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List of publications of AIIMS, New Delhi for the month of NOVEMBER, 2015 [Source: www.pubmed.com].

1: Aggarwal R, Pal S, Soni KD, Gamangatti S. Massive cerebral fat embolism leading to brain death: A rare presentation. Indian J Crit Care Med. 2015 Nov;19(11):687-9. doi: 10.4103/0972-5229.169358. PubMed PMID: 26730124; PubMed Central PMCID: PMC4687182.

Fat embolism syndrome (FES) typically consists of a triad of neurological, pulmonary, and cutaneous symptoms. There exist few case reports of FES involving central nervous system (CNS) only without pulmonary involvement. In most of such cases, CNS involvement is partial, and patients recover fully neurologically within days. We report a rare and unusual case of massive cerebral fat embolism that led to brain death in trauma patient.

2: Anupa G, Bhat MA, Srivastava AK, Sharma JB, Mehta N, Patil A, Sengupta J, Ghosh D. Cationic antimicrobial peptide, magainin down-regulates secretion of pro-inflammatory cytokines by early placental cytotrophoblasts. Reprod Biol Endocrinol. 2015 Nov 6;13(1):121. doi: 10.1186/s12958-015-0119-8. PubMed PMID: 26546156; PubMed Central PMCID: PMC4636767.

BACKGROUND: Human placental villous cytotrophoblasts exhibit relative externalization of negatively charged moieties to the outer leaflet of the plasma membrane during the time of syncytialization rendering their reactivity to positively charged cationic antimicrobial peptides (CAMPs) during the window of implantation and early placentation. Vaginal administration of a synthetic CAMP, Ala(8,13,18)-magainin II amide (AMA) inhibited blastocyst implantation and early placentation in monkeys. Furthermore, the administration of AMA resulted in significant inhibition of cell differentiation, enhancement in apoptosis and loss of viability in first trimester placental villous cytotrophoblasts in primary culture. The present study examines the effect of in vitro application of different doses (0, 1, 10, 100, 1000 ng/ml) of AMA on the secreted cytokine profiles of cytotrophoblasts obtained from placental villi samples (n = 13) collected during 8-9 weeks of gestation and grown on three-dimensional collagen matrix in vitro.
METHODS: A panel of forty-eight (48) cytokines in conditioned medium was analysed using multiplex immunoassays technique. Further, the steady state transcript levels of four cytokines (CCL4, CCL5, IL1B, IL6), the concentrations of which were affected by AMA in the isolated cytotrophoblasts, as well as, two cytokines (IL1A and TNF) which were not affected by AMA were estimated. Input list of cytokines secreted by cytotrophoblasts and showing differential secretion in response to AMA were used in enrichment analysis for the generation of biological networks.
RESULTS: Placental cytotrophoblasts secreted 27 cytokines, 13 of which are affected by AMA in vitro with significantly decreased secretion of CCLs-2, 3, 4, 5, CXCLs-1 and 8, FGF2 and MCSF and that of IL1B, IL6 and MIF, and increased secretion of IL16 and IL-2RA. Of the above cytokines showing differential secretion, only IL-2RA, IL16 and MIF showed significant correspondence in the steady state expression of their respective transcript levels. Post-hoc Enrichment analysis revealed Toll-like receptor (TLR) mediated pathways were the top-scored target pathways that were affected by AMA.
CONCLUSIONS: Administration of a CAMP causes shift in the balance of immune-inflammatory responses involving downstream pathways of TLRs in cytotrophoblast function. Further verification of functions of placental trophoblasts on administration of CAMP with pregnancy outcome is necessary.

3: Babu A, Madhavan K, Singhal M, Sagar S, Ranjan P. Pressure Ulcer Surveillance in Neurotrauma Patients at a Level One Trauma Centre in India. Oman Med J. 2015 Nov;30(6):441-6. doi: 10.5001/omj.2015.87. PubMed PMID: 26675523; PubMed Central PMCID: PMC4678450.

OBJECTIVES: Pressure ulcers are a multifactorial, prevalent, and preventable morbidity. They cause a burden both financially and emotionally, to the individual, their family and doctor, and to society as a whole. Pressure ulcers

are extremely difficult to treat; therefore, prevention is key.
METHODS: We started a Wound Care Surveillance Program in 2012 involving nurses, physiotherapists, and doctors. We intended to prevent the occurrence of pressure ulcers, ensure early detection, and facilitate the healing process. The Braden scale was used to stratify patients' risk. The number of patients observed in our study was 2,974 over a one-year period.
RESULTS: The pressure sore prevalence was 3.1%. Younger and middle-aged patients were most commonly affected; 27% of these patients did not survive. Mortality was not attributed to the pressure ulcer directly. The most common mode of injury was road traffic accidents. Most of our patients had just a single pressure area affected, most commonly the sacrum. Most patients were managed with debridement and dressings while 12% received surgical treatment. Of those with stage one ulcers, 29% healed completely at two months. In stage two and three patients, 17% and 6% healed in two months, respectively, and this number was zero in stage four patients.
CONCLUSION: The Wound Care Surveillance Program has been a very effective strategy for the prevention and management of pressure ulcers. Stage two ulcers were the most common in our setup. Braden scoring, traditionally used to screen these ulcers, can be used as a predictive and prognostic tool to predict healing of pressure ulcers. Poor healing is expected in higher staged ulcers and patients with spinal injury and major solid organ injury and those who need a tracheostomy. Home-based care is not up to mark in our society and accounts for most of the cases in the follow-up.

4: Bakhshi S, Batra A, Biswas B, Dhawan D, Paul R, Sreenivas V. Aprepitant as an add-on therapy in children receiving highly emetogenic chemotherapy: a randomized, double-blind, placebo-controlled trial. Support Care Cancer. 2015 Nov;23(11):3229-37. doi: 10.1007/s00520-015-2714-9. Epub 2015 Apr 8. PubMed PMID: 25851802.

BACKGROUND: Aprepitant, a neurokinin-1 receptor antagonist, in combination with 5 HT-3 antagonist and dexamethasone is recommended in adults receiving moderately and highly emetogenic chemotherapy to reduce chemotherapy-induced vomiting (CIV). Data for use of aprepitant in children is limited and hence aprepitant is not recommended by Pediatric Oncology Group of Ontario guidelines for prevention of CIV in children <12 years.
METHODS: A randomized, double-blind, placebo-controlled trial was conducted at a single center in chemotherapy naïve children (5-18 years) receiving highly emetogenic chemotherapy. All patients received intravenous ondansetron (0.15 mg/kg) and dexamethasone (0.15 mg/kg) prior to chemotherapy followed by oral ondansetron and dexamethasone. Patients randomly assigned to aprepitant arm received oral aprepitant (15-40 kg = days 1-3, 80 mg; 41-65 kg = day 1, 125 mg and days 2-3, 80 mg) 1 h before chemotherapy. Control group received placebo as add-on therapy. Primary outcome measure was the incidence of acute moderate to severe vomiting, which was defined as more than two vomiting episodes within 24 h after the administration of the first chemotherapy dose until 24 h after the last chemotherapy dose in the block. Complete response (CR) was defined as absence of vomiting and retching during the specified phase.
RESULTS: Of the 96 randomized patients, three were excluded from analysis; 93 patients were analyzed (50 in aprepitant arm and 43 in placebo arm). Acute moderate and severe vomiting was reported in 72 % patients receiving placebo and 38 % patients receiving aprepitant ($p = 0.001$). Complete response rates during acute phase were significantly higher in aprepitant arm (48 vs. 12 %, $p < 0.001$). No major adverse effects were reported by patients/guardians.
CONCLUSIONS: This double-blind, randomized, placebo-controlled trial shows that aprepitant significantly decreases the incidence of CIV during acute phase when used as an add-on drug with ondansetron and dexamethasone in children receiving highly emetogenic chemotherapy.

5: Balhara YP, Gupta R. Revised Size of Pictorial Warning on Cigarette Packages-A Step in Right Direction. Nicotine Tob Res. 2015 Nov;17(11):1401-2. doi: 10.1093/ntr/ntv023. Epub 2015 Jan 29. PubMed PMID: 25634933.

6: Banerjee J, Banerjee Dixit A, Tripathi M, Sarkar C, Gupta YK, Chandra PS. Enhanced endogenous activation of NMDA receptors in pyramidal neurons of hippocampal tissues from patients with mesial temporal lobe epilepsy: A mechanism of hyper excitation. Epilepsy Res. 2015 Nov;117:11-6. doi: 10.1016/j.eplepsyres.2015.08.007. Epub 2015 Aug 12. PubMed PMID: 26320079.

Altered excitatory synaptic transmission is one of the primary causes of seizure generation in patients with mesial temporal lobe epilepsy (MTLE). The present study is designed to delineate the contribution of glutamatergic tone under resting conditions to the hyper excitability in patients with MTLE. Resected hippocampal tissues were obtained from patients with MTLE. In these samples spontaneous excitatory postsynaptic currents (EPSCs), sensitive to NMDA receptor antagonist APV (50μM) and AMPA receptor antagonist CNQX (10μM) were recorded from pyramidal neurons at -70mV. We observed that frequency of EPSCs were 28.2% higher in slices obtained from patients with MTLE compared to that in case of non-epileptic controls. We also examined spontaneous fast current transients (CTs) recorded from these pyramidal neurons under cell-attached configuration. The frequency of CTs increased in the absence of extracellular Mg(2+) in brain slice preparations and was completely blocked by APV. We found that the frequency of CTs in pyramidal neurons were higher in case of MTLE samples compared to non-epileptic controls. This study suggests that enhanced endogenous activity of NMDA receptor contributes to excitability in pyramidal neurons of slice preparations obtained from patients with MTLE.

7: Batra A, Kashyap S, Singh L, Bakhshi S. Expression of FOXO3a and Correlation With Histopathologic Features in Retinoblastoma. Appl Immunohistochem Mol Morphol. 2015 Nov 16. [Epub ahead of print] PubMed PMID: 26574636.

Forkhead box (FOX) transcription factors are a class of highly conserved proteins, which serve critical cellular functions including cell cycle regulation. The downstream mechanisms of cell cycle regulation involve preservation of retinoblastoma protein function. Its deactivation by phosphorylation and translocation from nucleus to cytoplasm leads to cell proliferation. FOXO3a has been found to be dysregulated in few cancers. However, no study has been reported on role of FOXO3a in retinoblastoma. We assessed the expression of FOXO3a in sections of archived tissue blocks of enucleated/exenterated specimens of retinoblastoma by immunohistochemistry. The histopathologic features were reviewed and correlated with its expression. Effect of FOXO3a expression on survival was assessed. FOXO3a expression was assessed in 100 sections. Six samples did not contain any viable tissue. Retrospective data of 94 patients revealed that median age at presentation was 36 months with male:female ratio of 1.9:1. Fifty-one percent of patients were International Retinoblastoma Staging System stage 1. Of the 94 sections, 68 (72%) showed cytoplasmic expression. Choroidal invasion was associated with cytoplasmic FOXO3a (P=0.04). A trend was also noted in optic nerve cut end involvement (P=0.07). No other histopathologic features were found to be associated with FOXO3a expression. The overall survival and progression-free survival were not found to be affected by FOXO3a expression. Cytoplasmic expression of FOXO3a is frequently found in retinoblastoma and may be involved in pathogenesis. Activation by relocation of FOXO3a to nucleus may activate nonmutated retinoblastoma and may be a potential target of treatment in retinoblastoma.

8: Batra A, Thakar A, Bakhshi S. Ototoxicity in retinoblastoma survivors treated with carboplatin based chemotherapy: A cross-sectional study of 116 patients. Pediatr Blood Cancer. 2015 Nov;62(11):2060. doi: 10.1002/pbc.25618. Epub 2015 Jun 5. PubMed PMID: 26053139.

9: Behera C, Swain R, Bhardwaj DN, Millo T. Skin suicide note written in mehndi (henna). Med Leg J. 2015 Nov 26. pii: 0025817215614145. [Epub ahead of print] PubMed PMID: 26612577.

Suicide messages on the skin are rare. Until now, in all reported cases, the writing tool used by the victims has been a pen. We report a suicide case by hanging in which the victim had written a note on her palm in mehndi, or henna, at a wedding ceremony three days before the fatal act. The note was discovered at autopsy.

10: Bhatt SP, Misra A, Nigam P, Guleria R, Pasha MA. Phenotype, Body Composition, and Prediction Equations (Indian Fatty Liver Index) for Non-Alcoholic Fatty Liver Disease in Non-Diabetic Asian Indians: A Case-Control Study. PLoS One. 2015 Nov 24;10(11):e0142260. doi: 10.1371/journal.pone.0142260. eCollection 2015. PubMed PMID: 26599361; PubMed Central PMCID: PMC4657982.

OBJECTIVE: In this study, we have attempted comparison of detailed body composition phenotype of Asian Indians with non-alcoholic fatty liver disease (NAFLD) vs. those without, in a case controlled manner. We also aim to analyse prediction equations for NAFLD for non-diabetic Asian Indians, and compare performance of these with published prediction equations researched from other populations.
METHODS: In this case-control study, 162 cases and 173 age-and sex-matched controls were recruited. Clinical, anthropometric, metabolic, and body composition profiles, and liver ultrasound were done. Fasting insulin levels, value of homeostasis model assessment of insulin resistance (HOMA-IR), and serum high sensitive C-reactive protein (hs-CRP) levels were evaluated. Multivariate logistic and linear regression analyses were used to arrive at prediction equations for fatty liver [Indian fatty liver index (IFLI)].
RESULTS: As compared to those without fatty liver, those with fatty liver exhibited the following; Excess dorsocervical fat ('Buffalo hump'), skin tags, xanthelasma, 'double chin', arcus; excess total, abdominal and subcutaneous adiposity, and high blood pressure, blood glucose, measures of insulin resistance (fasting insulin and HOMA-IR values), lipids and hs-CRP levels. Two prediction equations were developed; Clinical [Indian Fatty Liver Index-Clinical; IFLI-C]: 1(double chin) +15.5 (systolic blood pressure) +13.8 (buffalo hump); and IFLI-Clinical and Biochemical (CB): serum triglycerides+12 (insulin)+1(systolic blood pressure) +18 (buffalo hump). On ROC Curve analysis, IFLI performed better than all published prediction equations, except one.
CONCLUSION: Non-diabetic Asian Indians with NAFLD researched by us were overweight/obese, had excess abdominal and subcutaneous fat, multiple other phenotypic markers, had higher insulin resistance, glycemia, dyslipidemia and subclinical inflammation than those without. Prediction score developed by us for NAFLD; IFLI-C and IFLI-CB, should be useful for clinicians and researchers.

11: Bhavani GS, Shah H, Shukla A, Gupta N, Gowrishankar K, Rao AP, Kabra M, Agarwal M, Ranganath P, Ekbote AV, Phadke SR, Kamath A, Dalal A, Girisha KM. Clinical and mutation profile of multicentric osteolysis nodulosis and arthropathy. Am J Med Genet A. 2015 Nov 24. doi: 10.1002/ajmg.a.37447. [Epub ahead of print] PubMed PMID: 26601801.

Multicentric osteolysis nodulosis and arthropathy (MONA) is an infrequently described autosomal recessive skeletal dysplasia characterized by progressive osteolysis and arthropathy. Inactivating mutations in MMP2, encoding matrix metalloproteinase-2, are known to cause this disorder. Fifteen families with mutations in MMP2 have been reported in literature. In this study we screened thirteen individuals from eleven families for MMP2 mutations and identified eight mutations (five novel and three known variants). We characterize the clinical, radiographic and molecular findings in all individuals with molecularly proven MONA from the present cohort and previous reports, and provide a comprehensive

review of the MMP2 related disorders. © 2015 Wiley Periodicals, Inc.

12: Bhoi S, Sinha TP, Mishra PR. Is it the time to integrate "sono cardiopulmonary resuscitation" in cardiopulmonary resuscitation algorithm of traumatic cardiac arrest? Indian J Crit Care Med. 2015 Nov;19(11):696-7. doi: 10.4103/0972-5229.169363. PubMed PMID: 26730128; PubMed Central PMCID: PMC4687186.

