

PURPOSE: Macroprolactinemia is characterized by predominance of macroprolactin molecules in circulation and generally has extra-pituitary origin. Macroprolactin is viewed as biologically inactive, therefore asymptomatic, and thus may not require any treatment or prolonged follow-up. In addition, data on prevalence of macroprolactinemia and its clinical manifestation are also rare. Therefore, the

present study was aimed to find out prevalence of macroprolactinemia and its association, if any, with reproductive manifestations.
MATERIAL AND METHODS: Macroprolactin was measured in 102 hyperprolactinemia cases (>100 ng/ml prolactin level), 135 physiological hyperprolactinemia cases (50 pregnant and 85 lactating females; >100 ng/ml prolactin level) and 24 controls. Poly ethylene glycol (PEG) precipitation method was carried out to screen macroprolactin. Prolactin recovery of <25% was considered overt macroprolactinemia. Detailed clinical data was recorded which included complete medical history, physical examination and hormone measurements besides CT/MRI for pituitary abnormalities.
RESULTS: Prevalence of macroprolactinemia was 21.57% (22/102) in hyperprolactinemia (prolactin >100 ng/ml). There was no case of macroprolactinemia in physiological hyperprolactinemia, or healthy control females. Reproductive manifestations were present in 72.73% (16/22) macroprolactinemia cases, out of which macroprolactinemia was the sole cause of associated reproductive manifestations in 68.7% (11/16) cases. Reversal of reproductive dysfunction/s was observed in five cases with appropriate treatment for high macroprolactin.
CONCLUSION: Macroprolactinemia prevalence was found to be 21.5%, out of which 72.73% cases had associated reproductive dysfunctions.

58: Kandwal P, Vijayaraghavan G, Upendra BN, Jayaswal A. Single-stage vertebrectomy for hydatid disease involving L3 vertebra: Five year follow-up. Neurol India. 2018 Sep-Oct;66(5):1499-1501. doi: 10.4103/0028-3886.241355. PubMed PMID: 30233034.

59: Karthikeyan G, Devasenapathy N, ZÃ¼hlke L, Engel ME, Rangarajan S, Teo KK, Mayosi BM, Yusuf S; Global Rheumatic Heart Disease Registry (REMEDY) Investigators. Digoxin and clinical outcomes in the Global Rheumatic Heart Disease Registry. Heart. 2018 Sep 12. pii: heartjnl-2018-313614. doi: 10.1136/heartjnl-2018-313614. [Epub ahead of print] PubMed PMID: 30209123.

OBJECTIVE: Digoxin is widely used in patients with rheumatic heart disease (RHD) despite a lack of data on its impact on clinical outcomes. We aimed to determine the association of digoxin use on clinical outcomes in patients with RHD.
METHODS: We performed a retrospective analysis of the association of digoxin use with mortality at 2 years in a large RHD registry. Secondary outcomes were recurrent heart failure (HF) and hospitalisation for any cause. We assessed associations using multivariable logistic regression in the entire cohort and in subgroups of patients with atrial fibrillation (AF) and HF. We also estimated average treatment effects from propensity-adjusted analyses using inverse probability treatment weighting.
RESULTS: Information on digoxin use at baseline was available for 98.7% (3298/3343) of patients. In the overall population, digoxin was significantly associated with mortality (OR 1.63, 95% CI 1.30 to 2.04, p<0.0001) and recurrent HF (OR 1.48, 95% CI 1.07 to 2.04, p=0.019). On propensity-weighted analyses, this effect was markedly attenuated (OR 1.05, 95% CI 1.01 to 1.09, p=0.005). Patients in sinus rhythm without HF had a higher propensity-adjusted odds of death with digoxin use (OR 1.06, 95% CI 1.01 to 1.12, p=0.015), but those with both AF and HF had lower mortality (OR 0.88, 95% CI 0.80 to 0.98, p=0.019).
CONCLUSION: Digoxin use is associated with higher mortality in patients with RHD, but this is greatly attenuated on propensity adjustment, indicating the presence of substantial treatment bias. The adjusted estimates may therefore not be reliable, and large randomised trials are needed to determine the true effect of digoxin in patients with RHD.

60: Katwa U, Kabra SK. Advances in Management of Asthma. Indian J Pediatr. 2018 Sep;85(9):746-747. doi: 10.1007/s12098-018-2748-3. Epub 2018 Jul 28. PubMed PMID:

30056497.

61: 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.

62: Kaur A, Das R, Nigam MR, Elangovan R, Pandya D, Jha S, Kalyanasundaram D. Rapid Detection Device for Salmonella typhi in Milk, Juice, Water and Calf Serum. Indian J Microbiol. 2018 Sep;58(3):381-392. doi: 10.1007/s12088-018-0730-4. Epub 2018 Apr 30. PubMed PMID: 30013283; PubMed Central PMCID: PMC6023822.

A limit of detection of 200 CFU/mL of Salmonella typhi spiked in various sample matrices were achieved in 30 min. The sample matrices were raw/unprocessed milk, commercially available milk, juice from packed bottles, fresh juice from carts, potable water, turbid water and calf serum. The complete protocol comprised of three steps: (a) cell lysis (b) nucleic acid amplification and (c) an in situ optical detection. The cell lysis was carried out using a simple heating based protocol, while the loop-mediated isothermal amplification of DNA was carried out by an in-house designed and fabricated system. The developed system consists of an aluminum block fitted with two cartridge heaters along with a thermocouple. The system was coupled to a light source and spectrometer for a simultaneous in situ detection. Primers specific for STY2879 gene were used to amplify the nucleic acid sequence, isolated from S. typhi cells. The protocol involves 15 min of cell lysis and DNA isolation followed by 15 min for isothermal amplification and simultaneous detection. No cross-reactivity of the primers were observed at 106 CFU/mL of Escherichia coli, Vibrio cholerae, Salmonella typhimurium, Salmonella paratyphi A, Pseudomonas aeruginosa, Bacillus cereus, Lysteria monocytogenes, Clostridium botulinum, Staphylococcus aureus and Salmonella havana. In addition, the system was able to detect S. typhi of 200 CFU/mL in a concoction of 106 CFU/mL of E. coli, 106 CFU/mL of V. cholerae, and 106 CFU/mL of hepatocyte-derived cellular carcinoma HUH7 cells. The proposed rapid diagnostic system shows a promising future in the field of food and medical diagnostics.

63: Kazi ZB, Desai AK, Troxler RB, Kronn D, Packman S, Sabbadini M, Rizzo WB, Scherer K, Abdul-Rahman O, Tanpaiboon P, Nampoothiri S, Gupta N, Feigenbaum A, Niyazov DM, Sherry L, Segel R, McVie-Wylie A, Sung C, Joseph AM, Richards S, Kishnani PS. An immune tolerance approach using transient low-dose methotrexate in the ERT-naÃ¯ve setting of patients treated with a therapeutic protein: experience in infantile-onset Pompe disease. Genet Med. 2018 Sep 14. doi: 10.1038/s41436-018-0270-7. [Epub ahead of print] PubMed PMID: 30214072.

PURPOSE: To investigate immune tolerance induction with transient low-dose methotrexate (TLD-MTX) initiated with recombinant human acid α-glucosidase (rhGAA), in treatment-naïve cross-reactive immunologic material (CRIM)-positive infantile-onset Pompe disease (IOPD) patients.
METHODS: Newly diagnosed IOPD patients received subcutaneous or oral 0.4 mg/kg TLD-MTX for 3 cycles (3 doses/cycle) with the first 3 rhGAA infusions. Anti-rhGAA IgG titers, classified as high-sustained (HSAT; ≥51,200, ≥2 times after 6 months), sustained intermediate (SIT; ≥12,800 and <51,200 within 12 months), or low (LT; ≤6400 within 12 months), were compared with those of 37 CRIM-positive IOPD historic comparators receiving rhGAA alone.
RESULTS: Fourteen IOPD TLD-MTX recipients at the median age of 3.8 months (range, 0.7-13.5 months) had a median last titer of 150 (range, 0-51,200) at median rhGAA duration ~83 weeks (range, 36-122 weeks). One IOPD patient (7.1%) developed titers in the SIT range and one patient (7.1%) developed titers in the HSAT range. Twelve of the 14 patients (85.7%) that received TLD-MTX remained LT, versus 5/37 HSAT (peak 51,200-409,600), 7/37 SIT (12,800-51,000), and 23/37 LT (200-12,800) among comparators.
CONCLUSION: Results of TLD-MTX coinitiated with rhGAA are encouraging and merit a larger longitudinal study.

64: Kim JD, Cho EJ, Ahn C, Park SK, Choi JY, Lee HC, Kim DY, Choi MS, Wang HJ,

Kim IH, Yeon JE, Seo YS, Tak WY, Kim MY, Lee HJ, Kim YS, Jun DW, Sohn JH, Kwon SY, Park SH, Heo J, Jeong SH, Lee JH, Nakayama N, Mochida S, Ido A, Tsubouchi H, Takikawa H, Shalimar, Acharya SK, Bernal W, O'Grady J, Kim YJ. A Model to Predict 1-Month Risk of Transplant or Death in Hepatitis A-Related Acute Liver Failure. Hepatology. 2018 Sep 8. doi: 10.1002/hep.30262. [Epub ahead of print] PubMed PMID: 30194739.

Acute liver failure (ALF) caused by hepatitis A is a rare but fatal disease. Here, we developed a model to predict outcome in patients with ALF caused by hepatitis A. The derivation set consisted of 294 patients diagnosed with hepatitis A-related ALF (ALFA) from Korea, and a validation set of 56 patients from Japan, India, and United Kingdom. Using a multivariate proportional hazard model, a risk-prediction model (ALFA score) consisting of age, international normalized ratio, bilirubin, ammonia, creatinine, and hemoglobin levels acquired on the day of ALF diagnosis was developed. The ALFA score showed the highest discrimination in the prediction of liver transplant or death at 1 month (c-statistic, 0.87; 95% confidence interval [CI], 0.84-0.92) versus King's College criteria (KCC; c-statistic, 0.56; 95% CI, 0.53-0.59), U.S. Acute Liver Failure Study Group index specific for hepatitis A virus (HAV-ALFSG; c-statistic, 0.70; 95% CI, 0.65-0.76), the new ALFSG index (c-statistic, 0.79; 95% CI, 0.74-0.84), Model for End-Stage Liver Disease (MELD; c-statistic, 0.79; 95% CI, 0.74-0.84), and MELD including sodium (MELD-Na; c-statistic, 0.78; 95% CI, 0.73-0.84) in the derivation set (all $P < 0.01$). In the validation set, the performance of the ALFA score (c-statistic, 0.84; 95% CI, 0.74-0.94) was significantly better than that of KCC (c-statistic, 0.65; 95% CI, 0.52-0.79), MELD (c-statistic, 0.74; 95% CI, 0.61-0.87), and MELD-Na (c-statistic, 0.72; 95% CI, 0.58-0.85) (all $P < 0.05$), and better, but not statistically significant, than that of the HAV-ALFSG (c-statistic, 0.76; 95% CI, 0.61-0.90; $P = 0.28$) and new ALFSG indices (c-statistic, 0.79; 95% CI, 0.65-0.93; $P = 0.41$). The model was well-calibrated in both sets. Conclusion: Our disease-specific score provides refined prediction of outcome in patients with ALF caused by hepatitis A.

65: Kishen T, Garg B. Legends of Indian Orthopedics: Dr. Verghese Chacko. Indian J Orthop. 2018 Sep-Oct;52(5):573. doi: 10.4103/ortho.IJOrtho_439_18. PubMed PMID: 30237617; PubMed Central PMCID: PMC6142802.

66: Kolias AG, Viaroli E, Rubiano AM, Adams H, Khan T, Gupta D, Adeleye A, Iaccarino C, Servadei F, Devi BI, Hutchinson PJ. The current status of decompressive craniectomy in traumatic brain injury. Curr Trauma Rep. 2018 Sep 1;4(4):326-332. doi: 10.1007/s40719-018-0147-x. PubMed PMID: 30473990; PubMed Central PMCID: PMC6244550.

Purpose: This review describes the evidence base that has helped define the role of decompressive craniectomy (DC) in the management of patients with traumatic brain injury (TBI).
Recent findings: The publication of two randomized trials (DECRA and RESCUEicp) has strengthened the evidence base. The DECRA trial showed that neuroprotective bifrontal DC for moderate intracranial hypertension is not helpful, whereas the RESCUEicp trial found that last-tier DC for severe and refractory intracranial hypertension can significantly reduce the mortality rate but is associated with a higher rate of disability. These findings have reopened the debate about 1) the indications for DC in various TBI subtypes, 2) alternative techniques (e.g. hinge craniotomy), 3) optimal time and material for cranial reconstruction, and 4) the role of shared decision-making in TBI care. Additionally, the role of primary DC when evacuating an acute subdural hematoma is currently undergoing evaluation in the context of the RESCUE-ASDH randomized trial.
Summary: This review provides an overview of the current evidence base, discusses its limitations and presents a global perspective on the role of DC, as there is growing recognition that attention should also focus on low- and middle-income countries due to their much greater TBI burden.

67: Konanki R, Gulati S, Prasad K, Saini L, Pandey RM, Paul VK. Comparison of

telephone with face to face consultation for follow up of Neurocysticercosis. Epilepsy Res. 2018 Sep;145:110-115. doi: 10.1016/j.eplepsyres.2018.06.005. Epub 2018 Jun 12. PubMed PMID: 29936301.

OBJECTIVES: There is significant scarcity of specialists to provide care for children with epilepsy in many parts of the world. Telemedicine is a potential future option. This study was planned to estimate the diagnostic accuracy of telephone consultation to identify Critical Clinical Events (breakthrough seizures, drug non-compliance, drug adverse events, features of raised intracranial pressure, and other disease-related events),compared to the Face-to-Face consultation (gold standard), in children with Neurocysticercosis (NCC) and symptomatic seizures, following the completion of cysticidal therapy.
METHODS: Children aged 2-15 years attending a tertiary health care facility with a diagnosis of NCC and symptomatic seizures were enrolled after completion of the cysticidal therapy. The parents were contacted by a Pediatric Neurology Resident on Telephone before the scheduled hospital visit. Subsequently, all the children were seen directly in hospital the next day by another Pediatric Neurology Resident. The information was noted on a structured questionnaire. The diagnostic accuracy of telephone consultation for identifying the Critical Clinical Events was estimated using Face-to-Face consultation as the gold standard.
RESULTS: A total of 1145 potential events were evaluated. Of these, the face-to-face consultation identified 56 events that would need hospital visit for detailed evaluation (breakthrough seizures in 19, drug non-compliance in 15, adverse drug events in 11, features of raised intracranial pressure in 8, and other disease-related events in 3), and 1089 events that did not require hospital consultation. The sensitivity, specificity, positive and negative predictive values of telephone consultation were 89.28% (78.12-95.96), 97.61% (96.52-98.43), 65.79% (54.01-76.30), and 99.43% (98.78-99.79) respectively. The likelihood ratios when telephone consultation was positive and negative were 37.3 and 0.11 respectively.
SIGNIFICANCE: Telephone consultation is an acceptable mode of follow-up for children with mild Neurocysticercosis and symptomatic seizures after completion of cysticidal therapy.

68: Koul PA, Mir H, Saha S, Chadha MS, Potdar V, Widdowson MA, Lal RB, Krishnan A. Respiratory viruses in returning Hajj & Umrah pilgrims with acute respiratory illness in 2014-2015. Indian J Med Res. 2018 Sep;148(3):329-333. doi: 10.4103/ijmr.IJMR_890_17. PubMed PMID: 30425224; PubMed Central PMCID: PMC6251276.

Background & objectives: Respiratory tract infections are common among Hajj and Umrah pilgrims which pose a public health risk of spread of respiratory infections. Influenza has been reported from Indian Hajj and Umrah returning pilgrims, but data on other respiratory pathogens are sparse in India. Here we report the presence of common respiratory viral pathogens in returning Hajj and Umrah pilgrims suffering from acute respiratory illness (ARI) in 2014-2015.
Methods: Respiratory specimens (nasopharyngeal and throat swabs) were collected from 300 consenting pilgrims with ARI in the past one week and tested for influenza and Middle East Respiratory Syndrome coronavirus (MERS-CoV) and other respiratory viruses using in-house standardized quantitative real-time reverse-transcription polymerase chain reaction. Clinical features among the pathogen positive and negative patients were compared. The patients received symptomatic treatment and antivirals where appropriate and were followed telephonically to collect data on illness outcome.
Results: Ninety seven (32.3%) of the 300 participants were tested positive for any virus, most common being influenza viruses (n=33, 11%). Other respiratory viruses that were detected included human coronaviruses [n=26, 8.7%; OC43 (n=19, 6.3%) and C229E (n=7, 2.3%)], rhinovirus (n=20, 6%), adenoviruses (n=8, 2.6%), parainfluenza viruses (n=7, 2.3%), respiratory syncytial virus (n=3, 1%) and bocaviruses (n=2, 0.6%). Clinical features observed in pathogen positive and pathogen negative patients did not differ significantly. Eighteen influenza positive patients were treated with oseltamivir.

Interpretation & conclusions: Pilgrims returning from mass gatherings are often afflicted with respiratory pathogens with a potential to facilitate transmission of respiratory pathogens across international borders. The study reinforces the need for better infection prevention and control measures such as vaccination, health education on cough etiquette and hand hygiene.

69: Kumar A, Pal A, Kalaivani M, Gupta N, Jain V. Etiology of short stature in Indian children and an assessment of the growth hormone-insulin-like growth factor axis in children with idiopathic short stature. J Pediatr Endocrinol Metab. 2018 Sep 25;31(9):1009-1017. doi: 10.1515/jpem-2017-0352. PubMed PMID: 30130251.

Background Our objectives were to evaluate the etiology of short stature, assess the prevalence of idiopathic short stature (ISS) and assess the growth hormone (GH)-insulin-like growth factor (IGF) axis in children with ISS. Methods A stepwise diagnostic evaluation was done in 394 children aged 4-16 years with short stature. Children with no definitive etiology were labeled as ISS. In these children, baseline IGF-1, IGF binding protein-3 (IGFBP-3) and stimulated IGF-1 after administration of GH for 4 days were measured. Results Hypothyroidism (in 18.1%) and ISS (in 15.5%) were the commonest causes of short stature. In children with ISS (n=61), the mean baseline and stimulated IGF-1 standard deviation scores (SDSs) were -1.2±1.0 and -0.3±1.4, respectively, with levels below -2 SDS in 13 (21%) and six (10%) children, respectively. In 33 (54%) of the ISS patients, response to GH was suboptimal (increment in the IGF-1 level <40%). There was no difference in the mean peak GH, IGFBP-3 and baseline and stimulated IGF-1 levels between children with familial and non-familial ISS. A significant positive correlation of height SDS with baseline IGF-1 SDS (r=0.28, p=0.026), stimulated IGF-1 SDS (r=0.32, p=0.010) and ΔIGF-1 SDS (r=0.26, p=0.036) was observed in children with ISS. Conclusions Hypothyroidism and ISS were the commonest etiologies for short stature. The baseline IGF-1 was below -2 SDS in 21% and the increment after GH stimulation was suboptimal in 54% of children, indicating that a substantial proportion of children with ISS had an impaired GH-IGF axis.