13: Blacquiere D, Demchuk AM, Al-Hazzaa M, Deshpande A, Petrcich W, Aviv RI, Rodriguez-Luna D, Molina CA, Silva Blas Y, Dzialowski I, Czlonkowska A, Boulanger JM, Lum C, Gubitz G, Padma V, Roy J, Kase CS, Bhatia R, Hill MD, Dowlatshahi D; PREDICT/Sunnybrook ICH CTA Study Group. Intracerebral Hematoma Morphologic Appearance on Noncontrast Computed Tomography Predicts Significant Hematoma Expansion. Stroke. 2015 Nov;46(11):3111-6. doi: 10.1161/STROKEAHA.115.010566. Epub 2015 Oct 8. PubMed PMID: 26451019.

BACKGROUND AND PURPOSE: Hematoma expansion in intracerebral hemorrhage is associated with higher morbidity and mortality. The computed tomography (CT) angiographic spot sign is highly predictive of expansion, but other morphological features of intracerebral hemorrhage such as fluid levels, density heterogeneity, and margin irregularity may also predict expansion, particularly in centres where CT angiography is not readily available.
METHODS: Baseline noncontrast CT scans from patients enrolled in the Predicting Hematoma Growth and Outcome in Intracerebral Hemorrhage Using Contrast Bolus CT (PREDICT) study were assessed for the presence of fluid levels and degree of density heterogeneity and margin irregularity using previously validated scales. Presence and grade of these metrics were correlated with the presence of hematoma expansion as defined by the PREDICT study on 24-hour follow-up scan.
RESULTS: Three hundred eleven patients were included in the analysis. The presence of fluid levels and increasing heterogeneity and irregularity were associated with 24-hour hematoma expansion (P=0.021, 0.003 and 0.049, respectively) as well as increases in absolute hematoma size. Fluid levels had the highest positive predictive value (50%; 28%-71%), whereas margin irregularity had the highest negative predictive value (78%; 71%-85). Noncontrast metrics had comparable predictive values as spot sign for expansion when controlled for vitamin K, antiplatelet use, and baseline National Institutes of Health Stroke Scale, although in a combined area under the receiver-operating characteristic curve model, spot sign remained the most predictive.
CONCLUSIONS: Fluid levels, density heterogeneity, and margin irregularity on noncontrast CT are associated with hematoma expansion at 24 hours. These markers may assist in prediction of outcomes in scenarios where CT angiography is not readily available and may be of future help in refining the predictive value of the CT angiography spot sign.

14: Chhablani J, Bansal P, Veritti D, Sambhana S, Sarao V, Pichi F, Carrai P, Massaro D, Lembo A, Mansour AM, Banker A, Gupta SR, Hamam R, Lanzetta P. Dexamethasone implant in diabetic macular edema in real-life situations. Eye (Lond). 2015 Nov 27. doi: 10.1038/eye.2015.246. [Epub ahead of print] PubMed PMID: 26611849.

PurposeTo report outcome of eyes with recalcitrant and naive eyes with diabetic macular edema (DME) treated with intravitreal dexamethasone implants (Ozurdex) injection.MethodsRetrospective multicenter data analysis of eyes with DME treated with Ozurdex implant and with minimum follow-up of at least one year after the first implant. Data collected included demographic details, history of presenting illness, past treatment history, clinical examination details including visual acuity at presentation, and follow-up with imaging and treatment details. Paired sample t-test was used to measure mean differences between pre- and post-implant

values obtained at baseline and last follow-up.ResultsA total of 79 eyes (62 subjects) were included. Sixty-four eyes had been previously treated; 15 eyes were naive. Among the previously treated eyes, mean interval between first Ozurdex injection and any previous treatment was 7.69±8.2 months. In naive eyes, the visual acuity improved from baseline 0.58±0.25 to 0.44±0.33 logMAR at last follow-up (P=0.05). In eyes that had been previously treated, the improvement was from 0.65±0.34 at baseline to 0.48±0.35 logMAR (P=0.01). Mean treatment-free interval was 6.5±4.5 months. Nine eyes were steroid responder with controlled intraocular pressure (IOP), none showed any spike in IOP during the follow-up period.ConclusionsOzurdex implant could be a good alternative for recalcitrant as well as naive eyes with DME. The visual gain after initial implant injection was fairly maintained, with additional treatment usually after 6 months in naive eyes. Ozurdex appeared safe even in steroid responders with good control of IOP with antiglaucoma medications.Eye advance online publication, 27 November 2015; doi:10.1038/eye.2015.246.

15: Dabas A, Khadgawat R. Vitamin D Receptor Polymorphisms and Bone Mass Accrual in Indian Girls. Indian J Pediatr. 2015 Nov;82(11):975-6. doi: 10.1007/s12098-015-1898-9. Epub 2015 Sep 24. PubMed PMID: 26400033.

16: Dabas Y, Bakhshi S, Xess I. Fatal Cases of Bloodstream Infection by Fusarium solani and Review of Published Literature. Mycopathologia. 2015 Nov 5. [Epub ahead of print] PubMed PMID: 26541869.

Fusarium species are ubiquitously present in environment and are well known as human pathogens with high mortality rate in immunocompromised patients. We report here two cases where immunocompromised patients developed fatal bloodstream infections by this organism. Isolates were further identified by ITS1 region sequencing which confirmed them as Fusarium solani. Antifungal susceptibility testing was done following CLSI M38-A2 guidelines to amphotericin B, fluconazole, itraconazole, voriconazole, posaconazole, caspofungin, and micafungin. Both patients had a fatal outcome and expired of septic shock. Therefore, identification up to species level is of utmost importance as that helps in directing the management of the patient thereby leading to a favourable outcome.

17: Dalela M, Shrivastav TG, Kharbanda S, Singh H. pH-Sensitive Biocompatible Nanoparticles of Paclitaxel-Conjugated Poly(styrene-co-maleic acid) for Anticancer Drug Delivery in Solid Tumors of Syngeneic Mice. ACS Appl Mater Interfaces. 2015 Dec 9;7(48):26530-48. doi: 10.1021/acsami.5b07764. Epub 2015 Nov 23. PubMed PMID: 26528585.

In the present study, we have synthesized poly(styrene-co-maleic anhydride), a biocompatible copolymer that was further conjugated with paclitaxel (PTX) via ester linkage and self-assembled to form poly(styrene-co-maleic acid)-paclitaxel (PSMAC-PTX) nanoparticles (NPs). The in vitro release of PTX from PSMAC-PTX NPs showed a higher release at lower pH than at the physiological pH of 7.4, confirming its pH-dependent release. The cell viability of PSMAC-PTX nanoparticles was evaluated using MTT assay. IC50 values of 9.05-18.43 ng/mL of PTX equivalent were observed in various cancer cell lines after 72 h of incubation. Confocal microscopy, Western blotting, and Flow cytometry results further supported that the cellular uptake and apoptosis of cancer cells with PSMAC-PTX NPs. Pharmacokinetic studies revealed that the conjugation of PTX to the PSMAC co-polymer not only increased the plasma and tumor Cmax of PTX but also prolonged its plasma half-life and retention in tumor via enhanced permeability and retention (EPR) effect. Administration of PSMAC-PTX NPs showed significant tumor growth inhibition with improved apoptosis effects in vivo on Ehrlich Ascites Tumor (EAT)-bearing BALB/c syngeneic mice in comparison with Taxol, without showing any cytotoxicity. On the basis of preliminary results, no subacute toxicity was observed in major organs, tissues and hematological system up to a dosage of 60 mg/kg body weight in mice. Therefore, PSMAC-PTX NPs may be considered as an alternative nanodrug delivery system for the delivery of PTX in solid tumors.

18: Das RR, Sankar MJ. Stressful Life in NICU: Time to Nurse the Neonatal Nurses. Indian J Pediatr. 2015 Nov;82(11):983-4. doi: 10.1007/s12098-015-1897-x. Epub 2015 Sep 24. PubMed PMID: 26400034.

19: Dayal M, Gamanagatti S. Inferior vena cava web causing Budd-Chiari syndrome. Arab J Gastroenterol. 2015 Sep-Dec;16(3-4):148-9. doi: 10.1016/j.ajg.2015.06.007. Epub 2015 Nov 3. PubMed PMID: 26545960.

20: Deepa M, Grace M, Binukumar B, Pradeepa R, Roopa S, Khan HM, Fatmi Z, Kadir MM, Naeem I, Ajay VS, Anjana RM, Ali MK, Prabhakaran D, Tandon N, Mohan V, Narayan KM; CARRS Surveillance Research Group. High burden of prediabetes and diabetes in three large cities in South Asia: The Center for cArdio-metabolic Risk Reduction in South Asia (CARRS) Study. Diabetes Res Clin Pract. 2015 Nov;110(2):172-82. doi: 10.1016/j.diabres.2015.09.005. Epub 2015 Sep 25. PubMed PMID: 26432412.

AIM: To estimate the prevalence of, and assess factors associated with, diabetes and prediabetes in three South Asian cities.
METHODS: Using a multi-stage cluster random sample representative of each city, 16,288 subjects aged ≥20 years (Chennai: 6906, Delhi: 5365 and Karachi: 4017) were recruited to the Centre for cArdio-metabolic Risk Reduction in South-Asia (CARRS) Study. Fasting plasma glucose (FPG) and glycosylated hemoglobin (HbA1c) were measured in 13720 subjects. Prediabetes was defined as FPG 100-125mg/dl (5.6-6.9mmol/l) and/or HbA1c 5.7-6.4% (39-46mmol/mol) and diabetes as self-report and/or drug treatment for diabetes and/or FPG≥126mg/dl (≥7.0mmol/l) and/or HbA1c≥6.5% (48mmol/mol). We assessed factors associated with diabetes and prediabetes using polytomous logistic regression models.
RESULTS: Overall 47.3-73.1% of the population had either diabetes or prediabetes: Chennai 60.7% [95%CI: 59.0-62.4%] (diabetes - 22.8% [21.5-24.1%], prediabetes - 37.9% [36.1-39.7%]); Delhi 72.7% [70.6-74.9%] (diabetes - 25.2% [23.6-26.8%], prediabetes - 47.6% [45.6-49.5%]); and Karachi 47.4% [45.7-49.1%]; (diabetes - 16.3% [15.2-17.3%], prediabetes - 31.1% [29.5-32.8%], respectively). Proportions of self-reported diabetes were 55.1%, 39.0%, and 48.0% in Chennai, Delhi, and Karachi, respectively. City, age, family history of diabetes, generalized obesity, abdominal obesity, body fat, high cholesterol, high triglyceride, and low HDL cholesterol levels were each independently associated with prediabetes, while the same factors plus waist-to-height ratio and hypertension were associated with diabetes.
CONCLUSION: Six in ten adults in large South Asian cities have either diabetes or prediabetes. These data call for urgent action to prevent diabetes in South Asia.

21: Dhamija E, Paul SB, Gamanagatti SR, Acharya SK. Biliary complications of arterial chemoembolization of hepatocellular carcinoma. Diagn Interv Imaging. 2015 Nov;96(11):1169-75. doi: 10.1016/j.diii.2015.06.017. Epub 2015 Aug 17. PubMed PMID: 26292615.

RATIONALE AND BACKGROUND: Transarterial chemoembolization (TACE) is the most frequently used palliative therapy for unresectable hepatocellular carcinoma (HCC). It is a safe and effective procedure with few major and minor complications. Rarely, biliary complications are also encountered following TACE. The goal of our study was to investigate the incidence and the presentation of biliary complications following TACE in patients with HCC.
MATERIAL AND METHODS: In this retrospective study, data of patients with HCC who underwent TACE between June 2002 to December 2014 were obtained from the records. Their detailed information about the procedure of TACE, diagnosis of biliary complications and subsequent management details were reviewed.
RESULT: One hundred and sixty-eight patients with HCC underwent 305 procedures of TACE. Of these, biliary complications of various severities developed in 6 (3.6%) patients leading to an incidence of 1.9% (6/305). Minimal intrahepatic biliary

dilatation (IHBD) occurred in three, biliary stricture in one and intrahepatic biloma in two patients. Supportive management was undertaken for IHBD patients while percutaneous aspiration and naso-biliary drainage was performed for the infected bilomas.
CONCLUSION: Biliary complications following TACE are infrequent. Diagnosis should be suspected clinically and confirmed with imaging. Treatment depends on the severity. Enforcing specific measures can minimize its frequency.

22: Drake LJ, Singh S, Mishra CK, Sinha A, Kumar S, Bhushan R, Hollingsworth TD, Appleby LJ, Kumar R, Sharma K, Kumar Y, Raman S, Chakrabarty S, Kihara JH, Gunawardena NK, Hollister G, Kumar V, Ankur A, Prasad B, Ramachandran S, Fishbane A, Makkar P. Bihar's Pioneering School-Based Deworming Programme: Lessons Learned in Deworming over 17 Million Indian School-Age Children in One Sustainable Campaign. PLoS Negl Trop Dis. 2015 Nov 19;9(11):e0004106. doi: 10.1371/journal.pntd.0004106. eCollection 2015 Nov. PubMed PMID: 26584484; PubMed Central PMCID: PMC4652892.
23: Dubey R, Chakrabarty B, Saini L, Madaan P, Gulati S. Bilateral ophthalmoplegia in a child with migraine. Brain Dev. 2015 Nov 11. pii: S0387-7604(15)00226-0. doi: 10.1016/j.braindev.2015.10.014. [Epub ahead of print] PubMed PMID: 26577169.

BACKGROUND: In children, migraine with or without aura is a common entity, however variants like recurrent painful optic neuropathy (RPON) is rarely encountered.
CASE RESULT: A 9year old boy presented with headache for 1week and restricted movements and drooping in both eyes for last 3days. On examination he had bilateral ophthalmoplegia and ptosis. History of migrainous headache was present in the patient as well as his mother. His MRI brain with venogram, serum autoimmune markers, serum and urine toxicology screen and repetitive nerve stimulation test were normal. He received intravenous pulse followed by oral steroids for 6weeks and was started on antimigraine prophylaxis. Eighteen months since the attack, he has improved completely with mild asymmetric mydriasis persisting.
DISCUSSION AND CONCLUSION: This may represent first attack of RPON in a child with migraine. Rarely this may herald the onset of migraine as well, index of suspicion should be high as it is a diagnosis of exclusion and a treatable entity.

24: Garg PK, Chandrashekhara SH, Keshri VK, Pandey D. Left carinal pneumonectomy through median sternotomy: Surgical experience of two patients. Lung India. 2015 Nov-Dec;32(6):627-30. doi: 10.4103/0970-2113.168125. PubMed PMID: 26664175; PubMed Central PMCID: PMC4663872.

Endobronchial tumors infiltrating the carina is a formidable challenge to surgeons in view of difficult surgical access to the carina, especially on the left side, problems of securing the airway intra-operatively, technically challenging anastomosis due to anatomical location, and high post-operative morbidity and mortality. We present our surgical experience of two cases of left carinal pneumonectomy which was undertaken for resectable primary salivary gland type tumors of lung.

25: Goyal SN, Sharma C, Mahajan UB, Patil CR, Agrawal YO, Kumari S, Arya DS, Ojha S. Protective Effects of Cardamom in Isoproterenol-Induced Myocardial Infarction in Rats. Int J Mol Sci. 2015 Nov 17;16(11):27457-69. doi: 10.3390/ijms161126040. PubMed PMID: 26593900; PubMed Central PMCID: PMC4661898.

Cardamom is a popular spice that has been commonly used in cuisines for flavor since ancient times. It has copious health benefits such as improving digestion, stimulating metabolism, and exhibits antioxidant and anti-inflammatory effects. The current study investigated the effect of cardamom on hemodynamic, biochemical, histopathological and ultrastructural changes in isoproterenol (ISO)-induced myocardial infarction. Wistar male albino rats were randomly divided and treated with extract of cardamom (100 and 200 mg/kg per oral) or normal saline for 30 days with concomitant administration of ISO (85 mg/kg, subcutaneous) on 29th and 30th days, at 24 h interval. ISO injections to rats caused cardiac dysfunction evidenced by declined arterial pressure indices, heart rate, contractility and relaxation along with increased preload. ISO also caused a significant decrease in endogenous antioxidants, superoxide dismutase, catalase, glutathione peroxidase, depletion of cardiomyocytes enzymes, creatine kinase-MB, lactate dehydrogenase and increase in lipid peroxidation. All these changes in cardiac and left ventricular function as well as endogenous antioxidants, lipid peroxidation and myocyte enzymes were ameliorated when the rats were pretreated with cardamom. Additionally, the protective effects were strengthened by improved histopathology and ultrastructural changes, which specifies the salvage of cardiomyocytes from the deleterious effects of ISO. The present study findings demonstrate that cardamom significantly protects the myocardium and exerts cardioprotective effects by free radical scavenging and antioxidant activities.

26: Gupta A, Kumar R, Sahu V, Agnihotri V, Singh AP, Bhasker S, Dey S. NFÎ°B-p50 as a blood based protein marker for early diagnosis and prognosis of head and neck squamous cell carcinoma. Biochem Biophys Res Commun. 2015 Nov 13;467(2):248-53. doi: 10.1016/j.bbrc.2015.09.181. Epub 2015 Oct 3. PubMed PMID: 26435503.

Head and neck squamous cell carcinoma (HNSCC) is the major health concern in Indian population. Despite of advanced treatment the mortality rate for this disease has not been improved very much. Current research focused on development of protein marker for the diagnosis and prognosis of HNSCC. The case control study was performed with 125 HNSCC patients and 104 control cases. The level of p50 and IκBα proteins in serum were evaluated at pre and post therapy by label free real time surface plasmon resonance (SPR) and western blot analysis. The serum p50 concentration were significantly ($P < 0.0001$) higher at the time of diagnosis i.e. pre therapy (Mean ± SD = 27.06 ± 4.88 ng/μl) as compared to controls (Mean ± SD = 16.96 ± 4.04 ng/μl) while it decline at post therapy (Mean ± SD = 21.01 ± 4.98 ng/μl). Similarly, the concentration of IκBα protein in serum were slightly higher at pre therapy (Mean ± SD = 8.33 ± 1.85 ng/μl) as compared to controls (Mean ± SD = 7.27 ± 1.84 ng/μl) and declined at post therapy (Mean ± SD = 7.09 ± 1.24 ng/μl). The level of p50 was also high at the early stage of the disease. The specificity and sensitivity of p50 proteins obtained from ROC analysis revealed the potentiality to be diagnostic protein marker for HNSCC for its accuracy in the study cohort.

27: Gupta A, Kharbanda OP, Sardana V, Balachandran R, Sardana HK. A knowledge-based algorithm for automatic detection of cephalometric landmarks on CBCT images. Int J Comput Assist Radiol Surg. 2015 Nov;10(11):1737-52. doi: 10.1007/s11548-015-1173-6. Epub 2015 Apr 7. PubMed PMID: 25847662.

PURPOSE: Cone-beam computed tomography (CBCT) is now an established component for 3D evaluation and treatment planning of patients with severe malocclusion and craniofacial deformities. Precision landmark plotting on 3D images for cephalometric analysis requires considerable effort and time, notwithstanding the experience of landmark plotting, which raises a need to automate the process of 3D landmark plotting. Therefore, knowledge-based algorithm for automatic detection of landmarks on 3D CBCT images has been developed and tested.
METHODS: A knowledge-based algorithm was developed in the MATLAB programming

environment to detect 20 cephalometric landmarks. For the automatic detection, landmarks that are physically adjacent to each other were clustered into groups and were extracted through a volume of interest (VOI). Relevant contours were detected in the VOI and landmarks were detected using corresponding mathematical entities. The standard data for validation were generated using manual marking carried out by three orthodontists on a dataset of 30 CBCT images as a reference.
RESULTS: Inter-observer ICC for manual landmark identification was found to be excellent ([Formula: see text]0.9) amongst three observers. Euclidean distances between the coordinates of manual identification and automatic detection through the proposed algorithm of each landmark were calculated. The overall mean error for the proposed method was 2.01 mm with a standard deviation of 1.23 mm for all the 20 landmarks. The overall landmark detection accuracy was recorded at 64.67, 82.67 and 90.33 % within 2-, 3- and 4-mm error range of manual marking, respectively.
CONCLUSIONS: The proposed knowledge-based algorithm for automatic detection of landmarks on 3D images was able to achieve relatively accurate results than the currently available algorithm.

28: Gupta DL, Nagar PK, Kamal VK, Bhoi S, Rao DN. Clinical relevance of single nucleotide polymorphisms within the 13 cytokine genes in North Indian trauma hemorrhagic shock patients. Scand J Trauma Resusc Emerg Med. 2015 Nov 11;23:96. doi: 10.1186/s13049-015-0174-3. PubMed PMID: 26561011; PubMed Central PMCID: PMC4642631.

INTRODUCTION: The susceptibility to adverse outcome from critical injury (occurrence of sepsis, septic shock, organ dysfunction/failure, and mortality) varies dramatically due to different degrees of inflammatory response. We assessed the relationship of the genotype distribution of various cytokine gene polymorphisms (CGP) with regard to the development of sepsis, organ dysfunction or mortality in severely injured patients.
METHOD: Observational, hospital-based cohort study of 114 severely injured North Indian patients from New Delhi admitted to the Emergency Department (ED) of Trauma Centre, AIIMS. Patients were monitored from day first to discharge or death, measuring SOFA score, sepsis and septic shock occurrences up to one month. We have analyzed 13 cytokine genes, including the SNPs of structural and regulatory regions at 22 positions.
RESULTS: Sequence-specific primer based PCR indicated that eight polymorphic loci IL-1α /-889, IL-1β/-511, IL-1R (pstI 1970), TGF-β/ code 10, TNF-α/-308, TNF-α/-238, IL-6/+565 and IL-10/-1082, out of 22 SNPs are significantly associated with sepsis morbidity and outcome. Theses SNPs might be used as risk determinants of the outcome. Patients with IL-10 (-1082A/A) genotypes were found significantly higher in post traumatic sepsis patients and had a significantly higher risk to developed sepsis complication ($p<0.05$, OR=0.86, C.I=0.08-8.8).In case of TNF-α (-308) position, GA and GG genotype patients have a significantly lower risk of poor outcome ($p<0.05$, OR=0.25, C.I=0.01-1.3) and ($p<0.05$, OR=0.22, C.I=0.01-0.5) in comparison to AA genotype. In this study, two polymorphisms (IL-1β (-511) and IL-1R) were significantly associated with the development of MOF and mortality, where as IL-1α (-889) polymorphism associated with susceptibility for sepsis. The distribution of haplotypes of TGF-β and IL-6 were also associated with sepsis susceptibility and outcome.
CONCLUSION: In conclusion, we have found that the alternations in the genotype and allele frequency of IL-1β (-511C/T), TNF-α (-308 G/A), TNF-α (-238 G/A) and IL-10 (-1082 G/A) genes are associated with an higher risk of sepsis development in trauma patients and outcomes.

29: Gupta R, Sharma A, Agarwal SK, Dinda AK. C1q nephropathy and isolated CD59 deficiency manifesting as necrotizing crescentic glomerulonephritis: A rare association of two diseases. Saudi J Kidney Dis Transpl. 2015 Nov-Dec;26(6):1274-8. doi: 10.4103/1319-2442.168671. PubMed PMID: 26586072.

C1q nephropathy is a recently described clinico-pathologic entity with a variable clinical presentation and pathology. Crescentic glomerulonephritis (GN) has been reported in only two patients in the available literature. CD59 deficiency, along with lack of CD55, is responsible for paroxysmal nocturnal hemoglobinuria (PNH). Few cases of isolated CD59 deficiency have been described with PNH-like features. A middle-aged adult male presented with rapidly progressive renal failure. Serological investigations were negative. A renal biopsy revealed necrotizing crescentic GN with rupture of Bowman's capsule. Immunofluorescence on the frozen sections showed dominant mesangial deposits of C1q along with IgM. Hematological work-up of the patient revealed isolated CD59 deficiency. Hence, a final diagnosis of C1q nephropathy and CD59 deficiency manifesting as crescentic GN and hemolytic anemia was made. The co-existence of two rare disorders, C1q nephropathy and CD59 deficiency, in a patient with necrotizing crescentic GN is described for the first time to the best of our knowledge. The pathogenetic link of these two entities with the clinical manifestation requires further study.

30: Gupta S, Sagar P, Gogia V, Khokhar S, Dada T. Dual Endotemponade for Extensive Long-standing Cyclodialysis Using Sulcus-fixated Cionni Ring and PCIOL. J Glaucoma. 2015 Nov 6. [Epub ahead of print] PubMed PMID: 26550971.

A young patient presented with visual acuity of hand movements only, unrecordable intraocular pressure, and total cataract after trauma 12 months ago. She reported failure to improve with conservative therapy as well as a direct cycloplexy elsewhere. After cleft localization on preoperative gonioscopy, ultrasound biomicroscopy (UBM), and intraoperative gonioscopy, a partial-thickness scleral flap was fashioned at the site of maximum cleft height. Following phacoaspiration, a multipiece intraocular lens was implanted in the sulcus; its haptics aligned to the axis with maximum height of cyclodialysis. A Cionni ring placed in sulcus was sutured to sclera under the flap to provide additional tamponading effect. Postoperative UBM and gonioscopy confirmed cleft closure. Normalization of intraocular pressure was found on repeated follow-ups till 1 year (12 to 14 mm Hg). UBM showed increase in sulcus diameter, and "double indentation sign" on the ciliary body.

31: Gupta S, Shah P, Grewal S, Chaurasia AK, Gupta V. Steroid-induced glaucoma and childhood blindness. Br J Ophthalmol. 2015 Nov;99(11):1454-6. doi: 10.1136/bjophthalmol-2014-306557. Epub 2015 May 22. PubMed PMID: 26002945.

AIM: To determine the prevalence, risk factors and the severity of visual loss caused by steroid-induced glaucoma (SIG) among children.
METHODS: Five-year records of all paediatric glaucoma cases presenting to the glaucoma services of our tertiary care centre were evaluated. Data of children presenting with SIG were recorded with respect to their visual acuity, highest baseline intraocular pressure, cup:disc ratio, perimetry and need of glaucoma filtering surgery. Parents were interviewed to assess the indication of steroid use, type of steroid used, person prescribing it and the duration of use. The prevalence of visual impairment was calculated based on WHO criteria.
RESULTS: Of 1259 cases of paediatric glaucoma presenting at our centre over 5 years, 59 children (4.7%) were diagnosed with SIG. Of these, 51 (87%) had been prescribed topical steroids for vernal keratoconjunctivitis (VKC). The median duration of steroid use was 18 months (range 1 month to 8 years). Also, 82% of children with VKC had been prescribed steroids by the treating ophthalmologist and 52% had been on topical steroids for >1 year. Glaucomatous optic neuropathy was the cause of blindness in 37.3% (22/59) and low vision in 23.7% (14/59) children. And 27% (16/59) were unilaterally blind at presentation.
CONCLUSIONS: A third of the children presenting with SIG to our tertiary care centre were bilaterally blind at presentation. Ophthalmologists need to consider steroid-sparing agents to treat VKC and monitor these children closely for glaucoma if they prescribe topical steroids in order to prevent unnecessary childhood blindness.

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32: Gupta SK. Clinical Approach to a Neonate with Cyanosis. Indian J Pediatr. 2015 Nov;82(11):1050-60. doi: 10.1007/s12098-015-1871-7. Epub 2015 Sep 19. PubMed PMID: 26385740.

Cyanosis is always pathological and demands detailed evaluation. Combined use of clinical findings, electrocardiogram and chest radiograph permits determination of underlying cause in vast majority. Stepwise approach allows hemodynamic classification of the cardiac lesion and directs immediate management. Accurate anatomic diagnosis of the cardiac malformation is seldom essential for preliminary management and therefore, emphasis must be on clinical classification rather than on obtaining echocardiographic diagnosis.

33: Gupta SK, Shetkar SS, Ramakrishnan S, Kothari SS. Saline Contrast Echocardiography in the Era of Multimodality Imaging-Importance of "Bubbling It Right". Echocardiography. 2015 Nov;32(11):1707-19. doi: 10.1111/echo.13035. Epub 2015 Aug 7. Review. PubMed PMID: 26257397.

Saline contrast echocardiography is an established imaging modality. Logical interpretation of a carefully performed study is vital to realize its diagnostic potential. In this review, we discuss utility of saline contrast echocardiography in evaluation of various pathologies within and outside the heart other than a patent foramen ovale.

34: Gupta V, Khandpur S. Blepharochalasis with double lip: A case of Ascher syndrome. Indian J Dermatol Venereol Leprol. 2015 Nov-Dec;81(6):651. doi: 10.4103/0378-6323.158645. PubMed PMID: 26515861.

35: Gupta V, Sahni K, Khute P, Sharma VK, Ali MF. Dowling-Degos disease and malignant melanoma: Association or mere coincidence? Indian J Dermatol Venereol Leprol. 2015 Nov-Dec;81(6):627-8. doi: 10.4103/0378-6323.168334. PubMed PMID: 26515850.

36: Gupta VG, Arora B, Radhakrishnan V, Banavali S, Bakhshi S. Treatment rates of paediatric acute myeloid leukaemia: a view from three tertiary centres in India. Br J Haematol. 2015 Nov 20. doi: 10.1111/bjh.13858. [Epub ahead of print] PubMed PMID: 26586018.

37: Huynh TJ, Aviv RI, Dowlatshahi D, Gladstone DJ, Laupacis A, Kiss A, Hill MD, Molina CA, Rodriguez-Luna D, Dzialowski I, Silva Y, Kobayashi A, Lum C, Boulanger JM, Gubitz G, Bhatia R, Padma V, Roy J, Kase CS, Symons SP, Demchuk AM; PREDICT/Sunnybrook CTA Investigators. Validation of the 9-Point and 24-Point Hematoma Expansion Prediction Scores and Derivation of the PREDICT A/B Scores. Stroke. 2015 Nov;46(11):3105-10. doi: 10.1161/STROKEAHA.115.009893. Epub 2015 Oct 13. PubMed PMID: 26463691.

BACKGROUND AND PURPOSE: Nine- and 24-point prediction scores have recently been published to predict hematoma expansion (HE) in acute intracerebral hemorrhage. We sought to validate these scores and perform an independent analysis of HE predictors.
METHODS: We retrospectively studied 301 primary or anticoagulation-associated intracerebral hemorrhage patients presenting <6 hours post ictus prospectively enrolled in the Predicting Hematoma Growth and Outcome in Intracerebral Hemorrhage Using Contrast Bolus Computed Tomography (PREDICT) study. Patients underwent baseline computed tomography angiography and 24-hour noncontrast computed tomography follow-up for HE analysis. Discrimination and calibration of the 9- and 24-point scores was assessed. Independent predictors of HE were identified using multivariable regression and incorporated into the PREDICT A/B

scores, which were then compared with existing scores.
RESULTS: The 9- and 24-point HE scores demonstrated acceptable discrimination for HE>6 mL or 33% and >6 mL, respectively (area under the curve of 0.706 and 0.755, respectively). The 24-point score demonstrated appropriate calibration in the PREDICT cohort (χ(2) statistic, 11.5; P=0.175), whereas the 9-point score demonstrated poor calibration (χ(2) statistic, 34.3; P<0.001). Independent HE predictors included spot sign number, time from onset, warfarin use or international normalized ratio >1.5, Glasgow Coma Scale, and National Institutes of Health Stroke Scale and were included in PREDICT A/B scores. PREDICT A showed improved discrimination compared with both existing scores, whereas performance of PREDICT B varied by definition of expansion.
CONCLUSIONS: The 9- and 24-point expansion scores demonstrate acceptable discrimination in an independent multicenter cohort; however, calibration was suboptimal for the 9-point score. The PREDICT A score showed improved discrimination for HE prediction but requires independent validation.

38: Jat KR, Walia DK, Khairwa A. Anti-IgE therapy for allergic bronchopulmonary aspergillosis in people with cystic fibrosis. Cochrane Database Syst Rev. 2015 Nov 4;11:CD010288. doi: 10.1002/14651858.CD010288.pub3. Review. PubMed PMID: 26545165.