70: Kumar V, Kumawat D, Tewari R, Venkatesh P. Ultra-wide field imaging of pigmented para-venous retino-choroidal atrophy. Eur J Ophthalmol. 2018 Sep 3:1120672118795056. doi: 10.1177/1120672118795056. [Epub ahead of print] PubMed PMID: 30175613.

OBJECTIVE: To describe the ultra-wide field imaging features of pigmented para-venous retino-choroidal atrophy.
DESIGN: Retrospective review at a tertiary care centre.
PARTICIPANTS: Eight eyes of five patients with pigmented para-venous retino-choroidal atrophy who presented to our retina clinic over last 2 years.
METHODS: Retrospective review of ultra-wide field pseudo-colour and short wave autofluorescence imaging was performed. In vivo histology of the macula and areas of retino-choroidal atrophy was studied with swept source optical coherence tomography (SS-OCT).
RESULTS: The median age was 40 years (range: 22-67 years). Best corrected visual acuity ranged from perception of light to 20/20. The para-venous retino-choroidal atrophy and pigment clumping not only involved the major arcade vessels but also extended into the peripapillary area and retinal periphery. The affected areas demonstrated hypoautofluorescence with sharp hyperautofluorescent borders. Macular atrophy, epiretinal membrane and optic disc pallor were noted in two eyes each. In all cases, the affected pigmentary area had disorganization of inner retinal layers, disruption of outer retinal layers and retinal pigment epithelium and markedly thinned out choroid on swept source optical coherence tomography. Concurrent involvement with retinitis pigmentosa in the fellow eye was noted in two patients.
CONCLUSION: Ultra-wide field imaging of pigmented para-venous retino-choroidal atrophy sheds light onto the widespread retino-choroidal abnormalities. Concurrent disc and macular involvement may jeopardize the visual function. Pigmented para-venous retino-choroidal atrophy may be considered as a

self-limited form of retinitis pigmentosa.

71: Kumarasinghe SPW, Pandya A, Chandran V, Rodrigues M, Dlova NC, Kang HY, Ramam M, Dayrit JF, Goh BK, Parsad D. A global consensus statement on ashy dermatosis, erythema dyschromicum perstans, lichen planus pigmentosus, idiopathic eruptive macular pigmentation, and Riehl's melanosis. Int J Dermatol. 2019 Mar;58(3):263-272. doi: 10.1111/ijd.14189. Epub 2018 Sep 3. Review. PubMed PMID: 30176055.

Ashy dermatosis (AD), lichen planus pigmentosus (LPP), erythema dyschromicum perstans (EDP), and idiopathic eruptive macular pigmentation are several acquired macular hyperpigmentation disorders of uncertain etiology described in literature. Most of the published studies on these disorders are not exactly comparable, as there are no clear definitions and different regions in the world describe similar conditions under different names. A consensus on the terminology of various morphologies of acquired macular pigmentation of uncertain etiology was a long-felt need. Several meetings of pigmentary disorders experts were held to address this problem. A consensus was reached after several meetings and collation of e-mailed questionnaire responses and e-mail communications among the authors of publications on the above conditions. This was achieved by a global consensus forum on AD, LPP, and EDP, established after the 22nd International Pigment Cell Conference held in Singapore in 2014. Thirty-nine experts representing 18 countries participated in the deliberations. The main focus of the deliberations was terminology of the conditions; as such, we present here the consensus statement of the forum and briefly review the available literature on the subject. We have not attempted to discuss treatment modalities in detail.

72: Lalwani S, Hasan F, Khurana S, Mathur P. Epidemiological trends of fatal pediatric trauma: A single-center study. Medicine (Baltimore). 2018 Sep;97(39):e12280. doi: 10.1097/MD.0000000000012280. PubMed PMID: 30278499; PubMed Central PMCID: PMC6181455.

To evaluate the potential risk factors which increase the incidence of post-trauma complications and mortality in pediatric population.A retrospective cohort study was conducted on patients below 18 years of age with a fatal outcome who were admitted to an Indian level-1 trauma center between January 2013 and December 2015. This cohort was analyzed to determine the demographics, injury mechanism, injury severity, microbiological profile, and cause of death.In total, 320 pediatric patients with a fatal outcome were studied which showed male preponderance (71.56%). The median age of the patients was 11 years (range, 0.14-18 years). Median duration of stay was 1 day (range, 0-183 days). Fall and road traffic accidents were the common mechanisms of trauma while the main injury was head injury. In total, 857 clinical samples were received from 56 patients. The clinical samples from 35 (10.94%) patients were culture positive. Culture-proven infections were significantly correlated with the length of hospital stay (P=.001). In total, 212 organisms were isolated from 193 positive samples of which gram-negative bacteria were predominant (89.15%). The most common gram-positive bacterial isolate was Staphylococcus aureus (12, 52.17%), while Acinetobacter baumannii (66, 34.92%) was the most prevalent gram-negative bacterial isolate followed by Pseudomonas spp. (36, 19.05%), Klebsiella pneumoniae (35, 18.52%), and Escherichia coli (16, 8.47%). Up to 100% multidrug resistance was seen in both gram-positive and gram-negative bacterial isolates. The first 24hours after trauma were the deadliest for our patients. Head/central nervous system injury was the primary cause of disabilities and early death whereas infection attributed to prolonged hospital stay.From these observations we concluded that management of pediatric trauma requires expert, multidisciplinary, and timely interventions. Moreover, nosocomial infections with multidrug resistant gram-negative bacteria challenges the accepted tenets of trauma care affecting the outcome of the pediatric population. Early identification of such high-risk patients' infection may facilitate early intervention. Thus, many deaths in pediatric group are preventable.

73: Madhusudhan KS, Kilambi R, Shalimar, Pal S, Sharma R, Srivastava DN. Evaluation of Splenic Stiffness in Patients of Extrahepatic Portal Vein Obstruction Using 2D Shear Wave Elastography: Comparison with Intra-Operative Portal Pressure. J Clin Exp Hepatol. 2018 Sep;8(3):250-255. doi: 10.1016/j.jceh.2017.12.002. Epub 2017 Dec 30. PubMed PMID: 30302041; PubMed Central PMCID: PMC6175726.

Background/Aims: To compare splenic stiffness (SS) with intra-operative portal pressures (PPs) in patients of extrahepatic portal vein obstruction (EHPVO).
Methods: Twenty-one patients (14 males; 7 females) of mean age 20.4 years with clinical and sonographic diagnosis of EHPVO were included in this approved prospective study. Endoscopy for esophageal varices (EV) was done in all patients followed by ultrasonographic 2D shear wave elastography (SWE) of spleen. Three values were taken at different areas of spleen avoiding major vessels and mean was calculated. Intra-operative PP was measured from an omental vein during proximal spleno-renal shunt surgery. The PP was compared and correlated with SS along with other parameters.
Results: The mean SS was 46.04 ± 8.0 kPa and the mean PP was 33.29 ± 4.1 mmHg. There was no significant correlation between PP and SS (P = 0.61) and between grades of EV and SS (P = 0.38). Significant correlation was seen between grades of EV and PP (0.04). SS also did not show significant correlation with splenic size or duration of disease.
Conclusion: SS measured by 2D SWE did not correlate with PP and thus may not help in predicting gastrointestinal bleed in patients of EHPVO.

74: Madhusudhan KS, Kilambi R, Shalimar, Sahni P, Sharma R, Srivastava DN, Gupta AK. Measurement of splenic stiffness by 2D-shear wave elastography in patients with extrahepatic portal vein obstruction. Br J Radiol. 2018 Dec;91(1092):20180401. doi: 10.1259/bjr.20180401. Epub 2018 Sep 18. PubMed PMID: 30226081; PubMed Central PMCID: PMC6319854.

OBJECTIVE:: To assess the accuracy of splenic stiffness (SS) measured by 2D-shear wave elastography (SWE) for predicting variceal bleeding in the patients with extrahepatic portal vein obstruction (EHPVO).
METHODS:: 52 patients with EHPVO (mean age: 22.29 years; 26 each males and females) were included in the study after obtaining approval from the institute ethics committee. All patients initially underwent upper gastrointestinal endoscopy followed by ultrasonography, including 2D-SWE on the Aixplorer Supersonic Imagine scanner. The SS was measured through the anterior abdominal wall and an average of three measurements was taken. The SS was then compared with clinical symptoms, variceal grade, and other ultrasonography (USG) parameters. USG parameters were also compared with variceal grade.
RESULTS:: The mean SS was 44.92 ± 12.35 kPa. There was no significant difference in the mean SS of patients with high grade varices (44.30 kPa; n = 25) from those with low grade varices (46.91 kPa; n = 20). The ROC analysis showed a poor area under the curve of 0.477 for the prediction of high grade varices by the SS. The SS did not show any significant correlation with other ultrasonography parameters except splenic size, with which there was a weak but significant correlation. The measurement of SS by 2D-SWE was reliable and Cronbach's alpha was 0.905.
CONCLUSION:: The SS measured by 2D-SWE is not an accurate predictor of variceal grade and thus bleeding in patients of EHPVO.
ADVANCES IN KNOWLEDGE:: EHPVO is a vascular pathology with most patients showing splenomegaly and preserved liver function. Although, elastography of spleen has been shown to be useful in patients with cirrhosis for predicting portal hypertension, it does not seem to be helpful in patients with EHPVO.

75: Mahajan UB, Chandrayan G, Patil CR, Arya DS, Suchal K, Agrawal Y, Ojha S, Goyal SN. Eplerenone attenuates myocardial infarction in diabetic rats via modulation of the PI3K-Akt pathway and phosphorylation of GSK-3Î². Am J Transl Res. 2018 Sep 15;10(9):2810-2821. eCollection 2018. PubMed PMID: 30323868; PubMed Central PMCID: PMC6176230.

We investigated the effect of eplerenone on myocardial infarcted diabetic rats via modulation of the PI3K/Akt pathway and its downstream target GSK-3β. Diabetes was induced by administration of a single dose of streptozotocin (55 mg/kg IP). Diabetic rats received either eplerenone or PI3k/Akt antagonist (wortmannin) or in combination for 14 days with concurrent administration of isoproterenol (100 mg/kg s.c) on 13th and 14th day. Isoproterenol prompted cardiotoxicity and was demonstrated by a decrease in the maximal positive rate of developed left ventricular pressure, the maximal negative rate of developed left ventricular pressure and an increase in left ventricular end-diastolic pressure along with oxidative stress. Myocardial infarcted diabetic rats exhibited increased myonecrosis, edema, and apoptotic cell death. Treatment with eplerenone significantly improved the redox status of the myocardium. Eplerenone markedly inhibited Bax expression, TUNEL-positive cells, and myonecrosis. On the other hand, the administration of eplerenone and wortmanin did not draw out the same effects, when administered concomitantly or individually. Moreover, the rats treated with eplerenone showed increased expression of PI3K/Akt and decreased its downstream target GSK-3β. The present study confirms the protective effects of eplerenone on myocardial infarction in diabetic rats via modulation of PI3K/Akt pathway and its downstream regulator GSK-3β.

76: Maharana PK, Chhablani JK, Das T, Kumar A, Sharma N. Response to: Transzonular drug delivery during cataract surgery: Is dropless cataract surgery really beneficial? Indian J Ophthalmol. 2018 Sep;66(9):1380. doi: 10.4103/ijo.IJO_1040_18. PubMed PMID: 30127183; PubMed Central PMCID: PMC6113823.

77: Maharana PK, Sahay P, Sen S, Venugopal R, Titiyal JS, Sharma N. Corneal Ectasia in Stevens-Johnson Syndrome: A Sequela of Chronic Disease. Am J Ophthalmol. 2018 Sep;193:1-9. doi: 10.1016/j.ajo.2018.05.030. Epub 2018 Jun 8. PubMed PMID: 29890163.

PURPOSE: To describe corneal ectasia in cases of chronic Stevens-Johnson syndrome (SJS).
DESIGN: Prospective observational study.
METHODS: Setting: Institutional.
PATIENTS: Fifteen consecutive cases of chronic SJS.
MAIN OUTCOME MEASURES: Best-corrected distance visual acuity (BCDVA), maximum corneal curvature (Kmax), anterior elevation, posterior elevation, thinnest pachymetry, and Sotozono severity score.
RESULTS: Thirty eyes of 15 patients were included. Corneal tomography using Scheimpflug technology (Pentacam-HR, Oculus GmbH) was performed. Nine eyes were excluded owing to poor-quality scans. The median age was 26 years. The median time from onset of disease to assessment for corneal ectasia was 7 years. The median BCDVA was 0.8 logMAR units at presentation. The median Sotozono severity score was 11. Corneal ectasia (Kmax > 48 diopters [D]) was noted in 76.2% of eyes. The mean Kmax was 58.37 ± 14.89 D. On Belin/Ambrosio enhanced ectasia display the median front and back elevation was 42 μm (10-176 μm) and 267 μm (15-2392 μm), respectively. The mean pachymetry was 377.76 ± 165.05 μm (133-448 μm). The point of maximum ectasia was peripheral in 57.1%, both central and peripheral in 19.1%, and central in 23.8% of eyes. On Spearman correlation analysis, deterioration in BCDVA (R = 0.759, P < .001) and increase in Kmax (R = 0.589, P = .005) was associated with higher disease severity (Sotozono grading).
CONCLUSION: Corneal ectasia is a common but often missed entity in cases of chronic SJS that may be a cause for poor visual acuity in these cases. All cases of SJS must be evaluated for corneal ectasia, especially when the visual acuity is disproportionate to the disease severity.

78: Makhija N, Magoon R. Ischemia Begets Right Ventricular Dysfunction After Cone Repair for Ebstein's Anomaly. J Cardiothorac Vasc Anesth. 2019 Jan;33(1):261-262. doi: 10.1053/j.jvca.2018.09.026. Epub 2018 Sep 25. PubMed PMID: 30529179.

79: Malaviya AN, Mehra NK. A fascinating story of the discovery & development of

biologicals for use in clinical medicine. Indian J Med Res. 2018 Sep;148(3):263-278. doi: 10.4103/ijmr.IJMR_1471_18. Review. PubMed PMID: 30425216; PubMed Central PMCID: PMC6251261.

A young physician starting a fresh career in medicine in this millennium would hardly stop to think about the genesis of a particular biological drug that he/she will be prescribing for a patient evaluated in the morning outpatient department. For him/her, this is now routine, and the question of 'Who', 'How' and 'When' about these biologicals would be the last thing on their mind. However, for those who came to the medical profession in the 1950s, 1960s and 1970s, these targeted drugs are nothing short of 'miracles'. It would be a fascinating story for the young doctor to learn about the long journey that the dedicated biomedical scientists of yesteryears took to reach the final destination of producing such wonder drugs. The story is much like an interesting novel, full of twists and turns, heart-breaking failures and glorious successes. The biologicals acting as 'targeted therapy' have not only changed the natural history of a large number of incurable/uncontrollable diseases but have also transformed the whole approach towards drug development. From the classical empirical process, there is now a complete shift towards understanding the disease pathobiology focusing on the dysregulated molecule(s), targeting them with greater precision and aiming for better results. Seminal advances in understanding the disease mechanism, development of remarkably effective new technologies, greater knowledge of the human genome and genetic medicine have all made it possible to reach the stage where artificially developed 'targeted' drugs are now therapeutically used in routine clinical medicine.

80: Malik R. Pediatric Inflammatory Bowel Disease in India: Time to Prepare for Challenges and Opportunities. Indian J Pediatr. 2018 Nov;85(11):959-960. doi: 10.1007/s12098-018-2778-x. Epub 2018 Sep 4. Review. PubMed PMID: 30182277.

81: Meel R, Wadhwani M, Pushker N. Giant congenital facial melanocytic nevus. Oman J Ophthalmol. 2018 Sep-Dec;11(3):265-266. doi: 10.4103/ojo.OJO_216_2017. PubMed PMID: 30505119; PubMed Central PMCID: PMC6219340.

Giant Congenital Melanocytic Nevus (GCMNs) is mostly reported in area of trunk followed by limbs and head. Their incidence is <1:20,000 newborns It derives attention due to its association with malignant melanoma.The risk of developing malignant melanoma is between 5 to 10%.We report a case of twelve year old boy with hyperpigmented lesion on face.

82: 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.

83: 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.

84: Misra S, Talwar P, Kumar A, Kumar P, Sagar R, Vibha D, Pandit AK, Gulati A, Kushwaha S, Prasad K. Association between matrix metalloproteinase family gene polymorphisms and risk of ischemic stroke: A systematic review and meta-analysis of 29 studies. Gene. 2018 Sep 25;672:180-194. doi: 10.1016/j.gene.2018.06.027. Epub 2018 Jun 12. Review. PubMed PMID: 29906531.

BACKGROUND: Ischemic stroke (IS) is a complex and devastating vascular disease that has become one of the leading causes of disability and mortality worldwide. Several studies have shown the association between matrix metalloproteinase (MMP) family gene polymorphisms and IS. However, the results have been indecisive.
OBJECTIVE: To investigate the association between Matrix Metalloproteinase gene polymorphisms and risk of IS.
METHODS: A literature search for eligible candidate gene studies published before, 28 June 2017, was conducted in the PubMed, EMBASE, Cochrane and Google Scholar databases. The following combinations of main keywords were used: ('Matrix Metalloproteinase' or 'MMP' or 'Stromelysin-1' or 'Gelatinase b') AND ('ischemic stroke' or 'IS') AND ('single nucleotide polymorphism' or 'gene polymorphism' or 'SNP'). Fixed or random effects models were used to estimate the Pooled Odds ratio (OR) and 95% confidence interval (CI). Statistical analysis was carried out by using STATA version 13.0 software.
RESULTS: Total 29 studies were included in our meta-analysis. A significant association was observed for MMP-9 (-1562C/T) (OR 1.27; 95% CI 1.06 to 1.53; p value = 0.01) and MMP-12 (-1082 A/G) (OR 2.55; 95% CI 1.75 to 3.71; p value<0.001) gene polymorphisms and risk of IS. No significant association was found for any of the MMP-1(-1607 1G/2G), MMP-2 (-1306C/T) & (-735C/T) and MMP-3 (-1612 5A/6A) gene polymorphisms with the risk of IS.
CONCLUSION: Our meta-analysis suggests that MMP-9 (-1562C/T) and MMP-12 (-1082 A/G) gene polymorphisms could be a risk factor for IS while MMP-1 (-1607 1G/2G), MMP-2 (-1306C/T) & (-735C/T) and MMP-3 (-1612 5A/6A) have no association with the risk of causing IS. However, large prospective studies with sufficient power are required to validate our findings.