BACKGROUND: Cystic fibrosis is an autosomal recessive multisystem disorder with an approximate prevalence of 1 in 3500 live births. Allergic bronchopulmonary aspergillosis is a lung disease caused by aspergillus-induced hypersensitivity with a prevalence of 2% to 15% in people with cystic fibrosis. The mainstay of treatment includes corticosteroids and itraconazole. The treatment with corticosteroids for prolonged periods of time, or repeatedly for exacerbations of allergic bronchopulmonary aspergillosis, may lead to many adverse effects. The monoclonal anti-IgE antibody, omalizumab, has improved asthma control in severely allergic asthmatics. The drug is given as a subcutaneous injection every two to four weeks. Since allergic bronchopulmonary aspergillosis is also a condition resulting from hypersensitivity to specific allergens, as in asthma, it may be a candidate for therapy using anti-IgE antibodies. Therefore, anti-IgE therapy, using agents like omalizumab, may be a potential therapy for allergic bronchopulmonary aspergillosis in people with cystic fibrosis. This is an updated version of the review.
OBJECTIVES: To evaluate the efficacy and adverse effects of anti-IgE therapy for allergic bronchopulmonary aspergillosis in people with cystic fibrosis.
SEARCH METHODS: We searched the Cochrane Cystic Fibrosis Trials Register, compiled from electronic database searches and handsearching of journals and conference abstract books. We also searched the reference lists of relevant articles and reviews. Last search: 27 July 2015.We searched the ongoing trial registry clinicaltrials.gov for any ongoing trials. Latest search for clinicaltrials.gov: 23 October 2015.
SELECTION CRITERIA: Randomized and quasi-randomized controlled trials comparing anti-IgE therapy to placebo or other therapies for allergic bronchopulmonary aspergillosis in people with cystic fibrosis.
DATA COLLECTION AND ANALYSIS: Two review authors independently extracted data and assessed the risk of bias in the included study. They planned to perform data analysis using Review Manager.
MAIN RESULTS: Only one study enrolling 14 participants was eligible for inclusion in the review. The double-blind study compared a daily dose of 600 mg omalizumab or placebo along with twice daily itraconazole and oral corticosteroids, with a maximum daily dose of 400 mg. Treatment lasted six months but the study was terminated prematurely and complete data were not available. We contacted the study investigator and were told that the study was terminated due to the inability to recruit participants into the study despite all reasonable attempts. One or more serious side effects were encountered in six out of nine (66.67%) and one out of five (20%) participants in omalizumab group and placebo group respectively.

AUTHORS' CONCLUSIONS: There is lack of evidence for the efficacy and safety of anti-IgE (omalizumab) therapy in people with cystic fibrosis and allergic bronchopulmonary aspergillosis. There is a need for large prospective randomized controlled studies of anti-IgE therapy in people with cystic fibrosis and allergic bronchopulmonary aspergillosis with both clinical and laboratory outcome measures such as steroid requirement, allergic bronchopulmonary aspergillosis exacerbations and lung function.

39: Jha KA, Nag TC, Kumar V, Kumar P, Kumar B, Wadhwa S, Roy TS. Differential Expression of AQP1 and AQP4 in Avascular Chick Retina Exposed to Moderate Light of Variable Photoperiods. Neurochem Res. 2015 Nov;40(11):2153-66. doi: 10.1007/s11064-015-1698-7. Epub 2015 Aug 19. PubMed PMID: 26285902.

Aquaporins (AQPs) are integral membrane proteins which maintain cellular water and ion homeostasis. Alterations in AQP expression have been reported in rod-dominated rodent retinas exposed to light. In rodents and also in birds, light of moderate intensities (700-2000 lux) damages the retina, though detailed changes were not examined in birds. The aim of our study was to see if light affects cone dominated retinas, which would be reflected in expression levels of AQPs. We examined AQP1 and AQP4 expressions in chick retina exposed to 2000 lux under 12 h light:12 h dark (12L:12D; normal photoperiod), 18L:6D (prolonged photoperiod) and 24L:0D (constant light). Additionally, morphological changes, apoptosis (by TUNEL) and levels of glutamate and GFAP (a marker of injury) in the retina were examined to correlate these with AQP expressions. Constant light caused damage in outer and inner nuclear layer (ONL, INL) and ganglion cell layer (GCL). Also, there were associated increases in GFAP and glutamate levels in retinal extracts. In normal photoperiod, AQP1 was expressed in GCL, outer part of INL and photoreceptor inner segments of. AQP4 was additionally expressed in nerve fiber layer. Immunohistochemistry and Western blotting revealed over all decreased AQP1 and AQP4 expression in constant light condition compared to those in other two groups. The elevated GFAP and glutamate levels might be involved in the reduction of AQPs in constant light group. Such decreases in AQP expressions are perhaps linked with retinal cell damage seen in constant light condition, while their relatively enhanced expression in two other conditions may help in maintaining a normal retinal architecture, indicating their neuroprotective potential.

40: Jha P, Agrawal R, Pathak P, Kumar A, Purkait S, Mallik S, Suri V, Chand Sharma M, Gupta D, Suri A, Sharma BS, Julka PK, Kulshreshtha R, Sarkar C. Genome-wide small noncoding RNA profiling of pediatric high-grade gliomas reveals deregulation of several miRNAs, identifies downregulation of snoRNA cluster HBII-52 and delineates H3F3A and TP53 mutant-specific miRNAs and snoRNAs. Int J Cancer. 2015 Nov 15;137(10):2343-53. doi: 10.1002/ijc.29610. Epub 2015 Jun 3. PubMed PMID: 25994230.

Pediatric high-grade gliomas (HGGs) are highly malignant tumors that remain incurable and relatively understudied. The crucial role of noncoding RNAs (ncRNAs) has been reported in various cancers. However, the study on miRNAs in pediatric HGGs is scant and there is no report till date on the status of other small ncRNAs. Genome-wide microarray analysis was performed to investigate small ncRNA expression in pediatric HGG (n = 14) and compared to adult glioblastoma (GBM) signature. The validation of miRNAs and small nucleolar RNAs (snoRNAs) was done by real-time polymerase chain reaction. TP53 and H3F3A mutation-specific miRNA and snoRNA profiles were generated and analyzed. Pediatric HGGs showed upregulation of miR-17/92 and its paralog clusters (miR106b/25 and miR-106a/363), whereas majority of downregulated miRNAs belonged to miR379/656 cluster (14q32). Unsupervised hierarchical clustering identified two distinct groups. Interestingly, Group 2 with downregulated 14q32 cluster showed better overall survival. The miRNAs unique to pediatric HGG as compared to adult GBM were predicted to affect PDGFR and SMAD2/3 pathways. Similarities were seen between pediatric HGG and TP53 mutant miRNA profiles as compared to wild types. Several

of H3F3A mutation-regulated genes were found to be the targets of H3F3A mutant-specific miRNAs. Remarkably, a significant downregulation of HBII-52 snoRNA cluster was found in pediatric HGGs, and was specific to H3F3A nonmutants. This is the first genome-wide profiling study on miRNAs and snoRNAs in pediatric HGGs with respect to H3F3A and TP53 mutations. The comparison of miRNA profiles of pediatric HGGs and adult GBM reiterates the overlaps and differences as also seen with their gene expression and methylation signatures.

41: Kakkar A, Kaur K, Kumar T, Cherian LB, Kaushal R, Sharma MC, Dhar A, Seth A, Jain D. Pigmented Pheochromocytoma: an Unusual Variant of a Common Tumor. Endocr Pathol. 2015 Nov 17. [Epub ahead of print] PubMed PMID: 26578456.

Pheochromocytoma is a neuroendocrine tumor arising from the adrenal medulla. A number of variants of pheochromocytoma are known; however, pigmented pheochromocytoma is extremely rare, with only few cases reported in literature. We report the cases of two patients with pigmented pheochromocytoma. Case 1 was a 28-year-old female who presented with complaints of breathlessness, palpitations, and anxiety for 5 years, which had worsened over the last 8 months. Computed tomography (CT) abdomen showed a right suprarenal mass. Case 2 was that of an 18-year-old girl who presented with similar complaints and was diagnosed with hypertension. CT abdomen showed bilateral adrenal masses. Urinary vanillyl mandelic acid was raised in both patients. Sections examined from all three tumors showed cells arranged in Zellballen pattern, separated by thin fibrovascular septae. Tumor cells showed moderate to marked nuclear pleomorphism in case 1. Mitoses were, however, not seen. There was no evidence of capsular or vascular invasion. Many of the tumor cells showed intracytoplasmic black pigment, which was positive for Fontana-Masson and was bleach-labile, confirming it as melanin. Hemosiderin deposition was also identified. Large areas of hemorrhagic necrosis were seen in case 1. Tumor cells were immunopositive for chromogranin and synaptophysin, while they were negative for HMB-45. Electron microscopy was performed. A final diagnosis of pigmented pheochromocytoma was rendered in both cases. Pigmented pheochromocytoma is a very rare tumor, which needs to be differentiated from other pigmented tumors like malignant melanoma of adrenal gland and pigmented adrenal adenoma. Histochemistry and immunohistochemistry help in making this distinction.

42: Kalai U, Hadda V, Madan K, Arava S, Ali F, Jain N, Mohan A. A 35-year old woman with productive cough and breathlessness. Lung India. 2015 Nov-Dec;32(6):651-4. doi: 10.4103/0970-2113.168106. PubMed PMID: 26664183; PubMed Central PMCID: PMC4663880.

A 35-year-old lady was seen in the outpatient clinic owing to fever, cough with mucopurulent expectoration, and breathlessness for the duration of 1 month. She had history of similar episodes treated with antibiotics four times during last 2 years. There was no history of recurrent sinusitis, diarrhea, and skin or soft tissue infection. She had no history of diabetes mellitus or steroid intake. She denied any history of facial trauma or dental infection in the past. There was no history of tuberculosis in her or in the family. Radiograph and CT scan of the chest revealed right upper lobe consolidation. Flexible fibreoptic bronchoscopy revealed multiple nodules at opening of right upper lobe bronchus. This clinicopathological conference describes the details of differential diagnoses, difficulties in achieving the final diagnosis and management of such patient.

43: Kalra B, Gupta Y, Kalra S. Pre-conception management of diabetes. J Pak Med Assoc. 2015 Nov;65(11):1242-3. PubMed PMID: 26564304.

Pre-conception management of diabetes implies the optimization of all biological, social, and psychological factors, prior to conception, in a woman with preexisting type 1 or type 2 diabetes. Pre-conception management includes appropriate counseling, investigations, glycaemic and supportive management. This brief communication encapsulates the essential features of pre-conception management.

44: Kalra S, Gupta Y. My name is Eklavya: Indian guidelines are necessary. Indian Heart J. 2015 Nov-Dec;67(6):625-6. doi: 10.1016/j.ihj.2015.09.001. Epub 2015 Oct 26. PubMed PMID: 26702710.

45: Kalra S, Gupta Y. Letter to the Editor: Comment on "The Impact of Chronic Liraglutide Therapy on Glucagon Secretion in Type 2 Diabetes: Insight From the LIBRA Trial" by Kramer C.K., et al. J Clin Endocrinol Metab. 2015 Nov;100(11):L116-7. doi: 10.1210/jc.2015-3494. PubMed PMID: 26544663.

46: Kathiresan P, Sharan P, Nongkynrih B, Mishra AK. Registration and definitions of mental disorders in Swedish survivors of the 2004 southeast Asia tsunami. Lancet Psychiatry. 2015 Nov;2(11):962. doi: 10.1016/S2215-0366(15)00415-0. PubMed PMID: 26544743.

47: Kaur M, Titiyal JS, Sharma N, Chawla R. Successful re-implantation of implantable collamer lens after management of post-ICL methicillin-resistant Staphylococcus epidermidis endophthalmitis. BMJ Case Rep. 2015 Nov 24;2015. pii: bcr2015212708. doi: 10.1136/bcr-2015-212708. PubMed PMID: 26604235.

A 29-year-old man presented with acute onset pain, redness and diminution of vision in the right eye 5 days after implantation of an implantable collamer lens (ICL). A diagnosis of postoperative endophthalmitis was made based on examination and ultrasonography. A vitreous tap was taken and intravitreal antibiotics (vancomycin 1 mg/0.1 ml+piperacillin-tazobactam 225 µg/0.1 mL) were administered. The vitreous culture revealed presence of methicillin-resistant Staphylococcus epidermidis. There was minimal improvement after 48 h; hence the ICL was explanted and repeat injection of intravitreal antibiotics administered. Following this, the endophthalmitis resolved and the patient achieved a corrected distance visual acuity of 20/25 4 weeks later. A repeat implantation of ICL was performed 9 months after the first surgery, following which the patient regained uncorrected distance visual acuity of 20/20. To our knowledge, this is the first case in which an ICL was re-implanted after successful resolution of endophthalmitis.

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48: Khan MF, Nag TC, Igathinathane C, Osuagwu UL, Rubini M. A new method of detecting changes in corneal health in response to toxic insults. Micron. 2015 Nov;78:45-53. doi: 10.1016/j.micron.2015.07.007. Epub 2015 Jul 26. PubMed PMID: 26312735.

The size and arrangement of stromal collagen fibrils (CFs) influence the optical properties of the cornea and hence its function. The spatial arrangement of the collagen is still questionable in relation to the diameter of collagen fibril. In the present study, we introduce a new parameter, edge-fibrillar distance (EFD) to measure how two collagen fibrils are spaced with respect to their closest edges and their spatial distribution through normalized standard deviation of EFD (NSDEFD) accessed through the application of two commercially available multipurpose solutions (MPS): ReNu and Hippia. The corneal buttons were soaked separately in ReNu and Hippia MPS for five hours, fixed overnight in 2.5% glutaraldehyde containing cuprolinic blue and processed for transmission electron microscopy. The electron micrographs were processed using ImageJ user-coded plugin. Statistical analysis was performed to compare the image processed equivalent diameter (ED), inter-fibrillar distance (IFD), and EFD of the CFs of treated versus normal corneas. The ReNu-soaked cornea resulted in partly degenerated epithelium with loose hemidesmosomes and Bowman's collagen. In contrast, the epithelium of the cornea soaked in Hippia was degenerated or lost but showed closely packed Bowman's collagen. Soaking the corneas in both MPS caused a statistically significant decrease in the anterior collagen fibril, ED and a significant change in IFD, and EFD than those of the untreated corneas ($p<0.05$, for all comparisons). The introduction of EFD measurement in the study

directly provided a sense of gap between periphery of the collagen bundles, their spatial distribution; and in combination with ED, they showed how the corneal collagen bundles are spaced in relation to their diameters. The spatial distribution parameter NSDEFD indicated that ReNu treated cornea fibrils were uniformly distributed spatially, followed by normal and Hippia. The EFD measurement with relatively lower standard deviation and NSDEFD, a characteristic of uniform CFs distribution, can be an additional parameter used in evaluating collagen organization and accessing the effects of various treatments on corneal health and transparency.

49: Kohanim S, Palioura S, Saeed HN, Akpek EK, Amescua G, Basu S, Blomquist PH, Bouchard CS, Dart JK, Gai X, Gomes JA, Gregory DG, Iyer G, Jacobs DS, Johnson AJ, Kinoshita S, Mantagos IS, Mehta JS, Perez VL, Pflugfelder SC, Sangwan VS, Sippel KC, Sotozono C, Srinivasan B, Tan DT, Tandon R, Tseng SC, Ueta M, Chodosh J. Stevens-Johnson Syndrome/Toxic Epidermal Necrolysis - A Comprehensive Review and Guide to Therapy. I. Systemic Disease. Ocul Surf. 2016 Jan;14(1):2-19. doi: 10.1016/j.jtos.2015.10.002. Epub 2015 Nov 5. Review. PubMed PMID: 26549248.

The intent of this review is to comprehensively appraise the state of the art with regard to Stevens Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN), with particular attention to the ocular surface complications and their management. SJS and TEN represent two ends of a spectrum of immune-mediated, dermatobullous disease, characterized in the acute phase by a febrile illness followed by skin and mucous membrane necrosis and detachment. The widespread keratinocyte death seen in SJS/TEN is rapid and irreversible, and even with early and aggressive intervention, morbidity is severe and mortality not uncommon. We have divided this review into two parts. Part I summarizes the epidemiology and immunopathogenesis of SJS/TEN and discusses systemic therapy and its possible benefits. We hope this review will help the ophthalmologist better understand the mechanisms of disease in SJS/TEN and enhance their care of patients with this complex and often debilitating disease. Part II (April 2016 issue) will focus on ophthalmic manifestations.