85: Mittal A, Dijoo M, Sabhikhi A, Gulati S. Henoch SchÃ¶nlein Purpura Nephritis Developing in a Child with Known IgA Nephropathy. Indian J Pediatr. 2018 Sep;85(9):808-809. doi: 10.1007/s12098-018-2660-x. Epub 2018 Apr 6. PubMed PMID: 29623535.

86: Mittal S, Mohan A, Madan K. Rigid transbronchial needle aspiration: "A sledgehammer to crack a nut"!! Lung India. 2018 Sep-Oct;35(5):447-448. doi: 10.4103/lungindia.lungindia_164_18. PubMed PMID: 30168472; PubMed Central PMCID: PMC6120317.

87: Mittal S, Madan K. A 21-year-old man with cough and skin thickening. Lung India. 2018 Sep-Oct;35(5):437-438. doi: 10.4103/lungindia.lungindia_178_17. PubMed PMID: 30168467; PubMed Central PMCID: PMC6120310.

88: Nagral A, Sarma MS, Matthai J, Kukkle PL, Devarbhavi H, Sinha S, Alam S, Bavdekar A, Dhiman RK, Eapen CE, Goyal V, Mohan N, Kandadai RM, Sathiyasekaran M,

Poddar U, Sibal A, Sankaranarayanan S, Srivastava A, Thapa BR, Wadia PM, Yachha SK, Dhawan A. Wilson's Disease: Clinical Practice Guidelines of the Indian National Association for Study of the Liver, the Indian Society of Pediatric Gastroenterology, Hepatology and Nutrition, and the Movement Disorders Society of India. J Clin Exp Hepatol. 2019 Jan-Feb;9(1):74-98. doi: 10.1016/j.jceh.2018.08.009. Epub 2018 Sep 3. Review. PubMed PMID: 30765941; PubMed Central PMCID: PMC6363961.

Clinical practice guidelines for Wilson's disease (WD) have been published by the American Association for the Study of Liver Diseases and European Association for the Study of the Liver in 2008 and 2012, respectively. Their focus was on the hepatic aspects of the disease. Recently, a position paper on pediatric WD was published by the European Society of Pediatric Gastroenterology Hepatology and Nutrition. A need was felt to harmonize guidelines for the hepatic, pediatric, and neurological aspects of the disease and contextualize them to the resource-constrained settings. Therefore, experts from national societies from India representing 3 disciplines, hepatology (Indian National Association for Study of the Liver), pediatric hepatology (Indian Society of Pediatric Gastroenterology, Hepatology and Nutrition), and neurology (Movement Disorders Society of India) got together to evolve fresh guidelines. A literature search on retrospective and prospective studies of WD using MEDLINE (PubMed) was performed. Members voted on each recommendation, using the nominal voting technique. The Grades of Recommendation, Assessment, Development and Evaluation system was used to determine the quality of evidence. Questions related to diagnostic tests, scoring system, and its modification to a version suitable for resource-constrained settings were posed. While ceruloplasmin and 24-h urine copper continue to be important, there is little role of serum copper and penicillamine challenge test in the diagnostic algorithm. A new scoring system - Modified Leipzig score has been suggested with extra points being added for family history and serum ceruloplasmin lower than 5 mg/dl. Liver dry copper estimation and penicillamine challenge test have been removed from the scoring system. Differences in pharmacological approach to neurological and hepatic disease and global monitoring scales have been included. Rising bilirubin and worsening encephalopathy are suggested as indicators predicting need for liver transplant but need to be validated. The clinical practice guidelines provide recommendations for a comprehensive management of WD which will be of value to all specialties.

89: Nambirajan A, Jain D. Cell blocks in cytopathology: An update. Cytopathology. 2018 Dec;29(6):505-524. doi: 10.1111/cyt.12627. Epub 2018 Sep 27. Review. PubMed PMID: 30153355.

The cell block (CB) offers many advantages over other cytological preparations, particularly for immunocytochemical and molecular testing. However, inconsistent cellularity remains the most common reason for dissatisfaction among cytopathologists. In recent years, there has been a surge in the demand for CBs imposed by the increasing number of minimally invasive procedures performed to obtain material for diagnostic, prognostic and predictive purposes from advanced stage cancer patients. However, routine preparation of CBs significantly increases laboratory work load, operating cost and sample turn-around time. The objectives of our review were to: (a) identify scenarios where a CB is likely to improve diagnostic yield; (b) optimise CB preparatory methods; and (c) understand the factors influencing the success and validity of ancillary testing on various types of CBs. We performed an extensive literature search on CBs in cytology on internet search engines using the following keywords: cell block, cytoblock, cytology, cytopathology, methods, preparation, fixatives, diagnostic yield, ancillary and molecular studies. New CB methods, improvisations of previous CB methods, their utility for diagnosis, immunocytochemistry and molecular testing, and role in predictive biomarker testing are discussed in this review. CBs of good quality and cellularity outperform other cytology preparations in their reliability and versatility for ancillary testing. With many CB methods described in the literature, each with specific advantages and limitations, laboratories

may choose to use one or more of the methods depending upon their infrastructure, expertise and workload.

90: Nandini B, Mooventhan A, Manjunath NK. Add-on Effect Of Hot Sand Fomentation To Yoga On Pain, Disability, And Quality Of Life In Chronic Neck Pain Patients. Explore (NY). 2018 Sep;14(5):373-378. doi: 10.1016/j.explore.2018.01.002. Epub 2018 Jun 28. PubMed PMID: 30100129.

BACKGROUND: Neck pain is one of the commonest complaints and an important public health problem across the globe. Yoga has reported to be useful for neck pain and hot sand has reported to be useful for chronic rheumatism. The present study was conducted to evaluate the add-on effect of hot sand fomentation (HSF) to yoga on pain, disability, quality of sleep (QOS) and quality of life (QOL) of the patients with non-specific neck pain.
MATERIALS AND METHODS: A total of 60 subjects with non-specific or common neck pain were recruited and randomly divided into either study group or control group. Both the groups have received yoga and sesame seed oil (Sesamum Indicum L.) application. In addition to yoga and sesame seed oil, study group received HSF for 15 min per day for 5-days. Assessments were taken prior to and after the intervention.
RESULTS: Results of the study showed a significant reduction in the scores of visual analogue scale for pain, neck disability index (NDI), The Pittsburgh Sleep Quality Index (PSQI), and a significant increase in physical function, physical health, emotional problem, pain, and general health both in study and control groups. However, reductions in pain and NDI along with improvement in social functions were better in the study group as compared with control group.
CONCLUSION: Results of this study suggest that addition of HSF to yoga provides a better reduction in pain and disability along with improvement in the social functioning of the patients with non-specific neck pain than yoga alone.

91: Narasimhan P, Kashyap L, Mohan VK, Arora MK, Shende D, Srinivas M, Kashyap S, Nath S, Khanna P. Comparison of caudal epidural block with paravertebral block for renal surgeries in pediatric patients: A prospective randomised, blinded clinical trial. J Clin Anesth. 2019 Feb;52:105-110. doi: 10.1016/j.jclinane.2018.09.007. Epub 2018 Sep 19. PubMed PMID: 30243061.

STUDY OBJECTIVE: This study was undertaken to compare the analgesic efficacy of ultrasound-guided single-shot caudal block with ultrasound-guided single-shot paravertebral block in children undergoing renal surgeries.
DESIGN: Randomised, interventional, blinded clinical trial.
SETTING: Operating rooms of All India Institute of Medical Sciences, New Delhi, India.
PATIENTS: 50 children aged 2-10 years, of ASA status I/II, posted for elective renal surgeries.
INTERVENTIONS: The children were randomised into two groups (Group C-caudal block, Group P-paravertebral block). After induction of general anesthesia, single-shot caudal or paravertebral block was performed under ultrasound guidance, with 0.2% ropivacaine with 1:200000 adrenaline.
MEASUREMENTS: Time to first rescue analgesia, time to perform blocks, intraoperative and post-operative hemodynamics, post-operative FLACC scores, incidence of complications, parental satisfaction scores were recorded.
MAIN RESULTS: Children in Group P had significantly longer duration of analgesia ($p < 0.0004$) than Group C. Post-operative FLACC scores ($p < 0.005$) and analgesic requirements ($p < 0.0004$) were lower in Group P. The mean fentanyl requirement over 24 h in group P was 0.56 ± 0.82 µg/kg, compared to 1.8 ± 1.2 µg/kg in group C. Parents in Group P reported greater satisfaction ($p < 0.02$). No complications were seen in either of the groups.
CONCLUSION: This study showed superior analgesia and parental satisfaction with single-shot paravertebral block in comparison to single-shot caudal block for renal surgeries in children. However, the block performance in children requires adequate expertise and practice.

92: Negi N, Mojumdar K, Singh R, Sharma A, Das BK, Sreenivas V, Vajpayee M. Comparative Proliferation Capacity of Gag-C-Specific Naive and Memory CD4+ and CD8+ T Lymphocytes in Rapid, Viremic Slow, and Slow Progressors During Human Immunodeficiency Virus Infection. Viral Immunol. 2018 Sep;31(7):513-524. doi: 10.1089/vim.2018.0012. Epub 2018 Aug 29. PubMed PMID: 30156469.

The exact cause of altered dynamics in T cells compartment during HIV infection remains elusive to date. In this longitudinal study, the proliferation frequency of different T cell subsets was investigated in untreated HIV-1-infected Indian individuals stratified as rapid (R), viremic slow (VS), slow (S) progressors, and healthy controls. Ten healthy and 20 treatment-naive HIV-1-infected individuals were enrolled. Expression of Ki67 nuclear antigen was examined on HIV-specific T cell subsets in peripheral blood lymphocytes. Upon stimulation with HIV-1 Gag-C peptide pools, effector memory (EM) CD4 T cells (R vs. S, EM CD4, $p<0.05$) of R progressors proliferated significantly compared with those of S progressors at baseline. However, central memory (CM) CD8 T cell subsets proliferated significantly in VS and S progressors compared with those in R progressors, wherein highest proliferation frequency of EM CD8 T cells was observed. At follow-up visit, the proliferation frequency of naive CD8 T cells was significantly higher in R progressors than S progressors (R vs. S naive CD8, $p<0.05$). The findings suggest altered dynamics of different CD4+ and CD8+ T cell subsets in R, VS, and S progressors. The increase in CM T cell proliferation in VS and S progressors could be attributed to slower progression of the HIV infection. Hence, treatment strategies must be focused on restoring the homeostatic balance to restore T cell functionality.

93: Pal S, George J, Singh AN, Mathur S, Dash NR, Garg P, Sahni P, Chattopadhyay TK. Posterior Superior Mesenteric Artery (SMA) First Approach vs. Standard Pancreaticoduodenectomy in Patients with Resectable Periampullary Cancers: a Prospective Comparison Focusing on Circumferential Resection Margins. J Gastrointest Cancer. 2018 Sep;49(3):252-259. doi: 10.1007/s12029-017-9933-x. PubMed PMID: 28315190.

BACKGROUND: The 'SMA-first' (P-SMA) pancreatoduodenectomy (PD) allows dissection directly on the right lateral aspect of superior mesenteric artery (SMA) which may decrease circumferential resection margin (CRM) positivity. This comparative study between standard PD (sPD) and P-SMA approach was planned focusing on CRM involvement.
METHODS: This was a prospective study comparing consecutive patients with resectable periampullary cancers (PACA) undergoing PD using the standard or P-SMA approach. The perioperative outcomes and the CRM positivity rates (specimens analysed according to the standardized Leeds pathology protocol (LEEPP)) were compared.
RESULTS: Overall, 39 patients (28 men; mean age 54 years; sPD 21, P-SMA 18) were included. Both groups were comparable with regard to demographic/tumour characteristics and perioperative outcomes. The P-SMA technique was significantly faster (321.1 ± 54.0 vs. 357.6 ± 55.8 min; $p = 0.05$). Though the mean tumour size (2.2 vs. 2.1 cm; $p = 0.84$) and T stage (T2 and T3) distribution were similar in both groups, lymph node yield was significantly higher in the P-SMA group (10.7 vs. 5.95; $p = 0.001$; mean 8 (2-21)). Though CRM positivity (margin <1 mm) occurred in 8 (21.1%), we did not find the P-SMA PD to yield significantly lower CRM positivity rates compared to the sPD (3/17 (17.6%) vs. 5/21(23.8%); $p = 0.71$). At a median follow-up of 28 months, fewer patients in the P-SMA PD group developed recurrence (2/15 vs. 5/19; $p = 0.3$) or died (3/15 vs. 7/19; $p = 0.19$), though this difference was not significant.
CONCLUSIONS: In patients with resectable PACA, P-SMA PD was significantly faster and yielded higher lymph node counts in the specimen but did not lower the rate of CRM positivity as determined by the LEEPP.

94: Pandey AK, Dhiman V, Sharma A, ArunRaj ST, Baghel V, Patel C, Sharma PD, Bal CS, Kumar R. Role of an Intensity-Transformation Function in Enhancement of Bone Scintigraphy Images. J Nucl Med Technol. 2018 Sep;46(3):274-279. doi:

10.2967/jnmt.117.202929. Epub 2018 Mar 29. PubMed PMID: 29599398.

Bone scintigraphy images might exceed the dynamic range (the ratio between the highest and the lowest displayable brightness) of the monitor. In such a case, a high-intensity area accompanied by loss of detail in other structures in the displayed image make the clinical interpretation challenging. We have investigated the role of an intensity-transformation (IT) function in enhancement of these types of images. Methods: Forty high-dynamic-range bone scintigraphy images were processed using an IT function. The IT function has 2 parameters: threshold and slope. With the threshold kept equal to the mean count of the image, the slope was varied from 1 to 20. A software program developed in-house was used to process the images. Twenty output images corresponding to one input image were visually inspected by 2 experienced nuclear medicine physicians to select images of diagnostic quality, and from their selection was determined the standardized slope that produced the maximum number of diagnostic images. The 2 physicians also scored the quality of the input and output images (at the standardized slope) on a scale of 1-5. The Student t test was used to determine the significance of differences in mean score between the input and output images at an α significance level of 0.05. Results: Application of the IT function with standardized parameters significantly improved the quality of high-dynamic-range bone scintigraphy images ($P < 0.001$, with $\alpha = 0.05$). A slope of 8 maximized the number of diagnostic images. Conclusion: The IT function has a significant role in enhancing high-dynamic-range bone scintigraphy images.

95: Pandey NN, Sharma A, Chowhan K, Jagia P. Rare and Anomalous Origin of Left Circumflex Artery From Left Anterior Descending Artery. Ann Thorac Surg. 2019 Jan;107(1):e61. doi: 10.1016/j.athoracsur.2018.07.034. Epub 2018 Sep 15. PubMed PMID: 30227126.

96: Pandey NN, Sharma A, Kumar S. Unusual Late Presentation of a Rare Complex Aorto-Pulmonary Malformation Diagnosed on Computed Tomography Angiography. Heart Lung Circ. 2018 Sep 29. pii: S1443-9506(18)31913-9. doi: 10.1016/j.hlc.2018.08.029. [Epub ahead of print] PubMed PMID: 30297259.

97: Pandey NN, Sharma A, Kumar S. Rare association of tetralogy of Fallot with absent pulmonary valve syndrome with anomalous origin of right pulmonary artery from ascending aorta. BMJ Case Rep. 2018 Sep 1;2018. pii: bcr-2018-227008. doi: 10.1136/bcr-2018-227008. PubMed PMID: 30173140.

98: Parakh N, Baliyan V, Jain P, Sharma S, Kumar A. Bizarre Arterial Beading in a Child With Stroke. Pediatr Neurol. 2018 Sep;86:75-76. doi: 10.1016/j.pediatrneurol.2018.06.010. Epub 2018 Jul 4. PubMed PMID: 30082242.

99: Parveen B, Tripathi M, Vohora D. A Cross-Sectional Study to Assess the Modulation of Wnt Inhibitors following Anti-Epileptic Drug Therapy and their Correlation with Vitamin D and Receptor Activator of Nuclear Factor Î° B Ligand in
Indian Women with Epilepsy. Basic Clin Pharmacol Toxicol. 2018 Sep;123(3):271-276. doi: 10.1111/bcpt.12996. Epub 2018 Apr 15. PubMed PMID: 29504704.

Long-term anti-epileptic drug (AED) therapy compromises bone health. Although vitamin D deficiency is proposed to be involved, it alone is not held responsible. This accounts for investigating other mechanisms in bone accrual. Recent studies have shown modulation of inhibitors of wnt pathway, sclerostin and dickkopf-1 (DKK-1), in glucocorticoids-induced osteoporosis. We investigated whether AED monotherapy modulates wnt inhibitors in Indian women with epilepsy. Women of age > 20-40 years with the diagnosis of epilepsy and receiving AEDs (carbamazepine, valproate and levetiracetam) for at least a year were enrolled. The results were compared with age-matched healthy controls with no evidence of metabolic bone disease. Women undergoing treatment with AEDs (mean duration: 50.59 ± 37.929 months) exhibited higher serum sclerostin and receptor activator

of nuclear factor κ B ligand (RANKL) and lower vitamin D (25-hydroxy vitamin D) and DKK-1 levels when compared to age-matched healthy controls. Sclerostin showed a positive correlation with RANKL, while DKK-1 presented no such relationship. However, no association was evident after adjusting for age, duration of treatment and total daily dose. Although a correlation between wnt inhibitors and RANKL could not be obtained, AEDs displayed changes in serum levels of wnt inhibitors in persons with epilepsy and hence these drugs may compromise bone health through a disturbance in wnt signalling mechanisms.

100: Passah A, Arora S, Damle NA, Sharma R. Triple Ectopic Thyroid on Pertechnetate Scintigraphy. Indian J Endocrinol Metab. 2018 Sep-Oct;22(5):712-713. doi: 10.4103/ijem.IJEM_88_18. PubMed PMID: 30294586; PubMed Central PMCID: PMC6166550.

101: Patel A, Sharma MC, Bakhshi S. Outcome of Early Stage Pediatric Non-Lymphoblastic Non-Hodgkin Lymphoma. Indian J Pediatr. 2018 Sep;85(9):782-784. doi: 10.1007/s12098-017-2585-9. Epub 2018 Feb 8. PubMed PMID: 29417460.

There is lack of data on outcome of limited stage pediatric non-Hodgkin lymphoma (NHL) from south Asia. In view of this lacuna, authors evaluated patients of early stage (stage 1 and 2) non-lymphoblastic pediatric NHL patients treated with uniform short course, reduced-intensity protocol from Jan 2003 through Dec 2016. Of the total 280 subjects with pediatric NHL, 50 were of early stage of which 42 received uniform protocol. B-cell subtype was observed in 83% patients. Event-free-survival (EFS) and overall-survival (OS) were 85% and 90% respectively at 5 y (median-not reached). Age>13 y emerged as the only poor risk factor for EFS (p=0.05) on univariate analysis and same had a trend toward inferior prognosis in OS (p=0.09). Vincristine-induced neuropathy occurred in five patients. Febrile neutropenia was observed in 16% subjects with one patient requiring hospitalization. There was no treatment-related death. This largest data of limited stage pediatric non-lymphoblastic NHL from south Asia highlights that good outcomes may be achieved with less intense short course therapy without hospitalization, and that adolescent age is the only poor prognostic factor for outcome.

102: Pollock JA, Sharma N, Ippagunta SK, Redecke V, HÃ¤cker 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.

103: Priyadarshi M, Sankar MJ, Gupta N, Agarwal R, Paul V, Deorari A. Efficacy of daily supplementation of 800 IU vitamin D on vitamin D status at 6 months of age in term healthy Indian infants. J Perinatol. 2018 Nov;38(11):1566-1572. doi: 10.1038/s41372-018-0216-6. Epub 2018 Sep 5. PubMed PMID: 30185932.

OBJECTIVES: Most authorities recommend daily supplementation of 400 IU vitamin D for all term healthy neonates throughout infancy, however this dose was shown to be inadequate in an earlier study from our institution. We planned to evaluate if supplementation of 800 IU/day in term Indian infants would reduce the prevalence of vitamin D insufficiency (VDI) at 6 months of age.
METHODS: In a prospective study, we supplemented 800 IU/day of vitamin D in 70 term infants from birth till 6 months of age. Serum 25-hydroxy cholecalciferol [25(OH)D] was measured at birth and 6 months for all infants; and at 6, 10 and 14 weeks of age in subsets of 23 infants each. The primary outcome was prevalence of VDI (defined as serum 25(OH)D level < 50 nmol/L) at 6 months of age.
RESULTS: A total of 58 out of 70 (83%) infants were followed up until 6 months of age. The median (nmol/L; IQR) serum 25(OH)D at birth and 6 months of age was 25 (12.5-35) and 92.5 (72.5-137.5), respectively. The prevalence of VDI at birth was 91.3% (63/69), which reduced to 6.9% (4/58) at 6 months of age. However, four infants (6.9%, 95% CI 1.9-16.7) developed vitamin D excess (serum 25(OH)D 250-375 nmol/L) requiring reduction of the dose of supplementation. No infant developed vitamin D toxicity (serum 25(OH)D > 375 nmol/L).
CONCLUSIONS: Daily supplementation of 800 IU of vitamin D resulted in vitamin D sufficiency in most term healthy infants at 6 months of age but with potential risk of toxicity.

104: Pujari A, Behera A, Mukhija R, Chawla R, Yadav S, Sharma N. Ocular toxicity due to colours used during holi celebration in India: correlation of clinical findings with the anterior segment OCT. Cutan Ocul Toxicol. 2019 Mar;38(1):1-4. doi: 10.1080/15569527.2018.1495225. Epub 2018 Sep 10. PubMed PMID: 29985058.

PURPOSE: To correlate the anatomical extent of ocular surface toxicity due to colours using anterior segment optical coherence tomography (ASOCT) with the clinical findings.
METHODS: Patients presenting to our emergency department with ocular colour toxicity during the Holi festival celebrations from March 2 2018 to March 5 2018 were assessed for any adnexal, conjunctival, corneal, and anterior chamber findings, as well as findings on anterior segment optical coherence tomography.
RESULTS: A total of 21 patients were observed. The average age was 23 years with 16 patients being male (76.19%). Bilateral ocular involvement was more common (13 patients, 61.90%). Clinically, the corneal changes included localized punctate epitheliopathy (type I) in 12 patients (57.14%) and diffuse punctate epitheliopathy admixed with a variable sized epithelial defect (type II) in the other 9 patients (42.85%). The visual acuity among the former group varied from 6/6 to 6/9, whereas for the latter, it ranged from 6/12 to 6/24. On ASOCT in both the types, the superficial stromal involvement was noted up to 60 microns. Interestingly in two patients with type II corneal involvement, anterior segment involvement was noted in the form of staining of the lens capsule and dense anterior chamber inflammation.
CONCLUSIONS: Ocular toxicity due to colours used during Holi mainly involves the surface epithelium and the superficial stroma. This was observed clinically and also confirmed on ASOCT. The colour can rarely diffuse into the anterior chamber causing an inflammatory reaction and staining of the lens capsule. However, if managed appropriately, vision-threatening complications can be averted.

105: Pujari A, Shakrawal J, Gagrani M, Bajaj MS. Paediatric ocular super glue injuries: assessment of two cases. BMJ Case Rep. 2018 Sep 27;2018. pii: bcr-2018-226198. doi: 10.1136/bcr-2018-226198. PubMed PMID: 30262538.

In this report, we elaborate the clinical findings and the optimal management of two cases with ocular glue injuries in two paediatric patients. Both the patients were presented to the ocular emergency with completely closed eyelid and periocular erythema. The eyelids were completely closed due to matting of the eyelashes with glue retention up to lash roots. Thus, in both cases, after the application of local anaesthetic agent, immediate lash trimming was performed along with the removal of crystallised glue particles. However, the ocular surface showed only congestion in absence of any added corneal complications.

Patients were followed up with standard treatment protocol as per chemical injuries. Until the end of 5 months, the clinical course was uneventful.

106: Pujari A, Mukhija R, Singh AB, Chawla R, Sharma N, Kumar A. Smartphone-based high definition anterior segment photography. Indian J Ophthalmol. 2018 Sep;66(9):1375-1376. doi: 10.4103/ijo.IJO_544_18. PubMed PMID: 30127180; PubMed Central PMCID: PMC6113839.

107: Pujari A, Mukhija R, Shashni A, Obedulla H, Meel R, Bajaj MS. Bilateral hemorrhagic proptosis due to an uncommon cause in ocular emergency. Indian J Ophthalmol. 2018 Sep;66(9):1370-1371. doi: 10.4103/ijo.IJO_399_18. PubMed PMID: 30127177; PubMed Central PMCID: PMC6113844.

A 19-year-old male patient presented to the ocular emergency services with sudden onset of proptosis, pain, and bloody discharge. Further evaluation revealed bilateral visual acuity of finger counting close to face vision with an accurate projection of rays. Computed tomography scan of the head and orbit revealed diffuse orbital hemorrhage (mainly along the ocular coats) in the absence of any subperiosteal or intracranial hemorrhage. A complete hematological workup was done and it revealed decreased factor IX levels (9% of normal) consistent with hemophilia B (Christmas disease). The patient was managed medically with factor IX supplementation. At the end of 6 weeks, patient's visual acuity improved to 20/20 in both the eyes.

108: Pushpam D, Bakhshi S. Impact of Pediatric Malignancies on Parent's Quality of Life. Indian J Pediatr. 2018 Sep;85(9):713-714. doi: 10.1007/s12098-018-2735-8. Epub 2018 Jun 28. Review. PubMed PMID: 29951781.

109: Rajendran A, Dhoble P, Sundaresan P, Saravanan V, Vashist P, Nitsch D, Smeeth L, Chakravarthy U, Ravindran RD, Fletcher AE. Genetic risk factors for late age-related macular degeneration in India. Br J Ophthalmol. 2018 Sep;102(9):1213-1217. doi: 10.1136/bjophthalmol-2017-311384. Epub 2017 Dec 19. PubMed PMID: 29259020; PubMed Central PMCID: PMC6104670.

BACKGROUND/AIMS: There are limited data from India on genetic variants influencing late age-related macular degeneration (AMD). We have previously reported associations from a population-based study in India (the India age-related eye disease study (INDEYE)) of early AMD and single nucleotide polymorphisms (SNPs) in ARMS2/HTRA1 and no association with CFH, C2 or CFB. Late AMD cases were too few for meaningful analyses. We aimed to investigate SNPs for late AMD through case enrichment and extend the loci for early AMD.
METHODS: Fundus images of late AMD hospital cases were independently graded by the modified Wisconsin AMD grading scheme. In total 510 cases with late AMD (14 geographic atrophy and 496 neovascular AMD (nvAMD)), 1876 with early AMD and 1176 with no signs of AMD underwent genotyping for selected SNPs. We investigated genotype and per-allele additive associations (OR and 95% CIs) with nvAMD or early AMD. Bonferroni adjusted P values are presented.
RESULTS: We found associations with nvAMD for CFHY402H variant (rs1061170) (OR=1.99, 95% CI 1.67 to 2.37, P=10-6), ARMS2 (rs10490924) (OR=2.94, 95% CI 2.45 to 3.52, P=10-9), C2 (rs547154) (OR=0.67, 95% CI 0.53 to 0.85, P=0.01), ABCA1 (rs1883025) (OR=0.77, 95% CI 0.65 to 0.92, P=0.04) and an SNP near VEGFA (rs4711751) (OR=0.64, 95% CI 0.54 to 0.77, P=10-3). We found no associations of TLR3 (rs3775291), CFD (rs3826945), FRK (rs1999930) or LIPC (rs10468017) or APOE ε4 alleles with nvAMD or early AMD, nor between early AMD and rs1883025 or rs4711751.
CONCLUSIONS: The major genetic determinants of nvAMD risk in India are similar to those in other ancestries, while findings for early AMD suggest potential differences in the pathophysiology of AMD development.

110: Ramachandran A, Srivastava DN, Gupta AK, Madhusudhan KS. The Double Trouble: A Case of Duplicated Extrahepatic Bile Duct with Choledochal Cyst. Indian J Pediatr. 2019 Feb;86(2):186-188. doi: 10.1007/s12098-018-2790-1. Epub 2018 Sep

12. PubMed PMID: 30209736.

Biliary tract shows a large number of anatomic variations and duplication of the bile duct is an extremely rare anomaly. It has been reported to be associated with other congenital conditions like Abnormal Pancreato Biliary Junction (APBJ), biliary atresia and choledochal cyst and may lead to complications like cholangitis, choledocholithiasis and malignancy. The clinical presentation may be with one of the above complications and the condition usually reveals itself only on imaging investigations, as a surprise to the radiologist and the surgeon. Its detection is important prior to any biliary tract surgery to prevent inadvertent bile duct injury. The authors report a case of a rare subtype of extrahepatic bile duct duplication with coexisting choledochal cyst.

111: 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.

112: Rao J, Tawar R, Dawar R. Gastrocnemius Myocutaneous Flap: A Versatile Option to Cover the Defect of Upper and Middle Third Leg. World J Plast Surg. 2018 Sep;7(3):314-318. doi: 10.29252/wjps.7.3.314. PubMed PMID: 30560070; PubMed Central PMCID: PMC6290304.

BACKGROUND: Large soft tissue leg defect involving upper and middle third remains a therapeutic challenge. The objective of this study was to evaluate the effectiveness and versatility gastrocnemius myocutaneous flap cover for post traumatic large defect of upper and middle third of leg.
METHODS: This prospective study was conducted from January 2015 to January 2017 on 25 consecutive cases of post-traumatic upper and middle third leg defect who were treated with gastrocnemius myocutaneous flap and the functional and aesthetic outcome were evaluated.
RESULTS: There was no case of complete flap failure. Partial skin necrosis occurred in 2 patients (8%). There was no postoperative hematoma while mild discharge was seen in only 4(16%) patients. With regard to the donor site morbidity, no functional deformity was seen in follow up period. The procedure was found to be reliable, technically easy and aesthetically acceptable.
CONCLUSION: Post-traumatic large defects of leg extending in upper and middle third were easily covered with the help of regional gastrocnemius myocutaneous flap with excellent outcome and aesthetically acceptable coverage of skin without any major complications or long term morbidity.

113: Rastogi S, Aggarwal A, Tiwari A, Sharma V. Chemotherapy in Nonmetastatic Osteosarcoma: Recent Advances and Implications for Developing Countries. J Glob Oncol. 2018 Sep;4:1-5. doi: 10.1200/JGO.2016.007336. Epub 2017 Jan 18. PubMed PMID: 30241154; PubMed Central PMCID: PMC6180788.

PURPOSE: Osteosarcoma (OS) is a relatively chemosensitive primary bone tumor, with the peak age of onset occurring in late childhood and early adolescence. The treatment paradigm of nonmetastatic OS has typically been multimodality therapy, including neoadjuvant and adjuvant chemotherapy with definitive surgery. Over the years, various permutations and combinations of chemotherapeutic agents have been used. However, the majority of recent trials have still used high-dose methotrexate as the backbone, with cisplatin and doxorubicin (MAP). In the last decade, various strategies targeted to improving outcomes in OS have included the addition of a fourth drug to the three-drug MAP regimen, changing therapy according to histopathologic response and the addition of immunotherapies. Through this review, we sought to underscore a few pertinent issues related to chemotherapy in nonmetastatic OS, with special reference to challenges confronted in Indian settings.
METHODS: We reviewed the literature, focusing on studies comparing high-dose methotrexate and non-high-dose methotrexate-containing regimens. In addition, this review focuses on non-methotrexate-containing triple-drug therapy.
RESULTS: Although a high-dose methotrexate regimen has become standard of care in developed countries, there are few data to suggest that it is superior to a non-high-dose methotrexate regimen.
CONCLUSION: Developing countries with lack of infrastructure and logistics for high-dose methotrexate might resort to non-high-dose methotrexate-containing regimens with a simultaneous focus on early detection, decreasing abandonment, multidisciplinary clinics, improved surgery, and meticulous pathologic evaluations.

114: Razik A, Das CJ, Sharma S, Seth A, Srivastava DN, Mathur S, Kumar R, Gupta AK. Diagnostic performance of diffusion-weighted MR imaging at 3.0Â T in predicting muscle invasion in urinary bladder cancer: utility of evaluating the morphology of the reactive tumor stalk. Abdom Radiol (NY). 2018 Sep;43(9):2431-2441. doi: 10.1007/s00261-018-1458-7. PubMed PMID: 29392362.

PURPOSE: To evaluate the diagnostic performance of stalk morphology on diffusion-weighted imaging (DWI) in comparison with conventional MRI in predicting muscle invasion in urinary bladder cancer.
METHODS: The study was prospective and approved by the institutional ethics committee. A written informed consent was obtained from all the patients. The study included 56 patients who presented with bladder mass between January 2014 and November 2015. After excluding 16 patients, 40 patients with 92 tumors were assessed. All the 40 patients underwent MRI at 3.0 Tesla (Achieva, Philips) inclusive of DWI (b0, 500, 1000 and 1500). Two radiologists evaluated the images independently, and disparities were resolved through consensus. For predicting muscle invasion on T2-weighted images, tumor morphology (papillary versus non-papillary), distensibility of the underlying bladder wall, and perivesical fat infiltration were evaluated. On DWI, the criterion used in a previous study (Takeuchi et al.) was used along with tumor stalk morphology. Findings were compared with histopathology using Pearson's $\chi 2$ test, and diagnostic performance indices were calculated.
RESULTS: All the evaluated features were present with significantly higher frequency in muscle-invasive tumors ($p < 0.001$). The finding of absent or distorted stalk on DWI had the highest sensitivity (87.5%) and specificity (97.6%). Conventional imaging features of non-papillary stalk morphology, restricted distension of underlying bladder wall, perivesical fat infiltration, as well as the previous DWI criterion were less sensitive (56.3%, 68.8%, 56.3% and 56.3%, respectively) in predicting muscle invasion.
CONCLUSIONS: Assessment of the morphology of the reactive tumor stalk on DWI has better diagnostic performance in predicting muscle invasion than conventional MRI.

115: Rumpf HJ, Achab S, Billieux J, Bowden-Jones H, Carragher N, Demetrovics Z, Higuchi S, King DL, Mann K, Potenza M, Saunders JB, Abbott M, Ambekar A, Aricak OT, Assanangkornchai S, Bahar N, Borges G, Brand M, Chan EM, Chung T, Derevensky

J, Kashef AE, Farrell M, Fineberg NA, Gandin C, Gentile DA, Griffiths MD, Goudriaan AE, Grall-Bronnec M, Hao W, Hodgins DC, Ip P, KirÃ¡ly O, Lee HK, Kuss D,
Lemmens JS, Long J, Lopez-Fernandez O, Mihara S, Petry NM, Pontes HM, Rahimi-Movaghar A, Rehbein F, Rehm J, Scafato E, Sharma M, Spritzer D, Stein DJ, Tam P, Weinstein A, Wittchen HU, WÃ¶lfling K, Zullino D, Poznyak V. Including gaming disorder in the ICD-11: The need to do so from a clinical and public health perspective. J Behav Addict. 2018 Sep 1;7(3):556-561. doi: 10.1556/2006.7.2018.59. Epub 2018 Jul 16. PubMed PMID: 30010410.

The proposed introduction of gaming disorder (GD) in the 11th revision of the International Classification of Diseases (ICD-11) developed by the World Health Organization (WHO) has led to a lively debate over the past year. Besides the broad support for the decision in the academic press, a recent publication by van Rooij et al. (2018) repeated the criticism raised against the inclusion of GD in ICD-11 by Aarseth et al. (2017). We argue that this group of researchers fails to recognize the clinical and public health considerations, which support the WHO perspective. It is important to recognize a range of biases that may influence this debate; in particular, the gaming industry may wish to diminish its responsibility by claiming that GD is not a public health problem, a position which maybe supported by arguments from scholars based in media psychology, computer games research, communication science, and related disciplines. However, just as with any other disease or disorder in the ICD-11, the decision whether or not to include GD is based on clinical evidence and public health needs. Therefore, we reiterate our conclusion that including GD reflects the essence of the ICD and will facilitate treatment and prevention for those who need it.

116: Sagar P, Kumar R, Vaish R, Thakar A. Long Term Oncological Results of Transoral Laser Microsurgery for Early and Moderately Advanced Glottic Carcinoma in Primary and Salvage Settings. Indian J Otolaryngol Head Neck Surg. 2018 Dec;70(4):463-470. doi: 10.1007/s12070-018-1505-2. Epub 2018 Sep 29. PubMed PMID: 30464899; PubMed Central PMCID: PMC6224817.

The aim of the study is to document the long term oncological results of trans-oral laser microsurgery (TLM) for early and moderately advanced glottic cancer in primary and salvage settings. In this prospective cohort study 43 consecutive patients of glottic cancer (T1-30, T2-7, and selected T3 with mobile cords-6) were recruited. TLM was performed in these 35 primary and 8 previously treated cases. In our series, the local disease control rate with TLM was 90% (27/30) for T1 disease, 71.4% (5/7) for T2 cancer and 66.6% (4/6) for T3 lesions. The overall disease control rates after subsequent treatment for locoregional recurrences were 100% (30/30), 85.7% (6/7) and 83.3% (5/6) for T1, T2, and T3 glottic cancers respectively. The 5-years disease free survival rate for primary cases was 100% and 50% for salvage cases. The 5-years local disease control rate was 96.4% and 41.67% in primary and salvage TLM settings respectively. The 5-years laryngectomy free rates were 96.3% and 18.75% for primary and salvage cases respectively. TLM offers a minimally invasive and oncologically robust treatment option for early glottic cancer with an overall disease free survival of 100% at 5 years noted for primary untreated cases in this experience. TLM for post radiation salvage cases has however been disappointing and alternate larynx preserving option of open partial laryngectomy needs to be considered in this setting.