50: Krishnan S, Dhillon PK, Bhadelia A, Schurmann A, Basu P, Bhatla N, Birur P, Colaco R, Dey S, Grover S, Gupta H, Gupta R, Gupta V, Lewis MA, Mehrotra R, McMikel A, Mukherji A, Naik N, Nyblade L, Pati S, Pillai MR, Rajaraman P, Ramesh C, Rath GK, Reithinger R, Sankaranarayanan R, Selvam J, Shanmugam MS, Shridhar K, Siddiqi M, Squiers L, Subramanian S, Travasso SM, Verma Y, Vijayakumar M, Weiner BJ, Reddy KS, Knaul FM. Report from a symposium on catalyzing primary and secondary prevention of cancer in India. Cancer Causes Control. 2015 Nov;26(11):1671-84. doi: 10.1007/s10552-015-0637-x. Epub 2015 Sep 3. PubMed PMID: 26335262; PubMed Central PMCID: PMC4596898.

PURPOSE: Oral, breast, and cervical cancers are amenable to early detection and account for a third of India's cancer burden. We convened a symposium of diverse stakeholders to identify gaps in evidence, policy, and advocacy for the primary and secondary prevention of these cancers and recommendations to accelerate these efforts.
METHODS: Indian and global experts from government, academia, private sector (health care, media), donor organizations, and civil society (including cancer survivors and patient advocates) presented and discussed challenges and solutions related to strategic communication and implementation of prevention, early detection, and treatment linkages.
RESULTS: Innovative approaches to implementing and scaling up primary and secondary prevention were discussed using examples from India and elsewhere in the world. Participants also reflected on existing global guidelines and national cancer prevention policies and experiences.
CONCLUSIONS: Symposium participants proposed implementation-focused research,

advocacy, and policy/program priorities to strengthen primary and secondary prevention efforts in India to address the burden of oral, breast, and cervical cancers and improve survival.

51: Kumar D, Mutreja I, Keshvan PC, Bhat M, Dinda AK, Mitra S. Organically Modified Silica Nanoparticles Interaction with Macrophage Cells: Assessment of Cell Viability on the Basis of Physicochemical Properties. J Pharm Sci. 2015 Nov;104(11):3943-51. doi: 10.1002/jps.24614. Epub 2015 Aug 21. PubMed PMID: 26295279.

Silica nanoparticles have drawn a lot of attention for nanomedicine application, and this is attributed to their biocompatibility and ease of surface functionalization. However, successful utilization of these inorganic systems for biomedical application depends on their physicochemical properties. This study, therefore, discusses in vitro toxicity of organically modified silica nanoparticles on the basis of size, shape, and surface properties of silica nanoparticles. Spherical- and oval-shaped nanoparticles having hydroxyl and amine groups were synthesized in Tween 80 micelles using different organosilanes. Nanoparticles of similar size and morphology were considered for comparative assessment. "As-prepared" nanoparticles were characterized in terms of size, shape, and surface properties using ZetaSizer, transmission electron microscopy, and Fourier transform infrared to establish the above parameters. In vitro analysis in terms of nanoparticle-based toxicity was performed on J-774 (macrophage) cell line using propidium iodide-4',6-diamidino-2-phenylindol and 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide assays. Fluorescent dye-entrapped nanoparticles were used to visualize the uptake of the nanoparticles by macrophage cells. Results from cell studies suggested low levels of toxicity for different nanoparticle formulations studied, therefore are suitable for nanocarrier application for poorly soluble molecules. On the contrary, the nanoparticles of similar size and shape, having amine groups and low net negative charge, do not exhibit any in vitro cytotoxicity.

52: Kumar P, Kumar A, Misra S, Sagar R, Farooq M, Kumari R, Vivekanandhan S, Srivastava AK, Prasad K. Association of transforming growth factor-Î²1 gene C509T,
G800A and T869C polymorphisms with intracerebral hemorrhage in North Indian Population: a case-control study. Neurol Sci. 2015 Nov 30. [Epub ahead of print] PubMed PMID: 26621360.

Transforming growth factor-β1 (TGF-β1) is a multifunctional pro-inflammatory cytokine involved in inflammation and pathogenesis of cerebrovascular disease. As per our knowledge, there is no published study investigating the association between variations within the TGF-β1 gene polymorphisms and risk of intracerebral hemorrhage (ICH). The aim of this study was to investigate the association of the TGF-β1 gene (C509T, G800A and T869C) polymorphisms, and their haplotypes with the risk of ICH in North Indian population. 100 ICH patients and 100 age- and sex-matched controls were studied. Genotyping was performed using SNaPshot method. Conditional logistic regression analysis was used to calculate the strength of association between TGF-β1 gene polymorphisms and risk of ICH. Hypertension, diabetes, dyslipidemia, low socioeconomic status, smoking, physical activity were found to be associated with the risk of ICH. The distribution of C509T, G800A and T869C genotypes was consistent with Hardy-Weinberg Equilibrium (HWE) in the ICH and control group. Adjusted conditional logistic regression analysis showed an independent association of TGF-β1 G800A (OR 9.07; 95 % CI 2.3-35.6; P = 0.002) and T869C (OR 5.1; 95 % CI 1.9-13.2; P = 0.001) with the risk of ICH under dominant model. Haplotype analysis showed that C509-G800-C869 and C509-A800-C869 haplotypes were significantly associated with the increased risk of ICH. C509T and T869C were in strong linkage disequilibrium (D' = 0.53, r (2) = 0.23). Our results suggest that TGF-β1 (G800A, T869C) gene polymorphisms and their haplotypes are significantly associated with the risk of ICH in North

Indian population. Further prospective studies with large sample size are required for independent validation. Our findings could be helpful in identifying individuals at increased risk for developing ICH.

53: Kumar R, Gupta YK, Singh S, Arunraja S. Picrorhiza kurroa Inhibits Experimental Arthritis Through Inhibition of Pro-inflammatory Cytokines, Angiogenesis and MMPs. Phytother Res. 2015 Nov 11. doi: 10.1002/ptr.5509. [Epub ahead of print] PubMed PMID: 26556014.

The present study investigates the anti-arthritic activity of Picrorhiza kurroa (PK), on formaldehyde and adjuvant-induced arthritis (AIA) in rat. Administration of Picrorhiza kurroa rhizome extract (PKRE) significantly inhibited joint inflammation in both animal models. In AIA-induced arthritic rat, treatment with PKRE considerably decreased synovial expression of interleukin-1β (IL-1β), interleukin-6 (IL-6), tumor necrosis factor receptor-1 (TNF-R1) and vascular endothelial growth factor as compared with control. The anti-arthritic activity was found to be well substantiated with significant suppression of oxidative and inflammatory markers as there was decreased malonaldehyde, Nitric oxide, tumor necrosis factor alpha levels accompanied with increased glutathione and superoxide dismutase, catalase activities. Additionally, PKRE significantly inhibited the expression of degrading enzymes, matrix metalloproteinases-3 and matrix metalloproteinases-9 in AIA-induced arthritic rat. Histopathology of paw tissue displayed decreased inflammatory cell infiltration as compared with control. Taken together, these results demonstrated the anti-arthritic activity of PKRE against experimental arthritis, and the underlying mechanism behind this efficacy might be mediated by inhibition of inflammatory mediators and angiogenesis, improvement of the synovium redox status and decreased expression of matrix metalloproteinases. Copyright © 2015 John Wiley & Sons, Ltd.

54: Kumar S, Malik MA, Goswami S, Sihota R, Kaur J. Candidate genes involved in the susceptibility of primary open angle glaucoma. Gene. 2015 Nov 24. pii: S0378-1119(15)01441-9. doi: 10.1016/j.gene.2015.11.032. [Epub ahead of print] Review. PubMed PMID: 26621382.

PURPOSE: Glaucoma is a common disease often identified by high intraocular pressure, characteristic optic neuropathy and vision loss. It is currently a leading cause of blindness worldwide with no known cure. Primary open angle glaucoma (POAG) is the most common type of glaucoma worldwide. It is a multifactorial disease where both genetic as well as environmental factors are involved in the pathogenesis.
RESULTS: Till date, at least 29 genetic loci have been found to be linked to POAG. However, the role of only three underlying genes Myocilin (MYOC), Optineurin (OPTN) and WD repeat Domain 36, (WDR36) is well established. Also, the role of Cytochrome P450, family 1, subfamily B, polypeptide 1 (CYP1B1), Glutathione S-transferase mu 1 (GSTM1) and Neurotrophin (NTF4) has been fairly identified. Association studies have found that 66 loci with 76 genes associated to POAG till date, but even more studies are required to confirm their role in the disease pathology. Gene mutations in various populations have been identified by genetic studies to establish that about 5% of POAG is currently attributed to single-gene or Mendelian forms of glaucoma and others caused by the combined effects of many genetic and environmental risk factors, each of which do not act alone to cause glaucoma.
CONCLUSION: Although the clinical progression of the disease is well defined, the molecular events responsible for glaucoma are poorly understood and thus the etiology of POAG remains a mystery. Despite strong genetic influence in POAG pathogenesis, only a small part of the disease can be explained in terms of genetic aberration. This review is an overview and update on the latest research and progress of genetic studies associated with POAG.

55: Lodha R, Kabra SK. Dengue Infection: Challenges and Way Forward. Indian J Pediatr. 2015 Dec;82(12):1077-9. doi: 10.1007/s12098-015-1946-5. Epub 2015 Nov 21. PubMed PMID: 26590155.

56: Madhusudhan KS, Gamanagatti S, Garg P, Shalimar, Dash NR, Pal S, Peush S, Gupta AK. Endovascular Embolization of Visceral Artery Pseudoaneurysms Using Modified Injection Technique with N-Butyl Cyanoacrylate Glue. J Vasc Interv Radiol. 2015 Nov;26(11):1718-25. doi: 10.1016/j.jvir.2015.07.008. Epub 2015 Aug 18. PubMed PMID: 26296736.

PURPOSE: To evaluate the indications, feasibility, safety, and effectiveness of N-butyl cyanoacrylate (NBCA) with modified injection technique in embolization of visceral artery pseudoaneurysms (PSAs).
MATERIALS AND METHODS: A retrospective evaluation was performed of 31 patients (26 men, 5 women; mean age, 32.6 y) with visceral artery PSAs that were treated with embolization using NBCA with modified sequential injection and flushing technique. The most common indication for using NBCA was preservation of a major feeding artery (n = 18), followed by difficult catheterization secondary to arterial tortuosity (n = 5), failed previous coil embolization (n = 4), and short landing zone for coils (n = 4). NBCA alone was used in 25 patients, and NBCA with coils was used in 6 patients. The patients were followed clinically until discharge and 1 and 3 months after discharge.
RESULTS: The mean amount of NBCA-ethiodized oil (Lipiodol; Guerbet LLC, Villepinte, France) mixture injected was 0.24 mL (range, 0.1-1.1 mL). Embolization with NBCA was technically successful in all (100%) patients. Recurrence was seen in 3 (9.7%; 2-splenic artery; 1-left gastric artery) patients after a mean time of 16.3 days (range, 10-27 d) of initial embolization resulting in clinical success of 90.3%. All 3 patients underwent successful repeat embolization with secondary technical success rate of 100%. Minor (pain) and major (nontarget embolization in 2; microcatheter adhesion and fracture in 1) complications were seen in 3 patients each.
CONCLUSIONS: NBCA is a safe and effective embolization agent when injected with modified technique in treatment of visceral artery PSAs.

57: Malhotra N, Dadhwal V, Sharma KA, Gupta D, Agarwal S, Deka D. The laparoscopic management of Swyer syndrome: Case series. J Turk Ger Gynecol Assoc. 2015 Nov 2;16(4):252-6. doi: 10.5152/jtgga.2015.15061. eCollection 2015. PubMed PMID: 26692777; PubMed Central PMCID: PMC4664218.

Swyer syndrome, also known as 46 XY pure gonadal dysgenesis, is a rare endocrine disorder. Affected individuals are phenotypically female with female genitalia, normal Mullerian structures, absent testicular tissue, and a 46 XY chromosomal constitution. We report a series of eight cases of Swyer syndrome, of which six were managed by laparoscopic gonadectomy. The two other cases had to undergo an exploratory laparotomy in view of their presentation with adnexal masses. Two of the girls were siblings. The chief presenting complaint was primary amenorrhea. Four girls also presented with a history of poor development of secondary sexual characters. The average age at presentation was 16.19±2.85 years. The average height was 158.33 ±4.63 cm, and the average weight was 49.33±8.44 kg. Breast development was either Tanner 2 or 3 in four girls, whereas three girls had a Tanner 1 underdeveloped breasts. Axillary and pelvic hair was sparse in all the girls. The vagina was well canalized in all the girls. Hormonal evaluation revealed hypergonadotropic hypogonadism with a mean follicle-stimulating hormone (FSH) level of 95.81 mIU/L and a mean luteinizing (LH) level of 24.15 mIU/L. Imaging analysis revealed the presence of a small uterus in all the cases, except one. Bilateral ovaries were either not visualized or streak gonads were present. Adnexal mass was detected in two of the six cases with raised carcinoembryonic antigen (CA) 125 levels in one case. Genetic analysis revealed a karyotype of 46 XY in six girls, 46 XY/45 X in one, and the culture repeatedly failed in one

girl. Because of the risk of malignancy, bilateral gonadectomy was performed in all cases. Histopathological analysis revealed that three of the six cases had dysgerminoma. The patients have been started on hormone replacement therapy. Laparoscopy is a minimally invasive modality for the definitive diagnosis and treatment of cases with Swyer syndrome. An early diagnosis of Swyer syndrome is possible during workup for primary amenorrhea before they present with adnexal masses.

58: Mandal PK, Saharan S, Tripathi M, Murari G. Brain Glutathione Levels - A Novel Biomarker for Mild Cognitive Impairment and Alzheimer's Disease. Biol Psychiatry. 2015 Nov 15;78(10):702-10. doi: 10.1016/j.biopsych.2015.04.005. Epub 2015 Apr 14. PubMed PMID: 26003861.

BACKGROUND: Extant data from in vivo animal models and postmortem studies indicate that Alzheimer's disease (AD) pathology is associated with reduction of the brain antioxidant glutathione (GSH), yet direct clinical evidence has been lacking. In this study, we investigated GSH modulation in the brain with AD and assessed the diagnostic potential of GSH estimation in hippocampi (HP) and frontal cortices (FC) as a biomarker for AD and its prodromal stage, mild cognitive impairment (MCI).
METHODS: Brain GSH levels were measured in HP of 21 AD, 22 MCI, and 21 healthy old controls (HC) and FC of 19 AD, 19 MCI, and 28 HC with in vivo proton magnetic resonance spectroscopy. The association between GSH levels and clinical measures of AD progression was tested. Linear regression models were used to determine the best combination of GSH estimation in these brain regions for discrimination between AD, MCI, and HC.
RESULTS: AD-dependent reduction of GSH was observed in both HP and FC ($p < .001$). Furthermore, GSH reduction in these regions correlated with decline in cognitive functions. Receiver operator characteristics analyses evidenced that hippocampal GSH robustly discriminates between MCI and healthy controls with 87.5% sensitivity, 100% specificity, and positive and negative likelihood ratios of 8.76/.13, whereas cortical GSH differentiates MCI and AD with 91.7% sensitivity, 100% specificity, and positive and negative likelihood ratios of 9.17/.08.
CONCLUSIONS: The present study provides compelling in vivo evidence that estimation of GSH levels in specific brain regions with magnetic resonance spectroscopy constitutes a clinically relevant biomarker for MCI and AD.

59: Mishra A, Prakash S, Kaur G, Sreenivas V, Ahuja V, Gupta SD, Makharia GK. Prevalence of celiac disease among first-degree relatives of Indian celiac disease patients. Dig Liver Dis. 2015 Nov 18. pii: S1590-8658(15)00695-7. doi: 10.1016/j.dld.2015.11.007. [Epub ahead of print] PubMed PMID: 26691992.