117: Sahay P, Asif MI, Maharana PK, Titiyal JS. Periocular contact dermatitis with use of topical voriconazole 1% in mycotic keratitis. BMJ Case Rep. 2018 Sep 15;2018. pii: bcr-2018-226498. doi: 10.1136/bcr-2018-226498. PubMed PMID: 30219785.

We present two cases of culture-proven fungal keratitis on natamycin treatment which developed periocular erythema, oedema, burning sensation and pruritus within 48 hours of the addition of topical voriconazole. On clinical examination, periocular erythema with induration was noted. A diagnosis of orbital cellulitis

was suspected, but the absence of pain and tenderness refuted the diagnosis on clinical grounds. A dermatology consultation was sought, and a diagnosis of periocular contact dermatitis with voriconazole was made. A skin patch test was performed with the same medication; however, it was negative. Topical voriconazole therapy was withdrawn, and the patient was prescribed cold compresses and oral antihistamine medication, to which they responded well.

118: Sahu A, Bhargava R, Sagar R, Mehta M. Perception of Families of Children with Specific Learning Disorder: An Exploratory Study. Indian J Psychol Med. 2018 Sep-Oct;40(5):406-413. doi: 10.4103/IJPSYM.IJPSYM_148_18. PubMed PMID: 30275614; PubMed Central PMCID: PMC6149301.

Background: Parents have a tremendous influence on their children's academic and social success. Unfortunately, a majority of them do not have a concrete idea on how to assist their children, impacting negatively on both the parents and the child. Currently, there is sparse research on parents' experiences in dealing with children with specific learning disorders (SLD). The current study was planned to explore the perception of families of children with SLD.
Materials and Methods: Five focus group discussions (FGDs) including 30 parents of children with SLD aged between 8 and 14 years were carried out. Each group composed of five - seven participants. A format to guide FGDs was made to bring uniformity across groups. The transcripts were analyzed using the content analysis method to extract key conceptual themes.
Results: The parents showed lack of conceptual knowledge with regard to the SLD symptomatology as well as proper guidelines to deal with their child's problem. They displayed negative attitudes and reactions toward their child's diagnosis of SLD, such as rejection, denial, over-protection, and loss of hope. Their caregiving was also perceived to place physical, personal, social, financial, and emotional burden by the majority of parents.
Conclusion: The study highlights the experiences of parents dealing with SLD in terms of their inadequate knowledge, adaptational difficulties, and burden. The findings also reiterate the need to focus on family perspective and experiences when working with a learning-disabled child. Various supportive strategies are required to empower families, which would help alleviate their burden. Moreover, parents' training to strengthen child's learning skills is also warranted.

119: Saibu Y, Kumar S, Jamwal A, Peak D, Niyogi S. A FTIRM study of the interactive effects of metals (zinc, copper and cadmium) in binary mixtures on the biochemical constituents of the gills in rainbow trout (Oncorhynchus mykiss). Comp Biochem Physiol C Toxicol Pharmacol. 2018 Sep;211:48-56. doi: 10.1016/j.cbpc.2018.05.009. Epub 2018 May 24. PubMed PMID: 29803893.

We employed Fourier Transform Infrared Microspectroscopy to examine, in situ, the effects of waterborne Cu, Cd and Zn, alone and in binary mixtures, during acute exposure on the integrity of major lipid and protein constituents of the gill of a model teleost species, rainbow trout (Oncorhynchus mykiss). Our findings demonstrated that acute exposure to metals, both individually and in binary mixture, resulted in the degradations of various components of proteins and lipids in the gill tissue. Generally, when comparing the effects of individual metals, Cu was found to induce the maximum adverse effects followed by Cd and Zn, respectively. Among the binary metal-mixture combinations, Cu and Cd produced additive effects on the degradation of major proteins and lipid moieties, whereas the co-exposure of Zn with Cd or Cu elicited ameliorative effects, indicating antagonistic (less than additive) interactions between Zn and Cd or Cu in the rainbow trout gill. Overall, the present study demonstrates that FTIRM can be a useful tool to gain novel mechanistic insights into the biochemical changes induced by metals in the fish gill, which could influence the overall toxicity of metals to fish.

120: Saini C, Kumar P, Tarique M, Sharma A, Ramesh V. Regulatory T cells antagonize proinflammatory response of IL-17 during cutaneous tuberculosis. J Inflamm Res. 2018 Sep 28;11:377-388. doi: 10.2147/JIR.S172878. eCollection 2018.

PubMed PMID: 30319283; PubMed Central PMCID: PMC6168067.

Background: The clinical forms of cutaneous tuberculosis (CTB) consist of a spectrum that reflects the host's immune response to Mycobacterium tuberculosis; it provides an ideal model to study the immunological dysregulation in humans. IL-17 plays an important role in initial immune response and is involved in both immune-mediated protection and pathology during M. tuberculosis infection. TGF-β producing regulatory T-cells (Tregs) are high in leprosy patients and responsible for immune suppression. However, in CTB, the involvement of Tregs and Th17 remains unevaluated.
Objective: To study the role of proinflammatory Th17 and Treg cells in the human CTB.
Methods: Blood and skin biopsies of CTB patients and healthy controls (HC) were included in the study. Flow cytometric analysis of IL-17, FOXP3, and TGF-β in blood was done followed by immunohistochemistry on paraffin-embedded skin sections. Expression of IFN-γ, TGF-β, and IL-17 was evaluated by quantitative real-time PCR.
Results: We found significant ($P<0.0002$) lower expression of proinflammatory IL-17 and IFN-γ ($P<0.01$) in CTB skins as compared to HC. However, the frequency of TGF-β producing Treg cells was found to be high in CTB patients ($P<0.001$) as compared to HC. A similar type of profile was observed by flow cytometric analysis. Treg cells produced suppressive cytokine TGF-β which showed a positive correlation with FOXP3 gene expression.
Conclusion: Our study found an increase in lineage-specific CD4+ Tregs in CTB as compared to the HC individuals. Such cells secrete TGF-β, a suppressive cytokine and may play a role in negatively regulating the T-cell immune responses in CTB. In addition, Tregs with TGF-β may downregulate Th17 cell responses leading to the antigen-specific anergy associated with CTB patients.

121: Saito S, Horinouchi T, Nakagami Y, Ii T, Sarkar S, McSweeney A, Yoshida L, Aniwattanapong D, Xin LM, Segrec N, Varbanov SV, Shams SF, Suzuki K, Mariano MPV, Tomlin SC, Kuno K, Freedman R, Riba MB, Akiyama T, Kawanishi C. Approaches to suicide prevention: Ideas and models presented by Japanese and international early career psychiatrists. Psychiatry Clin Neurosci. 2018 Sep;72(9):741. doi: 10.1111/pcn.12737. Epub 2018 Aug 6. PubMed PMID: 29989263.

122: Samal P, Goyal V, Makharia GK, Das CJ, Gorthi SP, Y VV, Singh MB, Srivastava MVP. Transfer Dysphagia Due to Focal Dystonia. J Mov Disord. 2018 Sep;11(3):129-132. doi: 10.14802/jmd.17081. Epub 2018 Sep 30. PubMed PMID: 30304925; PubMed Central PMCID: PMC6182304.

OBJECTIVE: The inability to propel a bolus of food successfully from the posterior part of the oral cavity to the oropharynx is defined as transfer dysphagia. The present case series describes the varied presentation of transfer dysphagia due to focal dystonia and highlights the importance of early detection by following up on strong suspicions.
METHODS: We describe seven cases of transfer dysphagia due to focal dystonia. Transfer dysphagia as a form of focal dystonia may appear as the sole presenting complaint or may present with other forms of focal dystonia.
RESULTS: Four out of seven patients had pure transfer dysphagia and had previously been treated for functional dysphagia. A high index of suspicion, barium swallow including videofluoroscopy, associated dystonia in other parts of the body and response to drug therapy with trihexyphenidyl/tetrabenazine helped to confirm the diagnosis.
CONCLUSION: Awareness of these clinical presentations among neurologists and non-neurologists can facilitate an early diagnosis and prevent unnecessary investigations.

123: Sankalp, Dada T, Yadav RK, Faiq MA. Effect of Yoga-Based Ocular Exercises in Lowering of Intraocular Pressure in Glaucoma Patients: An Affirmative Proposition. Int J Yoga. 2018 Sep-Dec;11(3):239-241. doi:

10.4103/ijoy.IJOY_55_17. PubMed PMID: 30233118; PubMed Central PMCID: PMC6134736.

Glaucoma is the most common cause of irreversible blindness worldwide, with >65 million sufferers. It is incurable and the only therapeutic approach accepted till now is the lowering of intraocular pressure (IOP) medically and/or surgically. These known interventions might have many side effects and complications. Yoga-based interventions are now well accepted as alternative therapy in many chronic diseases. The effects of yoga in glaucoma, however, have not been studied adequately. Accommodation (the process of adjustment of optical power to maintain clear vision) of eyes leads to instant lowering of IOP. Therefore, we hypothesize that one of the yoga-based interventions, Tratak kriya, which includes ocular exercises might lead to lowering of IOP in glaucoma patients. The proposed Tratak kriya leads to contraction and relaxation of ciliary muscles which might increase outflow of aqueous humor. In addition, this yoga-based intervention might decrease stress and improve quality of life in glaucoma patients.

124: Sarangi SC, Kaur N, Tripathi M, Gupta YK. Cost analysis study of neuropsychiatric drugs: Role of National List of Essential Medicines, India. Neurol India. 2018 Sep-Oct;66(5):1427-1433. doi: 10.4103/0028-3886.241345. PubMed PMID: 30233018.

Context: This study investigated the cost variation among neuropsychiatric drugs prevalent in the Indian market with reference to the National List of Essential Medicines (NLEM, 2015).
Aims: To promote the rational use of medicines through cost variation analysis among drugs for neuropsychiatric disorders enlisted in NLEM and those not included in NLEM (NNLEM).
Study Design: This study included drugs used for epilepsy, migraine, psychosis, depression, generalized anxiety disorder (GAD), bipolar disorder, and obsessive-compulsive disorder (OCD).
Materials and Methods: The unit drug cost for the selected strengths of different manufacturers mentioned in the Current Index of Medical Specialities 2016 was used for calculating cost/defined daily dose (DDD).
Statistical Analysis: Comparison was done among individual drugs and groups (NLEM and NNLEM) by cost/DDD in terms of interquartile range, percentage cost variation, and cost ratio.
Results: The cost variation is wide for neuropsychiatric drugs (maximum, 1724.3% for risperidone in NLEM, and 1780% for olanzapine in NNLEM). The drug-to-cost ratio is the highest (168.8 times) for bipolar disorder and the lowest (9.7 times) for GAD. The NLEM drugs were found to be more economical than the NNLEM drugs among antiepileptic drugs, antidepressants, and drugs for bipolar disorder; however, the reverse was noted for antimigraine drugs and drugs for GAD. Antipsychotic medications and drugs for OCD in the NLEM group have a wider range than in the NNLEM group.
Conclusions: The NLEM group has economical drugs in some disease categories; there is a need to consider the cost effectiveness of all drug categories while revising the NLEM next time and attention should focus on drug price regulation policies to accomplish the goal of rational use of medicines.

125: Satpathy G, Behera HS, Sharma A, Mishra AK, Mishra D, Sharma N, Tandon R, Agarwal T, Titiyal JS. A 20-year experience of ocular herpes virus detection using immunofluorescence and polymerase chain reaction. Clin Exp Optom. 2018 Sep;101(5):648-651. doi: 10.1111/cxo.12669. Epub 2018 Mar 6. PubMed PMID: 29510455.

BACKGROUND: To detect the presence of herpes virus in corneal scrapings/corneal grafts of suspected herpetic keratitis patients attending the outpatient department/casualty of the Dr Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi for the past 20 years with immunofluorescence assay and to analyse the efficacy of polymerase chain reaction over immunofluorescence for routine laboratory diagnosis in some of the

specimens.
METHODS: Corneal scrapings and corneal grafts were collected by the ophthalmologists from 1,926 suspected herpetic keratitis patients between 1996 and 2015, among whom 1,863 patients were processed with immunofluorescence assay and 302 patients were processed with polymerase chain reaction assay for the detection of herpes virus. Of the 302 patients, clinical specimens from 239 patients were analysed by both polymerase chain reaction and immunofluorescence assay.
RESULTS: Of the 1,863 suspected herpetic keratitis patients diagnosed with immunofluorescence assay, 277 (14.9 per cent) were found positive for herpes simplex virus 1 antigen. Similarly, of the 302 suspected herpetic keratitis patients diagnosed by polymerase chain reaction, 70 (23.2 per cent) were found positive for herpes simplex virus DNA. Of the 239 patients diagnosed by both polymerase chain reaction and immunofluorescence assay, 35 (14.6 per cent) were found positive with immunofluorescence assay, 59 (24.7 per cent) were found positive with polymerase chain reaction, 30 (12.5 per cent) were positive with both immunofluorescence and polymerase chain reaction assay.
CONCLUSION: Efficacy and accuracy of the polymerase chain reaction assay was greater compared to the immunofluorescence assay for detection of herpes virus in corneal scrapings/corneal grafts of suspected herpetic keratitis patients. Although the immunofluorescence assay is a rapid test for the detection of herpes virus in suspected herpetic keratitis patients, a combination of polymerase chain reaction with immunofluorescence assay will provide higher reliable and accurate results.

126: Seddon JA, Schaaf HS, Marais BJ, McKenna L, Garcia-Prats AJ, Hesseling AC, Hughes J, Howell P, Detjen A, Amanullah F, Singh U, Master I, Perez-Velez CM, Misra N, Becerra MC, Furin JJ. Time to act on injectable-free regimens for children with multidrug-resistant tuberculosis. Lancet Respir Med. 2018 Sep;6(9):662-664. doi: 10.1016/S2213-2600(18)30329-1. PubMed PMID: 30191832.

127: Selvanayagam R, Tiwari V, Das S, Trikha V. Traumatic Pubic-type Anterior Dislocation of the Hip with an Ipsilateral Greater Trochanter Fracture: Case Report and Review of Literature. Cureus. 2018 Sep 11;10(9):e3287. doi: 10.7759/cureus.3287. PubMed PMID: 30443457; PubMed Central PMCID: PMC6235655.

Due to the inherent stability of the hip joint, hip dislocations constitute a relatively small proportion of all the traumatic dislocations encountered in the emergency department. Among them, the anterior type of hip dislocation is less common than the posterior type of dislocation. Anterior dislocations are usually associated with an injury to other, nearby structures like the acetabulum and femoral head. An ipsilateral greater trochanter fracture with anterior hip dislocation is very sparsely reported in the literature. We report the case of a pubic type of anterior hip dislocation associated with a concomitant ipsilateral greater trochanter fracture. The joint was reduced promptly with traction-countertraction under sedation, and the associated fracture was subsequently fixed with two 6.5 mm partially threaded, cannulated, cancellous screws. The patient was symptom-free at the last follow-up of one year with a full range of hip joint motion, and without any evidence of osteonecrosis or osteoarthritis. The mechanism of greater trochanter fracture in such injuries and its management has been discussed.

128: 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.

129: Shankar A, Roy S, Rath GK, Chakraborty A, Kamal VK, Biswas AS. Impact of Cancer Awareness Drive on Generating Awareness of and Improving Screening for Cervical Cancer: A Study Among Schoolteachers in India. J Glob Oncol. 2018 Sep;4:1-7. doi: 10.1200/JGO.17.00074. PubMed PMID: 30241246; PubMed Central PMCID: PMC6223415.

PURPOSE: Cervical cancer is the second most common cancer in India. Our study assessed the level and impact of awareness programs in the adoption of safe practices in prevention and early detection.
METHODS: This assessment was part of a Pink Chain Campaign, the mission of which is to fight cancer. During cancer awareness events from 2013 to 2015 at various women's colleges in different parts in India, a pretest related to cervical cancer was followed by an awareness program. A post-test was conducted 6 months and 1 year later.
RESULTS: A total of 872 of 985 teachers participated in the study, for a response rate of 88.5%. Mean age of the population was 42.4 years. There was a significant increase in the level of knowledge regarding cervical cancer at 6 months, which was sustained at 1 year. Regarding cervical cancer screening, knowledge and practice of the Papanicolaou (Pap) test as a screening test for cervical cancer among teachers were changed significantly at 6 months and 1 year. More than 75% of teachers were educated by physicians about the Pap test. At the time of the post-test, there was a significant change in alcohol and smoking habits. The main reasons for not undergoing a screening test were ignorance (50%), lethargic attitude (44.8%), and lack of time (34.6%).
CONCLUSION: The level of knowledge of cervical cancer was poor. A significant increase in the level of knowledge of cervical cancer among the population was found after this study. To inculcate safe lifestyle practices, awareness programs should be conducted more widely and frequently.

130: Sharma A, Gupta V, Shashikant K. Optimizing Management of Open Fractures in Children. Indian J Orthop. 2018 Sep-Oct;52(5):470-480. doi: 10.4103/ortho.IJOrtho_319_17. PubMed PMID: 30237604; PubMed Central PMCID: PMC6142800.

Open fractures in children differ from adults owing to their better healing potential. Management strategies for open fracture in children are changing with improvement in our understanding of soft-tissue reconstruction and fracture fixation. A literature review was performed for articles covering management of open fractures in children. The cornerstones of management include prevention of infection, debridement, and skeletal stabilization with soft-tissue coverage. The injury should be categorized according to the established trauma classification systems. Timely administration of appropriate antibiotics is important for preventing infections. Soft-tissue management includes copious irrigation and debridement of the wound. Fractures can be stabilized by a variety of nonoperative and operative means, taking into consideration the special needs of the growing skeleton and the role of a thick and active periosteum in the healing

of fractures. The soft-tissue coverage required depends on the grade of injury.

131: Sharma M, Tyagi S, Tripathi P, Seth T. Syndecan-1 (sCD138) levels in chronic lymphocytic leukemia: clinical and hematological correlations. Blood Res. 2018 Sep;53(3):205-209. doi: 10.5045/br.2018.53.3.205. Epub 2018 Sep 28. PubMed PMID: 30310786; PubMed Central PMCID: PMC6170314.

Background: Syndecan-1 (sCD138) has recently been suggested to predict the clinical course of early-stage chronic lymphocytic leukemia (CLL), but few studies have been reported. This study assessed the role of syndecan-1 in the prognosis of patients with CLL and its correlation with other prognostic markers.
Methods: This prospective study was performed in the hematology department of an Indian tertiary care center, over nineteen months (Jun. 2009-Jan. 2011). Forty-nine new patients with CLL presented during this period and were included. Twenty age- and gender-matched healthy patients served as controls, and six patients with multiple myeloma were included as positive controls. Baseline serum syndecan-1 concentrations were measured for all patients at presentation using ELISA (Diaclone, Besancon, France). At baseline, patients were divided into low (N=10), intermediate (N=18) and high (N=21) risk cohorts. Serum syndecan-1 levels in these patient subgroups were compared with clinical and laboratory parameters.
Results: The median syndecan-1 level in patients with CLL (73.32 ng/mL, range, 28.71-268.0 ng/mL) was marginally higher than that in healthy patients (63.10 ng/mL, range, 55.0-75.11 ng/mL). At presentation, syndecan-1 levels in patients with CLL correlated strongly with symptomatic disease (cytopenias, P=0.004) and higher clinical stage (Rai stage III and IV, P=0.001) markers and poorly with β2-microglobulin level (P=0.270), diffuse BM infiltration (P=0.882), and surrogate mutation status markers (CD 38, P=0.174 and ZAP-70, P=0.459). Syndecan-1 levels dichotomized by the median value were higher with progressive disease markers, e.g. shorter lymphocyte doubling time (LDT, P=0.015) and increased treatment (P=0.099).
Conclusion: In CLL, serum syndecan-1 (sCD138) levels at presentation correlate with disease burden, and higher baseline levels may predict early treatment.