BACKGROUND: Celiac disease, once thought to be uncommon in Asia, is now recognized in Asian nations as well. We investigated the prevalence of celiac disease in first-degree relatives of celiac disease patients followed in our centre.
METHODS: First-degree relatives were screened prospectively for celiac disease using questionnaire-based interview and anti-tissue transglutaminase antibody. Serology positive first-degree relatives underwent duodenal biopsies. Diagnosis of celiac disease was made based on positive serology and villous abnormality Marsh grade 2 or higher. Human leucocyte antigen DQ2/-DQ8 was also assessed in 127 first-degree relatives.
RESULTS: 434 first-degree relatives of 176 celiac disease patients were prospectively recruited; 282 were symptomatic (64.9%), 58 were positive for serology (13.3%). Seroprevalence was higher in female than in males (19% vs 8.5%; $p=0.001$) and highest in siblings (16.9%) than parents (13.6%) and children (5.9%) of celiac patients ($p=0.055$); 87.4% first-degree relatives were human leucocyte antigen-DQ2/-DQ8 positive. Overall prevalence of celiac disease was 10.9% amongst first-degree relatives.

CONCLUSIONS: The prevalence of celiac disease in first-degree relatives of celiac disease patients was 10.9% in our cohort, and 87% had human leucocyte antigen-DQ2 or -DQ8 haplotype. All first-degree relatives of celiac disease patients should be screen for celiac disease even if asymptomatic or with atypical manifestations.

60: Mohan A, Uniyal A, Chandra S, Ozukum MC, Gaur B, Broor S, Upadhyaya K, Ali A, Upadhyaya A, Guleria R. Significance of viral infections detected by reverse-transcriptase - multiplex PCR on hospital-related outcomes in acute exacerbations of chronic obstructive pulmonary disease. Lung India. 2015 Nov-Dec;32(6):667-8. doi: 10.4103/0970-2113.168098. PubMed PMID: 26664190; PubMed Central PMCID: PMC4663887.

61: Narang R, Saxena A, Ramakrishnan S, Dwivedi SN, Bagga A. Oscillometric Blood Pressure in Indian School Children: Simplified Percentile Tables and Charts. Indian Pediatr. 2015 Nov 9;52(11):939-45. PubMed PMID: 26615340.

BACKGROUND: Data on blood pressure recorded by oscillometric method is limited.
OBJECTIVE: To develop simplified tables and charts of blood pressure recorded by oscillometric method in children.
DESIGN: Cross-sectional.
SETTING: Ballabhgarh, Haryana.
PARTICIPANTS: Healthy school-children.
MAIN OUTCOME MEASURES: Blood pressure measured by oscillometric method.
RESULTS: The study group included 7,761 children (58.4% males) with mean (SD) age of 10.5 (2.8) years. Age and gender were used to create simplified percentile tables and charts, as height was seen to explain very little variability of either systolic or diastolic blood pressure. Formulae for SBP and DBP thresholds for hypertension were derived as [110 + 1.6 x age] and [79 + 0.7 x age], respectively, with 1 mm Hg to be added for females. 95th percentile values suggest simple levels indicating hypertension to be 120/80, 125/85 and 135/90 at ages of 5, 10 and 15 years, respectively.
CONCLUSIONS: Simplified reference tables and charts, formulae for SBP and DBP, and simple convenient thresholds may be useful for rapid screening of hypertension using oscillometric method.

62: Naruse TK, Sakurai D, Ohtani H, Sharma G, Sharma SK, Vajpayee M, Mehra NK, Kaur G, Kimura A. APOBEC3H polymorphisms and susceptibility to HIV-1 infection in an Indian population. J Hum Genet. 2015 Nov 12. doi: 10.1038/jhg.2015.136. [Epub ahead of print] PubMed PMID: 26559750.

Human APOBEC3H (A3H) is a member of APOBEC cytidine deaminase family intensively constraining the HIV-1 replication. A3H is known to be polymorphic with different protein stability and anti-HIV-1 activity in vitro. We recently reported that A3H haplotypes composed of two functional polymorphisms, rs139292 (N15del) and rs139297 (G105R), were associated with the susceptibility to HIV-1 infection in Japanese. To confirm the association of A3H and HIV-1 infection in another ethnic group, a total of 241 HIV-1-infected Indian individuals and ethnic-matched 286 healthy controls were analyzed for the A3H polymorphisms. The frequency of 15del allele was high in the HIV-1-infected subjects as compared with the controls (0.477 vs 0.402, odds ratio (OR)=1.36, P=0.014). Haplotype analysis showed that the frequencies of 15del-105R was high (0.475 vs 0.400, OR=1.36, permutation P=0.037) in the HIV-1-infected subjects, confirming the association of A3H polymorphisms with the susceptibility to HIV-1 infection.Journal of Human Genetics advance online publication, 12 November 2015; doi:10.1038/jhg.2015.136.

63: Nataraj V, Batra A, Rastogi S, Khan SA, Sharma MC, Vishnubhatla S, Bakhshi S. Developing a prognostic model for patients with localized osteosarcoma treated

with uniform chemotherapy protocol without high dose methotrexate: A single-center experience of 237 patients. J Surg Oncol. 2015 Nov;112(6):662-8. doi: 10.1002/jso.24045. Epub 2015 Sep 18. PubMed PMID: 26381138.

BACKGROUND: Studies of baseline prognostic factors in patients with localized osteosarcoma treated without high dose methotrexate are limited.
METHODS: This is single-institutional review of localized osteosarcoma patients treated without high dose methotrexate between June 2003-December 2012. A multivariate analysis of impact of baseline and treatment characteristics on outcome was performed and a prognostic model was developed based solely on baseline factors for predicting event-free survival (EFS) and overall survival (OS).
RESULTS: Of 237 patients with median age of 17 years (range 2-66 yrs), neoadjuvant chemotherapy (NACT) was administered in 220 (92.82%) patients. Post NACT, 200/237 (84.38%) patients underwent surgery. At 30 months median follow-up, 5-year EFS and OS were 36.60 ± 0.03%, and 50.33 ± 0.04%, respectively. In multivariate analysis, baseline factors including duration of symptom >4 months ($P < 0.001$) and good performance status (PS) ($P < 0.001$) predicted better EFS whereas good PS ($P = 0.01$) and normal serum alkaline phosphatase (SAP) ($P = 0.03$) predicted better OS. The 5-year EFS without any risk factor (symptom duration <4 months, PS>1) was 58.7 ± 0.1%, with either one factor 31.5 ± 0.1% and with both factors 21.9 ± 0.1%. The 5-year OS without any risk factor (PS>1, elevated SAP) was 66.9 ± 0.1%, with either one factor 57.9 ± 0.1% and with both factors 25.6 ± 0.1%
CONCLUSIONS: This prognostic model assists in categorizing risk-groups within localized osteosarcoma. J. Surg. Oncol. 2015;112:662-668. © 2015 Wiley Periodicals, Inc.

64: Raghavendhar BS, Ray P, Ratagiri VH, Sharma BS, Kabra SK, Lodha R. Evaluation of chikungunya virus infection in children from India during 2009-2010: A cross sectional observational study. J Med Virol. 2015 Nov 18. doi: 10.1002/jmv.24433. [Epub ahead of print] PubMed PMID: 26581026.

Chikungunya virus, a small (about 60-70 nm diameter), spherical, enveloped, positive, single stranded RNA virus is transmitted by Aedes mosquitoes. After a short period of incubation (3-5 days) symptoms like fever with joint pains and others start appearing. After a gap of 20 years, this virus re-emerged during 2006-2008 in India causing a major outbreak of CHIKV in India. This study was conducted subsequent to the major outbreak in order to evaluate the proportion of chikungunya virus infection in children with suggestive symptoms at three geographical locations of India. Lineage of circulating strains and changes in the E1 structural polypeptide were also determined. Blood samples were collected (in Sodium citrate vacutainer tubes) during 1st June 2009 to 31st May 2010 from children (age 0 ≤ 18 years) suspected to have chikungunya infection, that is, those who presented with sudden onset of fever and/or joint pain, myalgia, and headache from three regions of India, All India Institute of Medical Sciences (AIIMS) in New Delhi, Karnataka Institute of Medical Sciences (KIMS) in Hubli and Sawai Mansingh Medical College (SMS) in Jaipur. Detection of CHIKV antibodies in all acute-phase patient plasma samples was done by IgM ELISA and for samples within ≤5 days of fever, a one-step RT-PCR was carried out on a block thermo-cycler targeting 294 bp region of E1 gene that codes for the viral envelope protein. Comparison of nucleotide and amino acid sequences from few positive samples of two regions was done with African S-27 reference strain using BioEdit. A phylogenetic tree was constructed using MEGA 6 by using the Maximum Likelihood method based on the Kimura 2-parameter model. Out of the 723 acute phase samples tested from three geographical locations of India, Chikungunya virus infection was detected in 249/723 (34.44%) subjects by either IgM Elisa (180/723) or RT-PCR (69/412). RT-PCR was employed in samples collected from children with ≤5 days of fever. Maximum positive cases were from KIMS center,

Hubli. Seasonally, positivity varied with number of enrolled cases at KIMS and SMS. Joint pain was significantly associated with CHIKV positivity (P=0.0156). Presence/absence of certain clinical features varied with age (P<0.05). Sequence analysis revealed four amino acid changes. Phylogenetic analysis with partial sequences of E1 gene from KIMS (n=12) and SMS (n=5) showed that the study isolates clustered with Indian Ocean Lineage strains (IOL) of East, Central and South African (ECSA) type. Evaluation of chikungunya virus infection in children from India during 2009-2010 showed high proportion of CHIKV infection in Southern region of India compared to Northern region. The circulating CHIKV strains were of Indian Ocean Lineage (IOL) group within the East, Central, and South African (ECSA) genotype. However few amino acid changes were observed in E1 polypeptide with reference to African strain S-27 (AF369024). Further studies are needed to know the implications of these changes in vector-pathogen compatibility and host-pathogen interactivity. As a whole, this study highlighted the proportion of CHIKV cases, lineage of causative strain and evolutionary pattern of circulating strain in terms of amino acid changes in the structural protein. J. Med. Virol. © 2015 Wiley Periodicals, Inc.

65: Raghuram S V, Khan WH, Deeba F, Sullender W, Broor S, Parveen S. Retrospective phylogenetic analysis of circulating BA genotype of human respiratory syncytial virus with 60Â bp duplication from New Delhi, India during 2007-2010. Virusdisease. 2015 Dec;26(4):276-81. doi: 10.1007/s13337-015-0283-7. Epub 2015 Nov 2. PubMed PMID: 26645038; PubMed Central PMCID: PMC4663712.

Human respiratory syncytial virus (hRSV) is the most common viral pathogen of acute lower respiratory tract infection in infants and young children. The G protein of hRSV is the trans-membrane glycoprotein that is involved in the attachment of virion with the host cell. The nasopharyngeal aspirates were subjected to RT-PCR for the second hypervariable region of the G protein gene in the present investigation. Sequencing and phylogenetic analysis revealed that all the study strains clustered within the BA genotype. The study sequences further clustered in BA-9, BA-7, BA-10 and BA-12 subgroups within the BA genotype. The G proteins of the study sequences were predicted to encode 312 and 319 amino acids. Three different N-linked glycosylation sites were observed in the deduced 93-100 amino acid region. There were 40-43 serine and threonine residues that are the potential O-linked glycosylation sites. The non-synonymous/synonymous (dN/dS) ratio was less than one indicating negative selection pressure for amino acid change in the analyzed region of the G protein. The present investigation provides information on circulating strains of BA genotype from New Delhi, India. Further elaborate investigations of the BA viruses from different regions of the world will establish the basis of the rapid global spread and evolutionary pattern of this expanding genotype.

66: Rajpoot P, Sharma A, Harikrishnan S, Baruah BJ, Ahuja V, Makharia GK. Adherence to gluten-free diet and barriers to adherence in patients with celiac disease. Indian J Gastroenterol. 2015 Sep;34(5):380-6. doi: 10.1007/s12664-015-0607-y. Epub 2015 Nov 18. PubMed PMID: 26576765.

BACKGROUND: While adherence to gluten-free diet (GFD) is essential for effective control of celiac disease, the level of adherence to GFD may vary. We assessed the level of adherence to GFD and identified barriers to adherence in patients with celiac disease.
METHODS: Both treatment-naive and follow up patients with celiac disease were recruited from a celiac disease clinic. All the patients were assessed for symptom improvement using celiac symptom index (CSI), weight, and hemoglobin; adherence to GFD using detailed dietary history and food-labeled quiz questionnaire; identification of barriers to GFD using a self-administered 36-point questionnaire; and quality of life using a standard 36-item short form (SF36) questionnaire.

RESULTS: Among the patients who were already on GFD, only 53.3 % maintained an excellent or good level of adherence, which increased to 92.4 % at 6 months with repeated counseling. Among the treatment-naive patients, 64.8 % maintained either excellent or good compliance at 1 month after first counseling, which increased to 96.3 % at 6 months with repeated counseling. The most common barrier to adherence was non-availability of GFD. Certain barriers could be modified with repeated counseling and education. Response to GFD, as measured by CSI, gain in weight, and improvement in hemoglobin, was better in those having either excellent or good compliance to GFD compared to those who remained poorly adherent.
CONCLUSIONS: Repeated counseling increased the level of adherence to GFD.

67: Ranjha R, Aggarwal S, Bopanna S, Ahuja V, Paul J. Site-Specific MicroRNA Expression May Lead to Different Subtypes in Ulcerative Colitis. PLoS One. 2015 Nov 16;10(11):e0142869. doi: 10.1371/journal.pone.0142869. eCollection 2015. PubMed PMID: 26569605; PubMed Central PMCID: PMC4646509.

BACKGROUND AND AIM: Ulcerative Colitis (UC) is a type of inflammatory bowel disease, considered as an important disease of gastrointestinal tract having a huge impact on the health of the patient. Prolonged inflammation of colon in UC patients increases the risk of developing colorectal cancer. MiRNA are reported as a connecting link between inflammation and cancer. Differential miRNA expression is reported in Crohn's disease (CD) patients involving various regions of the gastrointestinal tract. The current study was performed to dissect out the site specific miRNA expression in the colon biopsy samples of UC patients from Northern India.
METHODS: Biopsy samples were collected from UC patients and healthy controls from Rectosigmoid Area (RS) and Ascending Colon (AC). MiRNA expression was compared between patients with RS and AC using a microarray platform. Differential expression was further validated by Real Time PCR analysis. Demographic and pathological data of UC -associated CRC patients was collected from the hospital database and analyzed for assessing the site of cancer.
RESULTS: Upon analysis of data generated on a microarray platform and qRT PCR revealed that the expression of six miRNAs hsa-miR-146b-5p, hsa-miR-335-3p, hsa-miR-342-3p, hsa-miR-644b-3p, hsa-miR-491-3p, hsa-miR-4732-3p were downregulated in patients where RS was involved as compared to AC. The expression of hsa-miR-141-3p was upregulated in patients where RS region was involved as compared to AC. Analysis of the registered UC patient's database from the hospital revealed that the site of CRC was predomimnantly the rectosigmoid region of the colon in most of the cases.
CONCLUSION: This is the first study to show the differential expression of miRNA involving different sites of colon in UC patients. Taking our data and previous reports into consideration, we propose that differential miRNA expression during UC perhaps contribute in the development of UC-associated CRC at the rectosigmoid area.

68: Ray B, Agarwal S, Lohani N, Rajeswari MR, Mehrotra R. Structural, conformational and thermodynamic aspects of groove-directed-intercalation of flavopiridol into DNA. J Biomol Struct Dyn. 2015 Nov 24:1-47. [Epub ahead of print] PubMed PMID: 26599132.