132: Sharma N, Agrawal N, Maharana PK, Agarwal T, Vanathi M, Vajpayee RB. Comparison of Hospital Cornea Retrieval and Voluntary Eye Donation Program in Eye Banking. Eye Contact Lens. 2018 Sep;44 Suppl 1:S54-S58. doi: 10.1097/ICL.0000000000000320. PubMed PMID: 28060143.

OBJECTIVES: Comparison of demographic, clinical, microbiological, and utility profile of the corneas obtained through hospital corneal retrieval program (HCRP) and voluntary eye donation (VED) program.
METHODS: Donor corneas retrieved during a 14 months period at National eye bank, India were included in the study. The donor cornea grading was done according to the cornea donor study. The corneal swabs were taken from the donor eyes and were sent for microbiological evaluation. The quality of the donor corneas and their utility was assessed.
RESULTS: Out of 1,014 donor corneas collected (700 through HCRP, 314 through VED), 455 were of optical grade (91.2% [415/455] through the HCRP and 8.7% [40/455] through the VED). HCRP had a higher proportion of donors in younger age (81.6% vs. 21%, P<0.0001), clear lens (78.6% vs. 66.2%, P<0.0001), and endothelial cell counts of more than2,000 cells per squared millimeter (64.9% vs. 28%, P<0.0001). Higher proportions of corneas in HCRP were used for optical indications (Penetrating keratoplasty, 24.5% vs. 13.3%, P<0.0001 and endothelial keratoplasty, 18.14% vs. 4.14%, P<0.0001). VED had a greater number of corneas found unsuitable for keratoplasty (37.4% vs. 6.4%, P<0.001). Most of the donors in the HCRP belonged to lower socioeconomic status (59.4% vs. 17.9%, P<0.0001). No significant difference was found in the microbial contamination between the two groups.
CONCLUSIONS: Most corneas retrieved through HCRP were of optical grade quality and efforts should be focused on HCRP to reduce the demand-supply deficit in cornea transplantation.

133: Sharma R, Tandon V, Sawarkar D, Phalak M, Raheja A, Kale SS. Intracranial pressure (ICP) monitoring in diffuse brain injury: to do or not to do? Acta Neurochir (Wien). 2018 Sep;160(9):1699-1700. doi: 10.1007/s00701-018-3610-0. Epub 2018 Jul 11. PubMed PMID: 29992383.

134: Sharma S, Kumar G, Vashishta M, Pandey R, Rathore S, Chourasia BK, Singhal J, Deshmukh A, Kalamuddin M, Paul G, Panda A, Tatiya S, Rawat K, Gupta D, Mohmmed A, Natarajan K, Malhotra P. Biochemical characterization of Plasmodium complement factors binding protein for its role in immune modulation. Biochem J. 2018 Sep 14;475(17):2877-2891. doi: 10.1042/BCJ20180142. PubMed PMID: 30049893.

Complement system is the first line of human defence against intruding pathogens and is recognized as a potentially useful therapeutic target. Human malaria parasite Plasmodium employs a series of intricate mechanisms that enables it to evade different arms of immune system, including the complement system. Here, we show the expression of a multi-domain Plasmodium Complement Control Protein 1, PfCCp1 at asexual blood stages and its binding affinity with C3b as well as C4b proteins of human complement cascade. Using a biochemical assay, we demonstrate that PfCCp1 binds with complement factors and inhibits complement activation. Active immunization of mice with PfCCp1 followed by challenge with Plasmodium berghei resulted in the loss of biphasic growth of parasites and early death in comparison to the control group. The study also showed a role of PfCCp1 in modulating Toll-like receptor (TLR)-mediated signalling and effector responses on antigen-presenting cells. PfCCp1 binds with dendritic cells that down-regulates the expression of signalling molecules and pro-inflammatory cytokines, thereby dampening the TLR2-mediated signalling; hence acting as a potent immuno-modulator. In summary, PfCCp1 appears to be an important component of malaria parasite directed immuno-modulating strategies that promote the adaptive fitness of pathogens in the host.

135: Sharma VK, Bhatia R, Yadav CP. Clinical Profile and Allergens in Pigmented Cosmetic Dermatitis and Allergic Contact Dermatitis to Cosmetics in India. Dermatitis. 2018 Sep/Oct;29(5):264-269. doi: 10.1097/DER.0000000000000407. PubMed PMID: 30179977.

BACKGROUND: Pigmented cosmetic dermatitis (PCD) is frequently encountered in dark-skinned individuals as gradual hyperpigmentation on the face without preceding erythema or itching. Little is known about the allergen profile in PCD.
OBJECTIVES: The aim of the study was to describe the clinical profile and common allergens in PCD and allergic contact dermatitis (ACD) to cosmetics in Delhi.
METHODS: Records of patients suspected of PCD and ACD to cosmetics were analyzed. All patients were patch tested with the Indian standard series, Indian cosmetic and fragrance series, and personal cosmetics and, in relevant cases, hairdresser series.
RESULTS: One hundred six patients were analyzed. Patch test was positive in 77 cases (72.6%). Cetrimonium, gallate mix, thiomerosal, and skin lightening creams were more frequently positive in cases of PCD (P = 0.019-0.003), whereas p-phenylenediamine, toluene-2,5 diamine sulfate, p-aminophenol, m-aminophenol, and nitro-p-phenylenediamine were predominantly positive in ACD to cosmetics (P < 0.001).
CONCLUSIONS: Preservatives, antioxidants, and skin lightening creams seem to play a role in causation of PCD, whereas hair dye allergens cause ACD to cosmetics in India.

136: Sheemar A, Temkar S, Takkar B, Sood R, Sinha S, Chawla R, Vohra R, Venkatesh P. Ultra-Wide Field Imaging Characteristics of Primary Retinal Vasculitis: Risk Factors for Retinal Neovascularization. Ocul Immunol Inflamm. 2018 Sep 12:1-6. doi: 10.1080/09273948.2018.1508729. [Epub ahead of print] PubMed PMID: 30207804.

AIM: To evaluate patterns of retinal vasculitis with ultra-wide field imaging (UWF) and ascertain the risk factors for retinal neovascularization.
METHODS: Consecutive patients of retinal vasculitis were included prospectively.

Patients with retinal vasculitis secondary to uveitis were excluded. UWF was done for all the patients. Retinal involvement was classified into three zones and area of capillary non-perfusion was stratified into clock hours.
RESULTS: Two hundred patients were included, 85% (n = 170) were male. Mean age was 28.99 ± 10.56 years. Clinical examination revealed 65% cases (n = 130) to be bilateral, while UWF angiography detected 72.5% (n = 145) to have bilateral involvement. Retinal neovascularization was present in 47% (n = 188).Presence of posterior disease had very high odds ratio for development of retinal neovascularization as compared to cases restricted to retinal periphery (OR = 45.03, CI = 6.10-332.30, p = < 0.001).
CONCLUSION: UWF imaging is useful in detecting retinal vasculitis, which is otherwise obscure to clinical examination and assessing risk factors for retinal neovascularization.

137: Shekhar S, Yadav Y, Singh AP, Pradhan R, Desai GR, Dey AB, Dey S. Neuroprotection by ethanolic extract of Syzygium aromaticum in Alzheimer's disease like pathology via maintaining oxidative balance through SIRT1 pathway. Exp Gerontol. 2018 Sep;110:277-283. doi: 10.1016/j.exger.2018.06.026. Epub 2018 Jun 27. PubMed PMID: 29959974.

The oxidative stress plays a key role in Alzheimer's disease (AD) and Sirtuin (SIRT1) is potential mediator of oxidative pathway. This study explored the role of Syzygium aromaticum on SIRT1 and oxidative balance in amyloid beta induced toxicity. Anti-oxidative capacity of Syzygium aromaticum was performed in Aβ25-35 induced neurotoxicity in neuronal cells. Superoxide dismutase, Catalase and Glutathione enzyme activity were determined by the treatment of Syzygium aromaticum. Both recombinant and endogenous SIRT1 activity were performed in its presence. The expression of γ-secretase and SIRT1 were evaluated by western blot. Syzygium aromaticum was capable to scavenge ROS and elevate the percentage of anti-oxidant enzymes. It also activated and elevated the level of SIRT1 and downregulated γ-secretase level. These findings show a holistic approach towards the neurodegenerative disease management by Syzygium aromaticum which could lead to the formulation of new drug for AD. This Ayurvedic product can give a healthy aging with no side effects and also be cost effectives. It may meet unmet medical needs of current relevance.

138: Shridhar K, Singh G, Dey S, Singh Dhatt S, Paul Singh Gill J, Goodman M, Samar Magsumbol M, Pearce N, Singh S, Singh A, Singh P, Singh Thakur J, Kaur Dhillon P. Dietary Patterns and Breast Cancer Risk: A Multi-Centre Case Control Study among North Indian Women. Int J Environ Res Public Health. 2018 Sep 6;15(9). pii: E1946. doi: 10.3390/ijerph15091946. PubMed PMID: 30200632; PubMed Central PMCID: PMC6164652.

Evidence from India, a country with unique and distinct food intake patterns often characterized by lifelong adherence, may offer important insight into the role of diet in breast cancer etiology. We evaluated the association between Indian dietary patterns and breast cancer risk in a multi-centre case-control study conducted in the North Indian states of Punjab and Haryana. Eligible cases were women 30¯69 years of age, with newly diagnosed, biopsy-confirmed breast cancer recruited from hospitals or population-based cancer registries. Controls (hospital- or population-based) were frequency matched to the cases on age and region (Punjab or Haryana). Information about diet, lifestyle, reproductive and socio-demographic factors was collected using a structured interviewer-administered questionnaire. All participants were characterized as non-vegetarians, lacto-vegetarians (those who consumed no animal products except dairy) or lacto-ovo-vegetarians (persons whose diet also included eggs). The study population included 400 breast cancer cases and 354 controls. Most (62%) were lacto-ovo-vegetarians. Breast cancer risk was lower in lacto-ovo-vegetarians compared to both non-vegetarians and lacto-vegetarians with odds ratios (95% confidence intervals) of 0.6 (0.3¯0.9) and 0.4 (0.3¯0.7), respectively. The unexpected difference between lacto-ovo-vegetarian and lacto-vegetarian dietary patterns could be due to egg-consumption patterns which requires confirmation and

further investigation.

139: Shukla A, Singh NN, Adsul S, Kumar S, Shukla D, Sood A. Comparative efficacy of chemiluminescence and toluidine blue in the detection of potentially malignant and malignant disorders of the oral cavity. J Oral Maxillofac Pathol. 2018 Sep-Dec;22(3):442. doi: 10.4103/jomfp.JOMFP_261_17. PubMed PMID: 30651697; PubMed Central PMCID: PMC6306576.

Context: Early detection of oral cancer is of paramount importance in determining the prognosis of oral cancer. Literature suggests that several diagnostic modalities have been proposed to aid a clinician in early detection of oral cancer without much conclusive evidence.
Aims: The present study aims to compare toluidine blue and chemiluminescence screening methods in early detection of carcinoma in North Indian population and also to evaluate these methods with histopathological diagnosis.
Methods: In this prospective study, 42 patients with clinically visible premalignant lesions were included. Demographic data were collected, and suspicious lesions were examined by chemiluminescence light (Vizilite) and followed by local application of toluidine blue (Mashberg's recommendation). Findings were recorded for each lesion under standard incandescent light as positive or negative. Biopsy and histopathological analysis of the tissues were performed.
Statistical Analysis: Sensitivity, specificity and positive and negative predictive values for the chemiluminescence technique and toluidine blue were calculated for diagnostic tests.
Results and Conclusions: In the present study, toluidine blue test was found to be moderately sensitive (63.33%) whereas chemiluminescence test (Vizilite) was found to be highly sensitive (90%); however, the test has limited specificity (50%). Thus, the study concluded that both toluidine blue and Vizilite can be used as an adjunct to simple, conventional visual examination and in screening procedure for oral potentially malignant disorders.

140: Singh AKC, Kandasamy D, Garg A, Jyotsna VP, Khadgawat R. Study of Pituitary Morphometry Using MRI in Indian Subjects. Indian J Endocrinol Metab. 2018 Sep-Oct;22(5):605-609. doi: 10.4103/ijem.IJEM_199_18. PubMed PMID: 30294567; PubMed Central PMCID: PMC6166545.

Aim: To establish normative measurements of pituitary gland in Indian population.
Material and Methods: In this cross-sectional study, we measured dimensions of pituitary gland in 482 (213 females and 269 males) Indian subjects with apparently normal pituitary gland function. Mid-sagittal T1-weighted image (T1-WI) on magnetic resonance imaging (MRI) was used to measure height and length of pituitary gland. Pituitary gland width was measured using coronal T1-WI and pituitary gland volume was calculated.
Results: Mean height, length and calculated volume of pituitary gland was significantly higher in females compared to males ($p = <0.001$, $P = 0.03$ and $P = <0.001$, respectively) when all age groups were combined but pituitary gland width was not statistically different in male and female subjects. When subjects were divided into different age groups, except for 10-14 years age group where pituitary height was significantly higher in females as compared to male, no significant difference was observed between male and female in any of the parameters (height, length, width and volume). The mean pituitary gland height was 5.80 ± 1.32 mm and 5.37 ± 1.25 mm in female and male subjects, respectively. Females achieved peak pituitary gland height in 10 to 14-year age group, while males achieved their peak pituitary gland height in 15 to 19-year age group.
Conclusion: Our study provides age and sex wise normative data for pituitary measurements derived from Indian population.

141: Singh AN, Kilambi R. Single-stage laparoscopic common bile duct exploration and cholecystectomy versus two-stage endoscopic stone extraction followed by laparoscopic cholecystectomy for patients with gallbladder stones with common bile duct stones: systematic review and meta-analysis of randomized trials with

trial sequential analysis. Surg Endosc. 2018 Sep;32(9):3763-3776. doi: 10.1007/s00464-018-6170-8. Epub 2018 Mar 30. Review. PubMed PMID: 29603004.

BACKGROUND: The ideal management of common bile duct (CBD) stones associated with gall stones is a matter of debate. We planned a meta-analysis of randomized trials comparing single-stage laparoscopic CBD exploration and cholecystectomy (LCBDE) with two-stage preoperative endoscopic stone extraction followed by cholecystectomy (ERCP+LC).
METHODS: We searched the Pubmed/Medline, Web of science, Science citation index, Google scholar and Cochrane Central Register of Controlled trials electronic databases till June 2017 for all English language randomized trials comparing the two approaches. Statistical analysis was performed using Review Manager (RevMan) [Computer program], Version 5.3. Copenhagen: The Nordic Cochrane Centre, The Cochrane Collaboration, 2014 and results were expressed as odds ratio for dichotomous variables and mean difference for continuous. p value≤0.05 was considered significant. Trial sequential analysis (TSA) was performed using TSA version 0.9.5.5 (Copenhagen: The Copenhagen Trial Unit, Centre for Clinical Intervention Research, 2016). PROSPERO trial registration number is CRD42017074673.
RESULTS: A total of 11 trials were included in the analysis, with a total of 1513 patients (751-LCBDE; 762-ERCP+LC). LCBDE was found to have significantly lower rates of technical failure [OR 0.59, 95% CI (0.38, 0.93), p=0.02] and shorter hospital stay [MD -1.63, 95% CI (-3.23, -0.03), p=0.05]. There was no significant difference in mortality [OR 0.37, 95% CI (0.09, 1.51), p=0.17], morbidity [OR 0.97, 95% CI (0.70, 1.33), p=0.84], cost [MD -379.13, 95% CI (-784.80, 111.2), p=0.13] or recurrent/retained stones [OR 1.01, 95% CI (0.38, 2.73), p=0.98]. TSA showed that although the Z-curve crossed the boundaries of conventional significance, the estimated information size is yet to be achieved.
CONCLUSIONS: Single-stage LCBDE is superior to ERCP+LC in terms of technical success and shorter hospital stay in good-risk patients with gallstones and CBD stones, where expertise, operative time and instruments are available.

142: Singh D, Rana A, Jhajhria SK, Garg B, Pandey PM, Kalyanasundaram D. Experimental assessment of biomechanical properties in human male elbow bone subjected to bending and compression loads. J Appl Biomater Funct Mater. 2018 Sep 19:2280800018793816. doi: 10.1177/2280800018793816. [Epub ahead of print] PubMed PMID: 30229701.

This work discusses the biomechanical testing of 3 elbow bones, namely the humerus, ulna, and radius. There is a need to identify the mechanical properties of the bones at the organ level. The following tests were performed: 3-point bending, fracture toughness, and axial compression. Six sets of whole-bone samples of human male cadaveric humerus, ulna, and radius (age of donor: 35 to 56 years) were tested. The results were analyzed for statistical significance by 2-stage, repeated-measure analysis of variance (ANOVA). The difference between the bending strength of the humerus, ulna, and radius was statistically significant (P = .001) when compared to one another. However, the fracture toughness and compressive strength were observed to be similar for the 3 bones. The knowledge of mechanical properties of elbow bones can aid in the design of elbow implants and upper limb protection systems, and also allow us to identify criteria for injury. Further, knowledge of the mechanical properties of the elbow bones can aid in calibrating simulations through finite elements analysis.

143: Singh K, Johnson L, Devarajan R, Shivashankar R, Sharma P, Kondal D, Ajay VS, Narayan KMV, Prabhakaran D, Ali MK, Tandon N. Acceptability of a decision-support electronic health record system and its impact on diabetes care goals in South Asia: a mixed-methods evaluation of the CARRS trial. Diabet Med. 2018 Dec;35(12):1644-1654. doi: 10.1111/dme.13804. Epub 2018 Sep 19. PubMed PMID: 30142228.

AIMS: To describe physicians' acceptance of decision-support electronic health

record system and its impact on diabetes care goals among people with Type 2 diabetes.
METHODS: We analysed data from participants in the Centre for Cardiometabolic Risk Reduction in South Asia (CARRS) trial, who received the study intervention (care coordinators and use of a decision-support electronic health record system; n=575) using generalized estimating equations to estimate the association between acceptance/rejection of decision-support system prompts and outcomes (mean changes in HbA1c , blood pressure and LDL cholesterol) considering repeated measures across all time points available. We conducted in-depth interviews with physicians to understand the benefits, challenges and value of the decision-support electronic health record system and analysed physicians' interviews using Rogers' diffusion of innovation theory.
RESULTS: At end-of-trial, participants with diabetes for whom glycaemic, systolic blood pressure, diastolic blood pressure and LDL cholesterol decision-support electronic health record prompts were accepted vs rejected, experienced no reduction in HbA1c [mean difference: -0.05 mmol/mol (95% CI -0.22, 0.13); P=0.599], but statistically significant improvements were observed for systolic blood pressure [mean difference: -11.6 mmHg (95% CI -13.9, -9.3); P ≤ 0.001], diastolic blood pressure [mean difference: -5.2 mmHg (95% CI -6.5, -3.8); P ≤ 0.001] and LDL cholesterol [mean difference: -0.7 mmol/l (95% CI -0.6, -0.8); P ≤0.001], respectively. The relative advantages and compatibility of the decision-support electronic health record system with existing clinic set-ups influenced physicians' acceptance of it. Software complexities and data entry challenges could be overcome by task-sharing.
CONCLUSION: Wider adherence to decision-support electronic health record prompts could potentially improve diabetes goal achievement, particularly when accompanied by assistance from a non-physician health worker.

144: Singh N, Gupta DK, Sharma S, Sahu DK, Mishra A, Yadav DK, Rawat J, Singh AK. Single-nucleotide and copy-number variance related to severity of hypospadias. Pediatr Surg Int. 2018 Sep;34(9):991-1008. doi: 10.1007/s00383-018-4330-5. Epub 2018 Aug 4. PubMed PMID: 30078147.

BACKGROUND: The genetic association of hypospadias-risk studies has been conducted in Caucasians, Chinese-Han populations and few in Indian populations. However, no comprehensive approach has been followed to assess genetic involvement in the severity of the disorder.
METHODS: The study evaluated to establish the correlation between genotyped single nucleotide and copy number variants (SNPs/CNVs) and severity of hypospadias by an association in a total 30 SNPs in genes related to sex hormone-biosynthesis and metabolism; embryonic-development and phospholipase-D-signalling pathways on 138 surgery-confirmed hypospadias-cases from North India (84 penile and 28 cases of penoscrotal-hypospadias as compared with 31 cases of glanular+coronal), and analyzed and identified CNVs in four familial cases (18 members) and three paired-sporadic cases (6 members) using array-based comparative-genomic-hybridization and validated in 32 hypospadias samples by TaqMan assay.
RESULTS: Based on odds ratio at 95% CI, Z Statistic and Significance Levels, STS gene-rs17268974 was associated with Penile-Hypospadias and 9-SNPs [seven-SNPs (rs5934740; rs5934842; rs5934913; rs6639811; rs3923341; rs17268974; rs5934937)] of STS gene; rs7562326-SRD5A2 and rs1877031-STARD3 were associated with penoscrotal-hypospadias. On aggregate analysis with $p < 0.001$, we identified homozygous-loss of Ch7:q34 (PRSS3P2, PRSS2). On validation in previously CNV-characterized and new (32 hypospadias cases), we identified PRSS3P2-loss in most of the grade 3 and 4 hypospadias. Hence, Grade 1 and 2 (coronal and granular) show no-PRSS3P2-loss and no-association with SNPs in STS; SRD5A2; STARD3-gene but Grade 3 and 4 (Penile and Penoscrotal) show PRSS3P2-loss accompanied with the association of SNPs in STS; SRD5A2; STARD3.
CONCLUSIONS: Hence, homozygous-loss of PRSS3P2 accompanied with the association of STS; SRD5A2; STARD3 may link to the severity of the disease.

145: Singh S, Kumar S, Kumar N, Verma R. Low-frequency Repetitive Transcranial

Magnetic Stimulation for Treatment of Tourette Syndrome: A Naturalistic Study with 3 Months of Follow-up. Indian J Psychol Med. 2018 Sep-Oct;40(5):482-486. doi: 10.4103/IJPSYM.IJPSYM_332_17. PubMed PMID: 30275625; PubMed Central PMCID: PMC6149295.

The objective of this study is to report the effects of low-frequency repetitive transcranial magnetic stimulation (rTMS) in three patients with medication-refractory Tourette syndrome (TS) and over 3-month follow-up. A review of literature on the use of rTMS for the treatment of TS is also presented. Three patients with severe, medication-refractory TS and comorbid obsessive-compulsive disorder (OCD) in two of them, received an open-label trial of rTMS at 1 Hz frequency for 4-week duration. The first two cases of TS-OCD showed, on average, around 57% improvement in Yale Global Tic Severity Scale (YGTSS) scores (65% and 50%) and 45% improvement in Yale-Brown Obsessive-compulsive Scale (Y-BOCS) scores; however, the third case of pure-TS showed marginal improvement of 10% only. The improvement in TS-OCD patients with rTMS treatment was maintained at the end of 3-month follow-up, with an average reduction of about 49% (58% and 40%) and 36% observed in YGTSS and Y-BOCS scores, respectively. The present study supports the use of low-frequency rTMS to improve tics and OCD symptoms in patients with severe, medication-refractory TS-OCD. Further, the beneficial effects of rTMS treatment were maintained substantially over 3-month follow-up period.

146: Singh S, Patra S, Arava S, Bhari N. Linear Pitted Plaque Over the Foot. Indian Dermatol Online J. 2018 Sep-Oct;9(5):356-358. doi: 10.4103/idoj.IDOJ_207_17. PubMed PMID: 30258813; PubMed Central PMCID: PMC6137664.

147: Singh S, Kashyap JA, Chandhiok N, Kumar V, Singh V, Goel R; for an ICMR-UNFPA Task Force study on reducing maternal mortality and morbidity through promotion of evidence based intrapartum and early postpartum care*. Labour & delivery monitoring patterns in facility births across five districts of India: A cross-sectional observational study. Indian J Med Res. 2018 Sep;148(3):309-316. doi: 10.4103/ijmr.IJMR_103_18. PubMed PMID: 30425221; PubMed Central PMCID: PMC6251267.

Background & objectives: India has recorded a marked increase in facility births due to government's conditional cash benefit scheme initiated in 2005. However, concerns have been raised regarding the need for improvement in the quality of care at facilities. Here we report the monitoring patterns during labour and delivery documented by direct observation in reference to the government's evidence-based guidelines on skilled birth attendance in five districts of India.
Methods: A cross-sectional study design with multistage sampling was used for observation of labour and delivery processes of low-risk women with singleton pregnancy in five districts of the country. Trained research staff recorded the findings on pre-tested case record sheets.
Results: A total of 1479 women were observed during active first stage of labour and delivery in 55 facilities. The overall frequency of monitoring of temperature, pulse and blood pressure was low at all facilities. The frequency of monitoring uterine contractions and foetal heart sounds was less than the expected norm, while the frequency of vaginal examinations was high at all levels of facilities. Partograph plotting was done in only 15.8 per cent deliveries, and labour was augmented in about half of the cases.
Interpretation & conclusions: The findings of our study point towards a need for improvement in monitoring of maternal and foetal parameters during labour and delivery in facility births and to improve adherence to government guidelines for skilled birth attendance.

148: Sivanandan S, Sethi A, Joshi M, Thukral A, Sankar MJ, Deorari AK, Agarwal R. Gains from Quality Improvement Initiatives - Experience from a Tertiary-care Institute in India. Indian Pediatr. 2018 Sep 15;55(9):809-817. PubMed PMID: 30345991.

Quality improvement (QI) in healthcare involves implementing small iterative changes by a team of people using a simple structured framework to resolve problems, improve systems, and to improve patient outcomes. These efforts are especially important in a resource-limited setting where infrastructure, staff and funds are meagre. The concept of QI often appears complex to a new careprovider who feels intimidated to participate in change activities. In this article, we describe our experience with QI activities to address various issues in the Neonatal intensive care unit. QI efforts resulted in improved patient outcomes, and motivated careproviders. QI is a continuous activity and can be done easily if the team is willing to learn from their experiences and use those lessons to adapt, adopt or abandon changes, and improve further. Our institute has also developed Point of Care Quality Improvement (POCQI), a free online resource for learning the science of QI, and also serves as a platform for sharing QI work.

149: Sivanandan S, Sethi T, Lodha R, Thukral A, Sankar MJ, Agarwal R, Paul VK, Deorari AK. Target Oxygen Saturation Among Preterm Neonates on Supplemental Oxygen Therapy: A Quality Improvement Study. Indian Pediatr. 2018 Sep 15;55(9):793-796. PubMed PMID: 30345988.

OBJECTIVE: To avoid excessive oxygen exposure and achieve target oxygen saturation (SpO2) within intended range of 88%-95% among preterm neonates on oxygen therapy.
METHODS: 20 preterm neonates receiving supplemental oxygen in the first week of life were enrolled. The percentage of time per epoch (a consecutive time interval of 10 hours/day) spent by them within the target SpO2 range was measured in phase 1 followed by implementation of a unit policy on oxygen administration and targeting in phase 2. In phase 3, oxygen saturation histograms constructed from pulse-oximeter data were used as daily feedback to nurses and compliance with oxygen-targeting was measured again.
RESULTS: 48 epochs in phase 1 and 69 in phase 3 were analyzed. The mean (SD) percent time spent within target SpO2 range increased from 65.9% (21.4) to 76.5% (12.6) (P=0.001).
CONCLUSION: Effective implementation of oxygen targeting policy and feedback using oxygen saturation histograms may improve compliance with oxygen targeting.

150: Soni S, Muthukrishnan SP, Sood M, Kaur S, Mehta N, Sharma R. A novel method for assessing patients with schizophrenia and their first-degree relatives by increasing cognitive load of visuo-spatial working memory. Asia Pac Psychiatry. 2018 Dec;10(4):e12333. doi: 10.1111/appy.12333. Epub 2018 Sep 7. PubMed PMID: 30191660.

INTRODUCTION: In patients with schizophrenia, social and functional outcome is determined by the cognitive impairment. Assessment of visuo-spatial working memory (VSWM) which can simulate the day-to-day activities by simultaneous involvement of various elements of working memory may reflect disorganized thinking and fragmentation of thoughts in schizophrenia.
METHODS: Thirty-six patients with schizophrenia, 29 first-degree relatives of patients, and 25 healthy controls performed a VSWM task with three memory loads (comprising three pairs, six pairs, and eight pairs of abstract pictures). They were administered Hindi version of the Mini Mental State Examination, Scale for the Assessment of Negative Symptoms and Scale for the Assessment of Positive Symptoms, and Edinburgh handedness inventory.
RESULTS: Patients (mean age 27.29(5.98) years) committed significantly higher number of errors than healthy controls (mean age 26.76(6.08) years) in load 3 ($P = 0.012$) and total errors ($P = 0.018$). Within all the groups, errors in load 3 were significantly higher than in load 2. Significant correlation was observed between years of education ($r = -0.388$, $P = 0.021$), treatment duration ($r = -0.880$, $P < 0.001$), negative symptoms scores ($r = 0.345$, $P = 0.039$), and the total errors committed by patients.
DISCUSSION: Visuo-spatial working memory was impaired in schizophrenia with

increasing cognitive load with no difference in search time between the groups.

151: Srilatha PS, Wadhwani M, Vohra R, Gogia V, Garg S, Pandey V. Treatment before macular grid in patients of diabetic macular edema. Oman J Ophthalmol. 2018 Sep-Dec;11(3):254-258. doi: 10.4103/ojo.OJO_148_2016. PubMed PMID: 30505117; PubMed Central PMCID: PMC6219319.

AIM: The aim of this study is to compare the efficacy of intravitreal bevacizumab and posterior subtenons triamcinolone acetate in the management of diffuse diabetic macular edema (DME) and to evaluate their efficacy as an adjunct to modified grid laser in management of DME.
DESIGN: This was a prospective, randomized clinical trial of 30 patients.
MATERIALS AND METHODS: A total of 30 patients attending the medical ophthalmology clinic at a tertiary care hospital were included in the study. These 30 patients were divided into two groups. Group I (15 eyes) received intravitreal bevacizumab followed by modified grid photocoagulation 2 weeks after injection. Group II (15 eyes) received posterior subtenons triamcinolone followed by modified grid photocoagulation 2 weeks after injection. Each patient in our study was followed up at 1 week, 2 weeks, 1 month, 2 months, 3 months, and 6 months after the initial injection to record the central macular thickness (CMT) and best-corrected visual acuity (BCVA).
RESULTS: Both the combination therapies have efficacy to reduce the CMT (P = 0.001). The percentage fall in CMT was greater in bevacizumab + laser group, and there was a significant difference in the CMT values at the end of the study in the bevacizumab group (P = 0.013). The mean BCVA improved in both the groups and this difference was statistically significant compared to the baseline (P = 0.005). However, there was no statistically significant difference in BCVA between the two groups at the end of the study.
CONCLUSION: Both intravitreal bevacizumab and posterior subtenons triamcinolone given as an adjuvant therapy along with modified grid laser are equally efficacious in the reduction of the CMT; however, the percentage fall in the CMT was greater in bevacizumab + laser group, and there was a significant difference in the fall in CMT at all the visits as compared to a plateau in the fall of CMT in posterior subtenons triamcinolone group.

152: Srivastava MVP, Vishnu VY. Exercises after stroke: The essential endurance. Neurol India. 2018 Sep-Oct;66(5):1306-1308. doi: 10.4103/0028-3886.241380. PubMed PMID: 30232994.

153: Srivastava R, Gupta VG, Dhawan D, Geeta K, Bakhshi S. Poor nutritional knowledge and food restrictions among families of children with cancer and their impact: A cross-sectional study of 700 families. J Psychosoc Oncol. 2018 Sep-Oct;36(5):658-666. doi: 10.1080/07347332.2018.1484840. PubMed PMID: 30862311.

PURPOSE: To determine the prevalence of poor food knowledge and food restrictions among families of children with cancer and assess their impact on nutritional outcomes.
METHODS: In this cross-sectional study of 700 families of children with cancer who attended a referral cancer clinic, parents were asked 9 questions about nutritional knowledge ("Knowledge score") and 12 questions about food restrictions ("Restriction score"). Secondary outcomes included the nutritional status of children and possible socio-demographic associations of poor food knowledge.
FINDINGS: Commercial foods were considered more nutritious than homemade foods. Restriction of protein and energy-rich foods was frequent. Low knowledge scores were associated with rural background, poverty, and illiteracy. Low parental knowledge scores were associated with low weight and low height of the child. High restriction scores were associated with low weight but not low height.
CONCLUSIONS AND IMPLICATIONS: Harmful perceptions are widely prevalent in parents of children with cancer and targeted educational interventions may have a role in improving malnutrition in these children.

154: Srivastava S, Ramanujam B, Ihtisham K, Tripathi M. A case of narcolepsy with HLA-typing from North India. Neurol India. 2018 Sep-Oct;66(5):1485-1486. doi: 10.4103/0028-3886.241338. PubMed PMID: 30233027.

155: Srivastava S, Mahey R, Kachhawa G, Bhatla N, Upadhyay AD, Kriplani A. Comparison of intramyometrial vasopressin plus rectal misoprostol with intramyometrial vasopressin alone to decrease blood loss during laparoscopic myomectomy: Randomized clinical trial. Eur J Obstet Gynecol Reprod Biol. 2018 Sep;228:279-283. doi: 10.1016/j.ejogrb.2018.07.006. Epub 2018 Jul 5. PubMed PMID: 30056355.

OBJECTIVE: To compare the efficacy and safety of intramyometrial vasopressin plus rectal misoprostol with intramyometrial vasopressin alone to reduce blood loss during laparoscopic myomectomy.
STUDY DESIGN: A randomized, single-blind, controlled trial was conducted at All India Institute of Medical Sciences, New Delhi, India. Sixty women with symptomatic leiomyoma scheduled for laparoscopic myomectomy were recruited for the study. Thirty women received intramyometrial vasopressin plus rectal misoprostol (30 min before procedure) (Group I) and 30 women received intramyometrial vasopressin alone (Group II) during laparoscopic myomectomy. The primary outcome measure was intra-operative blood loss during surgery. Secondary outcome measures included decrease in postoperative haemoglobin, ease of enucleation of myomas, duration of surgery, need for additional haemostatic measures or blood transfusion, intra- and postoperative morbidity, and duration of hospital stay.
RESULTS: The baseline demographic features and characteristics of leiomyomas were comparable in both groups. The mean (±standard deviation) blood loss in Group I was 139 ± 96.7 ml, which was significantly less than that for Group II (206 ± 101.2 ml) (p = 0.008). The mean postoperative haemoglobin was 11.6 ± 1.3 g/dl in Group I and 10.0 ± 1.2 g/dl in Group II (p = 0.001). Although blood loss was not clinically significant in either group, the decrease in haemoglobin was significantly higher in Group II. The mean score for ease of enucleation (surgeon-rated measure) was significantly lower in Group I (2.6 ± 1.1) compared with Group II (3.4 ± 1.1) (p = 0.029). Intra- and postoperative vital signs, duration of surgery, need for blood transfusion and postoperative morbidity were comparable in both groups.
CONCLUSIONS: The addition of rectal misoprostol to intramyometrial vasopressin led to a significant reduction in blood loss and decreased the postoperative drop in haemoglobin. The combination also improved the ease of enucleation of myomas.

156: Subhadarshani S, Parambath N, Gupta S. Use of a lumbar puncture needle to reduce the number of needle insertions in infiltration local anaesthesia of large areas in dermatologic surgery. Australas J Dermatol. 2019 Feb;60(1):72-73. doi: 10.1111/ajd.12935. Epub 2018 Sep 23. PubMed PMID: 30246239.

157: Sultania M, Pandey D, Chandrasekhara SH, Garg PK. Unfavourable Vascular Anatomy for Esophageal Reconstruction: a Case for Chemoradiation in Operable Esophageal Cancer. J Gastrointest Cancer. 2018 Sep;49(3):319-321. doi: 10.1007/s12029-016-9894-5. PubMed PMID: 27858302.

158: Sundar D, Kumar A, Chawla R, Sen S, Ravani R, Kakkar P, Chatra K. Microscope-integrated optical coherence tomography-aided intraoperative diagnosis and management of peripheral tractional retinoschisis. Indian J Ophthalmol. 2018 Sep;66(9):1323-1324. doi: 10.4103/ijo.IJO_331_18. PubMed PMID: 30127155; PubMed Central PMCID: PMC6113810.

159: Sundar D, Takkar B, Venkatesh P, Chawla R, Temkar S, Azad SV, Vohra R. Evaluation of hyaloid-retinal relationship during triamcinolone-assisted vitrectomy for primary rhegmatogenous retinal detachment. Eur J Ophthalmol. 2018 Sep;28(5):607-613. doi: 10.1177/1120672118754301. Epub 2018 Mar 23. PubMed PMID: 29569478.