Certain plant derived alkaloids and flavonoids have shown propitious cytotoxic acitvity against different types of cancer, having DNA as their main cellular target. Flavopiridol, a semi-synthetic derivative of rohitukine (a natural compound isolated from Dysoxylum binectariferum plant), has attained much attention owing to its anticancer potential against various hematological malignancies and solid tumors. This work focuses on investigating interaction between flavopiridol and DNA at molecular level in order to decipher its underlying mechanism of action, which is not well understood. To define direct influence of flavopiridol on the structural, conformational and thermodynamic aspects of DNA, various spectroscopic and calorimetric techniques have been used. ATR-FTIR and SERS spectral outcomes indicate a novel insight into

groove-directed-intercalation of flavopiridol into DNA via direct binding with nitrogenous bases guanine (C6=O6) and thymine (C2=O2) in DNA groove together with slight external binding to its sugar-phosphate backbone. CD spectral analysis of flavopiridol-DNA complexes suggest perturbation in native B-conformation of DNA and its transition into C-form, which may be localized up to few base pairs of DNA. UV-visible spectroscopic results illustrate dual binding mode of flavopiridol when interacts with DNA having association constant, Ka=1.18×10(4) M(-1). This suggests moderate type of interaction between flavopiridol and DNA. Further, UV melting analysis also supports spectroscopic outcomes. Thermodynamically, flavopiridol-DNA complexation is an enthaply driven exothermic process. This conclusions drawn from this study could be helpful in unveiling mechanism of cyotoxicity induced by flavopiridol that can be further applied in the development of flavonoid-based new chemotherapeutics with more specificity and better efficacy.

69: Rufai SB, Singh A, Kumar P, Singh J, Singh S. Performance of Xpert MTB/RIF Assay in Diagnosis of Pleural Tuberculosis by Use of Pleural Fluid Samples. J Clin Microbiol. 2015 Nov;53(11):3636-8. doi: 10.1128/JCM.02182-15. Epub 2015 Aug 26. PubMed PMID: 26311855; PubMed Central PMCID: PMC4609697.

Prospectively, 162 pleural fluid samples from patients with probable tuberculous pleural effusion were tested by the Xpert MTB/RIF assay and the Bactec MGIT-960 culture system. Of these, 43 (26.5%) were positive in the MGIT-960 culture, and 23 (14.2%), in the Xpert MTB/RIF assay. The sensitivity and specificity of the Xpert MTB/RIF compared with the MGIT-960 culture were 54.8% and 100%, respectively.

70: Saxena A. Adult With Congenital Heart Disease in Developing Country: Scope, Challenges and Possible Solutions. Curr Treat Options Cardiovasc Med. 2015 Nov;17(11):46. doi: 10.1007/s11936-015-0408-8. PubMed PMID: 26369545.

OPINION STATEMENT: Adults with congenital heart disease (CHD) are rapidly increasing in numbers in developed countries where facilities for interventions for CHD are available to infants and children. Over 90 % of children survive to adulthood in these countries. However, less than 50 % of children born in developing countries undergo any form of intervention due to nonavailability of paediatric cardiac centres. Prevalence of CHD in adults is estimated at 3000 per million population in developed countries. Such data is not available from developing countries, but prevalence is likely to be much lower due to early attrition. In these countries, adult population with CHD mostly consists of relatively milder forms of CHD with a very small proportion of post-operated patients. Specialized centres for care of adults with CHD are sparse or nonexistent in most developing countries, although the situation is changing for the better in some of these countries. Major challenges to care of adults with CHD include lack of trained persons, low levels of awareness about the disease and lack of government interest. Sustainable strategies which are practical in the local environment are required to deal with these challenges. An urgent need is to initiate training of cardiologists and other team members, required for optimal care of these patients. Special clinics for adults with CHD, run by the trained staff, can be incorporated into already operational cardiac centres. Formation of expert groups and patient support groups will help to formulate local guidelines and to pursue advocacy with the government. Maintenance of registries for adults with CHD is necessary to generate data on disease burden and to set research priorities. It is likely that care for adult CHD will be delivered in less than ideal settings considering the limited resources available.

71: Saxena A. Evaluation of Acquired Valvular Heart Disease by the Pediatrician: When to Follow, When to Refer for Intervention? Part I. Indian J Pediatr. 2015 Nov;82(11):1033-41. doi: 10.1007/s12098-015-1796-1. Epub 2015 Jul 5. PubMed PMID:

26141545.

Lesions of the heart valves are the commonest acquired cardiac abnormalities seen in pediatric age group. In India, the underlying cause for most valvular diseases is chronic rheumatic heart disease (RHD). The aim of evaluation of patients with valvular heart disease is not only to make a diagnosis, but also to decide the management plan. The pediatrician or physician is usually the first health care provider to whom such patients (or their parents) report. It is therefore imperative that the general physician and pediatricians are well versed with valvular heart diseases. Valvular abnormalities produce characteristic murmurs and a bedside diagnosis is possible in majority. However, further investigations such as X ray of the chest and an ECG are useful tools to refine the diagnosis. Echocardiography is now widely available to most of the patients in India and is very useful for assessing the severity of valve lesion and to identify the underlying etiology. Serial echocardiography is instrumental in deciding the timing of intervention. Mitral valve is most commonly affected followed by aortic; in some patients both valves may be affected. The valve may not close properly, resulting in regurgitation of blood flow in reverse direction or does not open fully (stenosis). In mitral regurgitation (MR), the blood flows in the reverse direction. MR can occur secondary to several causes, but in India, the commonest cause is RHD. Patient may remain asymptpmatic for a long period of time. Symptoms include fatigue, palpitations and later exertional breathlessness. MR typically produces a pansystolic murmur at apex, which may radiate to left axilla. Surgical intervention is reserved for all symptomatic patients with severe MR. Valve repair is preferred over prosthetic valve replacement. Mitral stenosis (MS) is almost always due to RHD. Severe MS results in pulmonary hypertension, right ventricular failure and tricuspid regurgitation. Patients are often symptomatic with dyspnea. Hemoptysis may occur. A typical rumbling mid diastolic murmur is the hallmark of MS. Balloon mitral valvotomy, performed in the catheterization lab, is recommended for severe MS.

72: Saxena A. Evaluation of Acquired Valvular Heart Disease by the Pediatrician: When to Follow, When to Refer for Intervention? Part II. Indian J Pediatr. 2015 Nov;82(11):1042-9. doi: 10.1007/s12098-015-1804-5. Epub 2015 Jul 4. PubMed PMID: 26138578.

Lesions of the heart valves are the commonest acquired cardiac abnormalities seen in pediatric age group. Aortic regurgitation (AR) results from abnormality of the valve leaflets or of the aortic root. Mitral valve lesion may be associated in patients with rheumatic heart disease (RHD). Left ventricle dilates and may develop dysfunction in advanced states. Coronary perfusion also tends to suffer in severe AR. The symptoms develop later and include dyspnea and palpitations. An early diastolic, high pitched murmur, best heard at base of the heart is the hallmark of AR. All symptomatic patients with severe AR and those with left ventricular dysfunction should undergo surgical intervention. Aortic stenosis (AS) is often due to congenitally bicuspid or unicuspid valve. RHD rarely results in AS; associated AR is common in such cases. The most common cause of tricuspid valve involvement is secondary to dilatation of right ventricle and tricuspid annulus resulting in tricuspid regurgitation (TR). Rarely RHD affects the tricuspid valve directly; resulting in stenosis with TR. Involvement of both mitral and aortic valves is almost pathognomonic of RHD etiology. Severity of individual lesions may be difficult to ascertain as proximal valve lesion tends to modify the assessment of the distal valve lesion. It is important to understand that all valvular lesions do not require surgery. Regular secondary prophylaxis with long acting penicillin (for patients with RHD) may retard further progression of valve lesion and must be emphasized to the family. For mild and asymptomatic moderate valvular lesions, periodic monitoring with clinical examination and echocardiography is sufficient. No guidelines are available for timing of intervention in such children; data may have to be extrapolated from published guidelines for adult patients. Various types of surgical options are available for regurgitant valves, but none is ideal. The pediatricians are required to have knowledge of valvular diseases so as to refer

the patient at an appropriate time for intervention or further evaluation. His/ her role is also crucial in follow up of post operated patients, especially those on oral anticoagulation.

73: Saxena A. Editorial: Improving Pediatric Cardiac Care in India - Expanding Role of Pediatricians. Indian J Pediatr. 2015 Dec;82(12):1126-7. doi: 10.1007/s12098-015-1843-y. Epub 2015 Nov 9. PubMed PMID: 26548432.

74: Senguttuvan NB, Ramakrishnan S, Singh S, Mishra S. Percutaneous management of coronary embolism with prosthetic heart valve thrombosis after Bentall's procedure. Indian Heart J. 2015 Nov-Dec;67(6):589-91. doi: 10.1016/j.ihj.2015.10.372. Epub 2015 Nov 17. PubMed PMID: 26702693.

We describe a young male who had undergone a Bentall's procedure seven years ago presenting with acute severe chest pain. He was diagnosed to have coronary embolism from prosthetic heart valve thrombosis. Multiple treatment strategies for the patient were available and we briefly discuss the merits of each of them. We also describe the encountered difficulties in the percutaneous revascularization procedure.

75: Seth R, Das RR, Puri K, Singh P. Clinical Profile and Chemotherapy Response in Children with Hodgkin Lymphoma at a Tertiary Care Centre. J Clin Diagn Res. 2015 Nov;9(11):SC25-30. doi: 10.7860/JCDR/2015/14876.6845. Epub 2015 Nov 1. PubMed PMID: 26674594; PubMed Central PMCID: PMC4668499.

INTRODUCTION: Optimal treatment strategy in children with advance stage Hodgkin Lymphoma (HL) still remains controversial.
AIM: To evaluate the clinical profile and the efficacy of chemotherapy (CT) as a treatment modality in paediatric HL.
MATERIAL AND METHODS: Retrospective case record evaluation of paediatric HL cases over 5 years (October 2005 to October 2010) period.
RESULTS: Thirty five cases (31 boys) with a median age of eight years were studied. 24 cases were <10-year-old, and 23 had late stage disease (stage III to IV). B-symptoms were present in 60%, bulky mediastinal disease in 25.7%, and spleen involvement in 60% cases. None had bone marrow involvement. Most common histological type was nodular sclerosis (28.6%). Most cases received ABVD/COPP or ABVD regimen. Two cases needed BEACOPP due to progressive disease, and 4 needed low-dose involved field radiotherapy (RT). At a mean (SD) extended event-free follow-up of 42.7(±17.1) months, four cases relapsed (one was lost to follow-up, and three were treated with chemotherapy and low-dose involved field RT). None died due to the disease.
CONCLUSION: Present study found systemic CT alone to be an effective therapy in childhood Hodgkin lymphoma. However, a small sample in present study limits the generalisability of these findings. The findings needs to be replicated in larger population, preferably randomized clinical trials, before any firm conclusion can be made.

76: Shah SK, Lodha R. Implications of Vitamin D Deficiency in Critically Ill Children. Indian J Pediatr. 2015 Nov;82(11):977-9. doi: 10.1007/s12098-015-1902-4. Epub 2015 Sep 16. PubMed PMID: 26374738.

77: Shariq M, Kumar N, Kumari R, Kumar A, Subbarao N, Mukhopadhyay G. Biochemical Analysis of CagE: A VirB4 Homologue of Helicobacter pylori Cag-T4SS. PLoS One. 2015 Nov 13;10(11):e0142606. doi: 10.1371/journal.pone.0142606. eCollection 2015. PubMed PMID: 26565397; PubMed Central PMCID: PMC4643968.

Helicobacter pylori are among the most successful human pathogens that harbour a

distinct genomic segment called cag Pathogenicity Island (cag-PAI). This genomic segment codes for a type IV secretion system (Cag-T4SS) related to the prototypical VirB/D4 system of Agrobacterium tumefaciens (Ag), a plant pathogen. Some of the components of Cag-T4SS share homology to that of VirB proteins including putative energy providing CagE (HP0544), the largest VirB4 homologue. In Ag, VirB4 is required for the assembly of the system, substrate translocation and pilus formation, however, very little is known about CagE. Here we have characterised the protein biochemically, genetically, and microscopically and report that CagE is an inner membrane associated active NTPase and has multiple interacting partners including the inner membrane proteins CagV and Cagβ. Through CagV it is connected to the outer membrane sub-complex proteins. Stability of CagE is not dependent on several of the cag-PAI proteins tested. However, localisation and stability of the pilus associated CagI, CagL and surface associated CagH are affected in its absence. Stability of the inner membrane associated energetic component Cagβ, a VirD4 homologue seems to be partially affected in its absence. Additionally, CagA failed to cross the membrane barriers in its absence and no IL-8 induction is observed under infection condition. These results thus suggest the importance of CagE in Cag-T4SS functions. In future it may help in deciphering the mechanism of substrate translocation by the system.

78: Sharma A, Jagadesan P, Chaudhari P, Das S, Bhaskar S, Thakar A, Sharma A, Mohanti BK. Six years analysis of compliance to weekly Concurrent Chemo-Radiotherapy in Head and Neck Carcinomas. Clin Otolaryngol. 2015 Nov 2. doi: 10.1111/coa.12580. [Epub ahead of print] PubMed PMID: 26523400.

OBJECTIVES: To evaluate treatment compliance to weekly concurrent chemo-radiotherapy(CRT) in Head and neck squamous cell carcinoma (HNSCC).
STUDY DESIGN: Retrospective analysis.
SETTING: Tertiary care hospital.
MAIN OUTCOME MEASURES: Overall treatment time (OTT), acute radiation morbidity and treatment completion rate without prolongation of overall treatment time of more than 2weeks.
RESULTS: Three hundred seventy eight head & neck carcinoma patients treated with radical CRT with 70Gy/35fractions of Radiotherapy with weekly cisplatin 40 mg/m(2) were included in the study. Median age was 52 years (range22-77 years), oropharynx was most commonly (54%) involved site, 55% were in stage IV disease. Majority (86%) of patients were able to complete cancer directed therapy, median OTT was 52 days (46-140 days). Nineteen per cent of patients completed treatment without prolongation of OTT beyond 2 days and 68% of patients there completed treatment prolongation of OTT beyond 7 days. Nearly sixty six of the patients experienced grade II or higher acute radiation morbidities.
CONCLUSIONS: Delivery of weekly low dose concurrent CRT is safe and feasible. Two third of the patients experienced treatment prolongation of more than 2 days and 14% could not complete treatment. Results within in the study suggest to a greater need to lay emphasis on continuity of a course of radical CRT for HNSCC.

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79: Sharma BS, Kumar A, Sawarkar D. Endoscopic controlled clipping of anterior circulation aneurysms via keyhole approach: Our initial experience. Neurol India. 2015 Nov-Dec;63(6):874-80. PubMed PMID: 26588620.

INTRODUCTION: Surgical clipping is the most definite treatment for intracranial aneurysms. Its aim is to achieve complete aneurysmal occlusion without compromising the lumen of a parent vessel or perforators, and with minimal brain tissue trauma.
OBJECTIVE: To evaluate the role of endoscopic controlled keyhole approach in clipping of anterior circulation aneurysms.
MATERIALS AND METHODS: In this retrospective study, all consecutive patients undergoing endoscopic controlled clipping via the keyhole approach by the senior author during the last 1 year were included. The cases in which a microscope was

used at any stage of surgery were excluded.
RESULTS: Fourteen patients with anterior circulation aneurysms underwent clipping via the endoscopic keyhole approach (supraorbital and mini-pterional). Seven patients had anterior communicating (ACom) artery aneurysms, four had middle cerebral artery (MCA) bifurcation aneurysms, two had internal carotid artery bifurcation aneurysms, and one had a posterior communicating artery aneurysm. Ten patients presented with subarachnoid hemorrhage (Hunt and Hess grade I in 6 and grade II in 4 patients), whereas the remaining four were incidentally detected. The pre-clipping dissection as well as the clipping were successfully performed endoscopically in all patients. The post-clipping inspection revealed inclusion of a perforator within the clip blades in 2 patients (ACom and MCA bifurcation) that required clip readjustment. There was no residual neck/incompletely clipped aneurysm detected on post-clipping inspection. There was no morbidity directly attributable to the use of keyhole approach or the endoscope.
CONCLUSION: Endoscopic keyhole approach for intracranial aneurysms combines the advantages of both keyhole approach and endoscopy. Endoscopic visualization can help to reduce chances of an incompletely clipped aneurysms/residual neck and the risk of parent vessel/perforator occlusion. However, the use of an endoscope in narrow corridors with space constraints has a learning curve that can be overcome by practicing on cadavers and initially performing several simple endoscopic procedures.

80: Sharma N, Sinha G, Shekhar H, Titiyal JS, Agarwal T, Chawla B, Tandon R, Vajpayee RB. Demographic profile, clinical features and outcome of peripheral ulcerative keratitis: a prospective study. Br J Ophthalmol. 2015 Nov;99(11):1503-8. doi: 10.1136/bjophthalmol-2014-306008. Epub 2015 May 2. PubMed PMID: 25935428.