AIMS: To determine hyaloid-retinal relationship in primary rhegmatogenous retinal detachment during vitreous surgery.
METHODS: This is a prospective, interventional study of patients (n = 72) undergoing triamcinolone-assisted 25G vitreous surgery for primary rhegmatogenous retinal detachment. Hyaloid-retinal relationship was noted intraoperatively to identify regions and patterns of firm attachment and was classified into subgroups. Analysis was done to determine association between hyaloid-retinal relationship patterns and preoperative findings: posterior vitreous detachment, proliferative vitreoretinopathy, type of retinal tear, the presence of peripheral degenerations, and postoperative outcomes.
RESULTS: Three patterns of hyaloid-retinal relationship were identified: type1 (complete absence of posterior vitreous detachment (21%)), type 2 (incomplete posterior vitreous detachment (47%)) and type 3 (complete posterior vitreous detachment (32%)). Posterior vitreous detachment in some form was present in 84% of the cases with retinal tears as the causative break but none of the cases with retinal holes ($p < 0.001$). None of the cases with vitreoretinal degeneration had complete posterior vitreous detachment ($p = 0.001$). 69% of proliferative vitreoretinopathy-C cases had type 1 hyaloid-retinal relationship as compared to 11% cases with no proliferative vitreoretinopathy ($p < 0.001$). Proliferative vitreoretinopathy-related anatomical failure was seen in 7.5%, and 80% of these eyes with recurrent RD had type 1 hyaloid-retinal relationship ($p<0.001$). Nearly half the patients diagnosed as complete posterior vitreous detachment preoperatively were found to have incomplete posterior vitreous detachment intraoperatively.
CONCLUSIONS: Majority of the cases with rhegmatogenous retinal detachment have some form of strong vitreoretinal adhesion. Hyaloid-retinal relationship varies with types of retinal breaks, retinal degeneration, and proliferative vitreoretinopathy. Intraoperative hyaloid-retinal relationship is frequently different from that assessed before surgery and the proposed classification may improve surgical decision making and prognostication.

160: Talwar S, Bhoje A, Khadagawat R, Chaturvedi P, Sreenivas V, Makhija N, Sahu M, Choudhary SK, Airan B. Oral thyroxin supplementation in infants undergoing cardiac surgery: A double-blind placebo-controlled randomized clinical trial. J Thorac Cardiovasc Surg. 2018 Sep;156(3):1209-1217.e3. doi: 10.1016/j.jtcvs.2018.05.044. Epub 2018 Jun 4. PubMed PMID: 30119284.

BACKGROUND: Decreases in serum total thyroxin and total triiodothyronine occurs after cardiopulmonary bypass, and is reflected as poor immediate outcome. We studied effects of oral thyroxin supplementation in infants who underwent open-heart surgery.
METHODS: In this prospective study, 100 patients were randomized into 2 groups: 50 in the thyroxin group (TH) and 50 in the placebo group (PL). Patients in the TH group received oral thyroxin (5 μg/kg) 12 hours before surgery and once daily for the remainder of their intensive care unit (ICU) stay. Data on intraoperative and postoperative variables were recorded. Cardiac index (CI) was measured. Perioperative serum thyroid hormone levels and serum interleukin-6 and tumor necrosis factor-α were measured. Secondary analysis was performed by dividing patients into simple and complex subcategories.
RESULTS: Results of the primary analysis indicated a higher CI in the TH compared with the PL. In the complex category, the mean duration of mechanical ventilation was 3.85 ± 0.93 and 4.66 ± 1.55 days in the TH and PL, respectively ($P = .001$). Mean ICU stay was 6.79 ± 2.26 and 8.33 ± 3.09 days ($P = .03$), and mean hospital stay was 15.70 ± 4.77 and 18.90 ± 4.48 days ($P = .01$) in the TH and PL, respectively. There were no significant differences between the TH and the PL in the simple category. CI was higher in the TH at all time points ($P = .004$). The average therapeutic intervention scoring system scores for the first 2 days were higher in the PL in the complex category.
CONCLUSIONS: Oral thyroxin supplementation improves the CI and reduces the inotropic requirement. In addition, it reduces the duration of mechanical ventilation, ICU and hospital stay, and therapeutic intervention scoring system in infants after surgery for complex congenital heart defects.

161: 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.

162: 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.

163: Temkar S, Bafna RK, Damodaran S, Agarwal D, Kumar V. Retinal necklace: Chain of cysts in retinal detachment. Indian J Ophthalmol. 2018 Sep;66(9):1331-1332. doi: 10.4103/ijo.IJO_56_18. PubMed PMID: 30127162; PubMed Central PMCID: PMC6113824.

164: Tewari N, Rajwar A, Mathur VP, Chaudhari PK. Oral features of Griscelli syndrome type II: A rare case report. Spec Care Dentist. 2018 Nov;38(6):421-425. doi: 10.1111/scd.12328. Epub 2018 Sep 12. PubMed PMID: 30207398.

Griscelli syndrome (GS) is an autosomal-recessive disorder of the vesicle transport and membrane trafficking system first identified by Griscelli et al in 1978. The three types of GS have specific genetic defects and systemic manifestations apart from classic partial pigmentary dilution, resulting in hypopigmentation of skin and silvery hair. GS-II occurs due to a defect in the Rab27a gene and is characterized by primary immune deficiency along with accelerated phases of a hemophagocytic lymphohistiocytosis (HLH) crisis. This rare disorder has been widely studied for dermatological, hematological, and neurological manifestations; however, the oral features and presentations have not been elucidated in detail. This report presents a case of a 4-year-old male with known mutation c.550C > T or p.R184X mutation (ENST00000396307) in Rab27a with oral features.

165: Thergaonkar RW, Bhardwaj S, Sinha A, Dinda AK, Kumar R, Bagga A, Srivastava RN, Hari P. Posttransplant Lymphoproliferative Disorder: Experience from a Pediatric Nephrology Unit in North India. Indian J Nephrol. 2018 Sep-Oct;28(5):374-377. doi: 10.4103/ijn.IJN_143_17. PubMed PMID: 30270999; PubMed Central PMCID: PMC6146730.

Posttransplant lymphoproliferative disorder (PTLD) is reported in 1%-3% among pediatric renal allograft recipients. We report the experience of PTLD among pediatric renal allograft recipients at a pediatric nephrology center in North India. Four cases of PTLD were identified from among records of 95 pediatric renal allograft recipients over a period of 21 years. Constitutional and localizing symptoms were present in three patients each. The diagnosis was suggested on positron emission tomography in three patients and confirmed by histopathology in all. Sites affected included tonsils, cervical lymph nodes, duodenum, and para-aortic lymph nodes in one patient each. The lymphocytic infiltrate was polymorphic in three patients and monomorphic in one. Immunostaining suggested B-cell origin in all patients. There was evidence of Epstein-Barr virus infection in only one patient. The patients were successfully managed with reduction of immunosuppression (in all), rituximab (in 3), and excision of affected tissue (in 1). Over a follow-up period of 30-88 months, there were no episodes of disease recurrence or allograft rejection, and renal function was preserved.

166: Titiyal JS, Karunakaran A, Kaur M, Rathi A, Agarwal T, Sharma N. Collagen Cross-Linked Therapeutic Grafts in Fungal Keratitis. Ophthalmology. 2018 Sep;125(9):1471-1473. doi: 10.1016/j.ophtha.2018.04.005. Epub 2018 May 5. PubMed PMID: 29739628.

167: Titiyal JS, Kaur M, Shaikh F, Gagrani M, Brar AS, Rathi A. Small incision lenticule extraction (SMILE) techniques: patient selection and perspectives. Clin

Ophthalmol. 2018 Sep 5;12:1685-1699. doi: 10.2147/OPTH.S157172. eCollection 2018. Review. PubMed PMID: 30233132; PubMed Central PMCID: PMC6134409.

Refractive lenticule extraction is becoming the procedure of choice for the management of myopia and myopic astigmatism owing to its precision, biomechanical stability, and better ocular surface. It has similar safety, efficacy, and predictability as femtosecond laser-assisted in situ keratomileusis (FS-LASIK) and is associated with better patient satisfaction. The conventional technique of small incision lenticule extraction (SMILE) involves docking, femtosecond laser application, lenticule dissection from the surrounding stroma, and extraction. It has a steep learning curve compared to conventional flap-based corneal ablative procedures, and the surgical technique may be challenging especially for a novice surgeon. As SMILE is gaining worldwide acceptance among refractive surgeons, different modifications of the surgical technique have been described to ease the process of lenticule extraction and minimize complications. Good patient selection is essential to ensure optimal patient satisfaction, and novice surgeons should avoid cases with low myopia (thin refractive lenticules), difficult orbital anatomy, high astigmatism, or uncooperative, anxious patients to minimize complications. A comprehensive MEDLINE search was performed using "small incision lenticule extraction," "SMILE," and "refractive lenticule extraction" as keywords, and we herein review the patient selection for SMILE and various surgical techniques of SMILE with their pros and cons. With increasing surgeon experience, a standard technique is expected to evolve that may be performed in all types of cases with optimal outcomes and minimal adverse effects.

168: Tiwari A, Kumar L. Pancreatic ductal adenocarcinoma: Role of chemotherapy & future perspectives. Indian J Med Res. 2018 Sep;148(3):254-257. doi: 10.4103/ijmr.IJMR_615_18. PubMed PMID: 30425214; PubMed Central PMCID: PMC6251265.

169: Tripathi P, Mishra P, Ranjan R, Tyagi S, Seth T, Saxena R. Factor VII deficiency - an enigma; clinicohematological profile in 12 cases. Hematology. 2019 Dec;24(1):97-102. doi: 10.1080/10245332.2018.1518799. Epub 2018 Sep 7. PubMed PMID: 30191763.

OBJECTIVE: Factor VII deficiency is the commonest of the rare bleeding disorders with limited knowledge on clinical profile. The objective of this study was to study the prevalence and clinico-hematological profile of factor VII-deficient patients.
METHODS: It is a retrospective observational study of probable inherited factor VII deficiency covering 18 months. Their clinical profile, family history, investigation and treatment records were studied in detail.
RESULTS: The study group comprised of total 12 factor VII deficiency cases with mean age of 17.5 years of onset of symptoms. The commonest symptom was menorrhagia (41.6%) followed by epistaxis (25%) and easy bruisability (16.6%). These 12 patients when categorized according to bleeding severity: severe bleeding - 2, moderate bleeding - 3, mild bleeding - 6 and asymptomatic - 1. All cases had prolonged prothrombin time (PT) with mean PT of 35.4 seconds (range 18-50 seconds) and mean prolongation of PT from upper limit of normal - 19.4 seconds (range 2-34 seconds). Factor VII levels ranged from < 1-40% in these patients. Clinical symptoms were not in concordance with factor levels. Of 12 patients, required treatment other than local measures.
DISCUSSION AND CONCLUSION: Inherited factor VII deficiency is the commonest autosomally inherited factor deficiency with marked variation in the age of presentation and clinical symptoms. The laboratory results in form of PT and factor VII levels do not correlate with the severity of clinical presentation. A comprehensive evaluation to exclude acquired causes of factor VII deficiency, e.g. obesity, liver diseases, vitamin K deficiency and acquired inhibitors is required before labeling it as inherited in the absence of family history and molecular studies.

170: Tripathy K, Chawla R, Wadekar BR, Venkatesh P, Sharma YR. Evaluation of rhegmatogenous retinal detachments using Optos ultrawide field fundus fluorescein angiography and comparison with ETDRS 7 field overlay. J Curr Ophthalmol. 2018 Jul 3;30(3):263-267. doi: 10.1016/j.joco.2018.06.006. eCollection 2018 Sep. PubMed PMID: 30197958; PubMed Central PMCID: PMC6127357.

Purpose: To evaluate the ultrawide field fundus fluorescein angiography (UWFA) characteristics of rhegmatogenous retinal detachments (RRDs) and compare the findings with an early treatment diabetic retinopathy study (ETDRS) 7 field (ETDRS7F) overlay.
Methods: UWFA (Optos, PLC, Dunfermline, UK) was performed in 10 eyes with macula-off RRDs in 9 patients. The findings of UWFA were compared with that of an overlay of standard ETDRS7F.
Results: Vascular dilation, tortuosity of vessels, and blockage of choroidal fluorescence were noted in all eyes in both UWFA and ETDRS7F overlay. Other findings in UWFA and ETDRS7F included peripheral perivascular staining (10 versus 4 eyes), peripheral capillary nonperfusion (CNP) (9 eyes compared to none), vascular loop formation (7 eyes versus none), optic disc hyperfluorescence (5 eyes in both), petaloid leak at macula (2 eyes in both), and neovascularization elsewhere (3 eyes versus none).
Conclusions: Peripheral perivascular staining and leak, CNP, and vascular tortuosity are common UWFA features of RRDs. Standard ETDRS7F missed peripheral CNP, peripheral vascular loops, and peripheral retinal new vessels in all eyes compared to UWFA in the current study.

171: 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.

172: Watkins DA, Beaton AZ, Carapetis JR, Karthikeyan G, Mayosi BM, Wyber R, Yacoub MH, ZÃ¼hlke LJ. Rheumatic Heart Disease Worldwide: JACC Scientific Expert Panel. J Am Coll Cardiol. 2018 Sep 18;72(12):1397-1416. doi: 10.1016/j.jacc.2018.06.063. Review. PubMed PMID: 30213333.

Rheumatic heart disease (RHD) is a preventable heart condition that remains endemic among vulnerable groups in many countries. After a period of relative

neglect, there has been a resurging interest in RHD worldwide over the past decade. In this Scientific Expert Panel, the authors summarize recent advances in the science of RHD and sketch out priorities for current action and future research. Key questions for laboratory research into disease pathogenesis and epidemiological research on the burden of disease are identified. The authors present a variety of pressing clinical research questions on optimal RHD prevention and advanced care. In addition, they propose a policy and implementation research agenda that can help translate current evidence into tangible action. The authors maintain that, despite knowledge gaps, there is sufficient evidence for national and global action on RHD, and they argue that RHD is a model for strengthening health systems to address other cardiovascular diseases in limited-resource countries.

173: Wood WA, Brazauskas R, Hu ZH, Abdel-Azim H, Ahmed IA, Aljurf M, Badawy S, Beitinjaneh A, George B, Buchbinder D, Cerny J, Dedeken L, Diaz MA, Freytes CO, Ganguly S, Gergis U, Almaguer DG, Gupta A, Hale G, Hashmi SK, Inamoto Y, Kamble RT, Adekola K, Kindwall-Keller T, Knight J, Kumar L, Kuwatsuka Y, Law J, Lazarus HM, LeMaistre C, Olsson RF, Pulsipher MA, Savani BN, Schultz KR, Saad AA, Seftel M, Seo S, Shea TC, Steinberg A, Sullivan K, Szwajcer D, Wirk B, Yared J, Yong A, Dalal J, Hahn T, Khera N, Bonfim C, Atsuta Y, Saber W. Country-Level Macroeconomic Indicators Predict Early Post-Allogeneic Hematopoietic Cell Transplantation Survival in Acute Lymphoblastic Leukemia: A CIBMTR Analysis. Biol Blood Marrow Transplant. 2018 Sep;24(9):1928-1935. doi: 10.1016/j.bbmt.2018.03.016. Epub 2018 Mar 19. PubMed PMID: 29567340; PubMed Central PMCID: PMC6146070.

For patients with acute lymphoblastic leukemia (ALL), allogeneic hematopoietic cell transplantation (alloHCT) offers a potential cure. Life-threatening complications can arise from alloHCT that require the application of sophisticated health care delivery. The impact of country-level economic conditions on post-transplantation outcomes is not known. Our objective was to assess whether these variables were associated with outcomes for patients transplanted for ALL. Using data from the Center for Blood and Marrow Transplant Research, we included 11,261 patients who received a first alloHCT for ALL from 303 centers across 38 countries between the years of 2005 and 2013. Cox regression models were constructed using the following macroeconomic indicators as main effects: Gross national income per capita, health expenditure per capita, and Human Development Index (HDI). The outcome was overall survival at 100 days following transplantation. In each model, transplants performed within lower resourced environments were associated with inferior overall survival. In the model with the HDI as the main effect, transplants performed in the lowest HDI quartile (n=697) were associated with increased hazard for mortality (hazard ratio, 2.42; 95% confidence interval, 1.64 to 3.57; P<.001) in comparison with transplants performed in the countries with the highest HDI quartile. This translated into an 11% survival difference at 100 days (77% for lowest HDI quartile versus 88% for all other quartiles). Country-level macroeconomic indices were associated with lower survival at 100 days after alloHCT for ALL. The reasons for this disparity require further investigation.

174: Yadav DK, Khanna K, Khanna V, Bagga D. Enterolithiasis in posterior urethral diverticulum: an uncommon complication following surgery for anorectal malformation. BMJ Case Rep. 2018 Sep 12;2018. pii: bcr-2018-226274. doi: 10.1136/bcr-2018-226274. PubMed PMID: 30209147.

175: Yadav M, Sinha A, Khandelwal P, Hari P, Bagga A. Efficacy of low-dose daily versus alternate-day prednisolone in frequently relapsing nephrotic syndrome: an open-label randomized controlled trial. Pediatr Nephrol. 2018 Sep 7. doi: 10.1007/s00467-018-4071-7. [Epub ahead of print] PubMed PMID: 30194663.

BACKGROUND: While patients with frequently relapsing nephrotic syndrome (FRNS) are initially treated with long-term alternate-day prednisolone, relapses and adverse effects are common. In an open-label randomized controlled trial, we

compared the efficacy of therapy with low-dose daily to standard alternate-day prednisolone in reducing relapse rates over 12-month follow-up.
METHODS: Consecutive patients, aged 2-18 years, with FRNS were included. Following therapy of relapse, prednisolone was tapered to 0.75 mg/kg on alternate days. Stratifying for steroid dependence, patients were randomly assigned to prednisolone at 0.2-0.3 mg/kg daily or 0.5-0.7 mg/kg alternate day for 12 months. Relapses were treated with daily prednisolone, followed by return to intervention. Primary outcome was the incidence of relapses. Proportion with therapy failure (≥2 relapses in any 6 months or significant steroid toxicity) and sustained remission, cumulative prednisolone intake and adverse events were evaluated.
RESULTS: Patients receiving daily prednisolone (n = 30) showed significantly fewer relapses than those on alternate-day therapy (n = 31) (0.55 relapses/person-year versus 1.94 relapses/person-year; incidence rate ratio 0.28; 95% CI 0.15, 0.52). Daily therapy was associated with higher rates of sustained remission at 6 months (73.3 versus 48.4%) and 1 year (60 versus 31.6%; log rank p = 0.013), lower rates of treatment failure at 6 months (3.3 versus 32.8%) and 1 year (6.7 versus 57.4%; p < 0.0001), and lower prednisolone use (0.27 ± 0.07 versus 0.39 ± 0.19 mg/kg/day; p = 0.003). Three and two patients need to receive the study intervention to enable sustained remission and prevent treatment failure, respectively.
CONCLUSIONS: In patients with FRNS, daily administration of low-dose prednisolone is more effective than standard-dose alternate day therapy in lowering relapse rates, sustaining remission, and enabling steroid sparing.