PURPOSE: To evaluate aetiology, demographic profile, clinical features and outcomes in cases of peripheral ulcerative keratitis (PUK).
METHODS: Seventy-six eyes of 65 consecutive patients with PUK were evaluated in this prospective interventional study over an 18 month period, which were followed for 3 years. The main outcome measures were sociodemographic profile, aetiology, clinical features, management strategies and outcome.
RESULTS: Sixty per cent (39/65) of cases were men and mean age was 45.5±17.9 years. Two-thirds (43/65) of the patients were from rural areas with majority (48/65) belonging to low socioeconomic status. Unilateral disease was present in 83% of patients (54/65) with nasal involvement in 60.5% (46/76) cases. The most common aetiology was Mooren's ulcer (31.5% cases (24/76 eyes)) followed by infection and systemic collagen vascular disease. Meibomian gland dysfunction (17/76: 22.3%) was the most common extraocular association and complicated cataract (12/76:15.7%) was the most common intraocular abnormality. In mild and moderate cases, no significant visual improvement was observed (p=0.085 and p=0.156) as compared with the pretreatment status. Surgical treatment was successful in maintaining anatomical integrity in 83.3% (30/36) eyes. Recurrence of the disease was seen in one eye in moderate disease and three eyes in severe disease.
CONCLUSIONS: Mooren's ulcer followed by collagen vascular diseases and infection are important causes of PUK in developing countries. Surgical intervention in perforated cases had good anatomical success and visual prognosis.

81: Sharma N, Sivalingam V, Maurya S, Prasad A, Khandelwal P, Yadav SC, Patel BK. New insights into in vitro amyloidogenic properties of human serum albumin suggest considerations for therapeutic precautions. FEBS Lett. 2015 Dec 21;589(24 Pt B):4033-8. doi: 10.1016/j.febslet.2015.11.004. Epub 2015 Nov 7. PubMed PMID: 26554815.

Amyloid aggregates display striking features of detergent stability and

self-seeding. Human serum albumin (HSA), a preferred drug-carrier molecule, can also aggregate in vitro. So far, key amyloid properties of stability against ionic detergents and self-seeding, are unclear for HSA aggregates. Precautions against amyloid contamination would be required if HSA aggregates were self-seeding. Here, we show that HSA aggregates display detergent sarkosyl stability and have self-seeding potential. HSA dimer is preferable for clinical applications due to its longer retention in circulation and lesser oedema owing to its larger molecular size. Here, HSA was homodimerized via free cysteine-34, without any potentially immunogenic cross-linkers that are usually pre-requisite for homodimerization. Alike the monomer, HSA dimers also aggregated as amyloid, necessitating precautions while using for therapeutics.

82: Sharma R, Singhal D, Shashni A, Agarwal E, Wadhwani M, Dada T. Comparison of Eye Drop Instillation Before and After Use of Drop Application Strips in Glaucoma Patients on Chronic Topical Therapy. J Glaucoma. 2015 Nov 6. [Epub ahead of print] PubMed PMID: 26550965.

PURPOSE: To evaluate the impact of using drop application strips on eye drop instillation in glaucoma patients on chronic topical ocular hypotensive therapy.
METHODS: A total of 72 patients with primary open-angle glaucoma with an uncorrected visual acuity of 3/60 or more, self-administering topical antiglaucoma medication for >1 year were evaluated. One eye of each patient was included in the study. Patients were instructed to instill 0.5% carboxymethyl cellulose drop in 1 eye. They were then instructed to instill the same drop using the drop application strips.
RESULTS: Mean age of the patients included in the study was 50.39±12.04 years. Before assistance of drop application strips, 35 (48.61%) patients placed the drop into the eye without any contact of the dropper nozzle, and, after application of the drop application strips, 66 (91.67%) patients placed the drop in the eye without any contact (P=0.025). The number of patients putting the first drop of drug into the eye without spilling over the adenexae increased from 30 (41.67%) to 45 (62.5%) after application of the strip (P<0.001). The mean number of drops instilled to get 1 drop into the eye decreased from 2±0.95 to 1.56±0.78 when the drop application strip was used (P<0.001).
CONCLUSIONS: Use of a drop application strip causes a significant decrease in contact of the eye drop bottle nozzle with the eyeball and eyelid, decreases the number of drops instilled to get 1 drop into the eye, and is associated with an overall improvement in eye drop instillation.

83: Sharma SK, Soneja M, Ranjan S. Malignancies in human immunodeficiency virus infected patients in India: Initial experience in the HAART era. Indian J Med Res. 2015 Nov;142(5):563-7. doi: 10.4103/0971-5916.171283. PubMed PMID: 26658591.

BACKGROUND & OBJECTIVES: Limited data are available on malignancies in human immunodeficiency virus (HIV)-infected patients from India. We undertook this study to assess the frequency and spectrum of malignancies in HIV-infected adult patients during the first eight years of highly active antiretroviral therapy (HAART) rollout under the National ART Programme at a tertiary care centre in New Delhi, India.
METHODS: Retrospective analysis of records of patients registered at the ART clinic between May 2005 and December 2013 was done.
RESULTS: The study included 2598 HIV-infected adult patients with 8315 person-years of follow up. Malignancies were diagnosed in 26 patients with a rate of 3.1 (IQR 2.1-4.5) cases per 1000 person-years. The median age for those diagnosed with malignancy was 45 (IQR 36-54) yr, which was significantly (P<0.01) higher compared with those not developing malignancies 35 (IQR 30-40) yr. The median baseline CD4+ T-cell count in patients with malignancy was 135 (IQR 68-269) cells/µl compared to 164 (IQR 86-243) cells/µl in those without malignancies. AIDS-defining cancers (ADCs) were seen in 19 (73%) patients, while

non-AIDS-defining cancers (NADCs) were observed in seven (27%) patients. Malignancies diagnosed included non-Hodgkin's lymphoma (16), carcinoma cervix (3), Hodgkin's lymphoma (2), carcinoma lung (2), hepatocellular carcinoma (1), and urinary bladder carcinoma (1). One patient had primary central nervous system lymphoma. There was no case of Kaposi's sarcoma.
INTERPRETATION & CONCLUSIONS: Malignancies in HIV-infected adult patients were infrequent in patients attending the clinic. Majority of the patients presented with advanced immunosuppression and the ADCs, NHL in particular, were the commonest malignancies.

84: Shrivastava N, Singh P, Seth A, Dogra PN, Kumar R. Device Malfunction with the da Vinci S Surgical System and Impact on Surgical Procedures: Could Device Aging be Responsible? Eur Urol. 2015 Nov;68(5):914-5. doi: 10.1016/j.eururo.2015.07.014. Epub 2015 Jul 22. PubMed PMID: 26209035.

85: Singh HN, Rajeswari MR. Role of long purine stretches in controlling the expression of genes associated with neurological disorders. Gene. 2015 Nov 10;572(2):175-83. doi: 10.1016/j.gene.2015.07.007. Epub 2015 Jul 3. PubMed PMID: 26149656.

Purine repeat sequences present in the human genome are known to act as hotspots for mutations leading to chromosomal imbalances. It is established that large purine repeats (PRs) form stable DNA triplex structure which can inhibit gene expression. Friedreich's ataxia (FRDA), the autosomal neurodegenerative disorder is the only human disease known so far, where a large purine (GAA) repeat in the FXN gene is known to inhibit the expression of frataxin protein. We explored the hidden purine repeats (PRn with n ≥ 200) if any, in the human genome to find out how they are associated with neurological disorders. The results showed 28 PRs, which are mostly restricted to the intronic regions. Interestingly, the transcriptome expression analysis of PR-carrying genes (PR-genes) revealed that most of them are down-regulated in neurological disorders (autism, Alzheimer's disease, schizophrenia, epilepsy, mental retardation, Parkinson's disease, brain tumor) as compared to that in healthy controls. The altered gene expression in brain disorders can be interpreted in terms of a possible expansion of purine repeats leading to formation of very stable DNA-triplex and/or alleviation of the repair enzymes and/or other unknown cellular factors. Interactome analysis identified four PR-genes in signaling pathways whose dysregulation is correlated directly with pathogenesis: GRK5 and KLK6 in Alzheimer's disease; FGF14 in craniosynostosis, mental retardation and FLT1 in neuroferritinopathy. By virtue of being mutational hotspots and their ability to form DNA-triplex, purine repeats in genome disturb the genome integrity and interfere with the transcriptional regulation. However, validation of the disease linkage of PR-genes can be validated using knock-out techniques.

86: Singh I, Faruq M, Padma MV, Goyal V, Behari M, Grover A, Mukerji M, Srivastava AK. Investigation of mitochondrial DNA variations among Indian Friedreich's ataxia (FRDA) patients. Mitochondrion. 2015 Nov;25:1-5. doi: 10.1016/j.mito.2015.08.003. Epub 2015 Aug 29. PubMed PMID: 26321457.

OBJECTIVE: The loss of function mutations (biallelic) in frataxin (FXN) has primarily been implicated in Friedreich's ataxia (FRDA), an autosomal recessive cerebellar ataxia. The protein product of FXN is a nuclear-encoded mitochondrial protein required for the biogenesis of iron- clusters (Fe-S). FRDA is characterized by neurological and non-neurological features which show variable expression in affected individuals. An inverse relationship has been demonstrated between GAA repeat size and age at onset and explains 50% variability of the age at onset. MtDNA variations and haplogroups could be one of the contributory factors to explain the remaining heterogeneity in FRDA, since mitochondrial oxidative stress is thought to be involved in the pathogenesis of FRDA.

METHODS: In our study, targeted resequencing of the D-loop and coding region of mitochondrial genes (ND1-6 and ATP) was conducted in 30 genetically confirmed FRDA patients and 62 ethnicity-matched unrelated healthy controls to identify the functionally important mtDNA variations and to trace the mitochondrial lineage of Indian FRDA patients. Cumulative mitochondrial SNP scores were computed for the identified variations in the functional region and haplogroups were determined by Haplogrep.
RESULTS: A significantly higher load of overall mitochondrial variations (with a trend toward the coding region) per individual was noted among FRDA cases rather than controls (p-value<0.03). A non-synonymous variation (p. L237M) in ND2 was over-represented among FRDA cases (p-value 0.04). This variation has a reported association with longevity and myocardial infarction. We also observed over-representation of H haplogroup (Caucasian mitochondrial haplogroup) among FRDA patients. We have not observed the influence of mitochondrial variations and haplogroup upon age at onset of FRDA.
CONCLUSIONS: Overall, our study identifies the functionally important variations and mitochondrial lineage of Indian FRDA cases and, that underscores the importance of studying the role of mitochondrial genome variations in FRDA.

87: Singh N, Sreenivas V, Sheoran A, Sharma S, Gupta KB, Khuller GK, Mehta PK. Serodiagnostic potential of immuno-PCR using a cocktail of mycobacterial antigen 85B, ESAT-6 and cord factor in tuberculosis patients. J Microbiol Methods. 2016 Jan;120:56-64. doi: 10.1016/j.mimet.2015.11.016. Epub 2015 Nov 25. PubMed PMID: 26625715.

A novel indirect immuno-polymerase chain reaction (I-PCR) assay was developed for the detection of circulating anti-Ag85B (antigen 85B, Rv1886c), anti-ESAT-6 (early secretory antigenic target-6, Rv3875) and anti-cord factor (trehalose 6,6'-dimycolate) antibodies from the sera samples of pulmonary tuberculosis (PTB) and extrapulmonary tuberculosis (EPTB) patients and the results were compared with an analogous enzyme-linked immunosorbent assay (ELISA). We covalently attached the amino-modified reporter DNA to the dithiothreitol (DTT)-reduced anti-human IgG antibody through a chemical linker succinimidyl 4-[N-maleimidomethyl]-cyclohexane-1-carboxylate (SMCC). The detection of cocktail of anti-Ag85B, anti-ESAT-6 and anti-cord factor antibodies was found to be superior to the detection of individual antibodies. The sensitivities of 89.5% and 77.5% with I-PCR and 70.8% and 65% with ELISA were observed in smear-positive and smear-negative PTB cases, respectively with high specificity (90.9%). On the other hand, a sensitivity of 77.5% with I-PCR and 65% with ELISA was observed in EBTB cases. The detection of cocktail of antibodies by I-PCR is likely to improve the utility of existing algorithms for TB diagnosis.

88: Singh N, Pati HP, Tyagi S, Upadhyay AD, Saxena R. Evaluation of the Diagnostic Performance of Fibrin Monomer in Comparison to d-Dimer in Patients With Overt and Nonovert Disseminated Intravascular Coagulation. Clin Appl Thromb Hemost. 2015 Nov 15. pii: 1076029615615959. [Epub ahead of print] PubMed PMID: 26574574.

INTRODUCTION: Disseminated intravascular coagulation (DIC) is a thrombohemorrhagic disorder characterized by hyperactivation of coagulation and secondary fibrinolysis.
AIM: The primary aim of this prospective study was to evaluate and compare the diagnostic performance of fibrin monomer (FM) and d-dimer (DD) for the preemptive diagnosis of DIC in the early stages.
MATERIALS AND METHODS: The patients were categorized into 3 groups: overt DIC, nonovert DIC, and non-DIC based on the International Society of Thrombosis and Hemostasis scoring for overt DIC and the modified nonovert-DIC criteria. Coagulation tests were performed on freshly obtained plasma. Quantitative

determination of FM and DD was done by immunoturbidimetric assay.
RESULTS: Median DD and FM levels in patients with overt DIC were significantly higher in comparison to the other 2 groups. Interestingly, unlike DD, the difference in FM levels was also found to be statistically significant between patients with nonovert DIC and non-DIC patients (P = .0001). At receiver-operator characteristic curve-generated cutoff values, FM had higher specificity and negative predictive value than DD for predicting onset of overt DIC. Multivariate analysis showed that only FM was as an independent predictive factor useful in differentiating patients with overt DIC from non-DIC patients (odds ratio [OR]: 43.3; confidence interval [CI] 4.61-406.68; P value = .001) as well as in distinguishing nonovert DIC from non-DIC patients (OR:18.3; CI 3.45-97.19; P value = .001).
CONCLUSION: Fibrin monomer is a better indicator than DD in distinguishing patients with overt and nonovert DIC from non-DIC patients, raising the possibility for its diagnostic utility as a marker for impending overt DIC, aiding in early diagnosis and prompt therapeutic intervention.

89: Singh N, Usha BR, Malik N, Malhotra N, Pant S, Vanamail P. Three-dimensional sonography-based automated volume calculation (SonoAVC) versus two-dimensional manual follicular tracking in in vitro fertilization. Int J Gynaecol Obstet. 2015 Nov;131(2):166-9. doi: 10.1016/j.ijgo.2015.04.045. Epub 2015 Jul 23. PubMed PMID: 26341173.

OBJECTIVE: To compare the predictive value of manual two-dimensional follicular monitoring with that of sonography-based automated volume calculation (SonoAVC) in routine follicular tracking in in vitro fertilization (IVF).
METHODS: A prospective study was undertaken of women undergoing IVF with controlled ovarian hyperstimulation at a center in New Delhi, India, between October and November 2013. Follicular monitoring was performed both manually and in three dimensions with SonoAVC. On the day of oocyte retrieval, the follicular count and dimensions were calculated with both techniques and correlated with the number of oocytes retrieved.
RESULTS: Overall, 46 patients and 91 ovaries were studied. The mean times taken to perform manual and SonoAVC measurements were 209.2±47.4 s and 156.6±38.6 s, respectively (P<0.001). The mean follicular count was significantly lower when measured manually than with SonoAVC (8.46±3.35 vs 9.91±4.60; P=0.016). However, the mean leading follicle diameter measured manually (19.45±2.46mm) was similar to both the mean diameter (21.12±2.65mm) and the volume-based diameter (19.56±2.16mm) measured with SonoAVC.
CONCLUSION: Three-dimensional SonoAVC could be a useful adjunct for follicular monitoring, with a significant reduction in time and a good correlation with manual counts. However, further studies with larger sample sizes are required.

90: Singh P, Arora S, Lal S, Strand TA, Makharia GK. Risk of Celiac Disease in the First- and Second-Degree Relatives of Patients With Celiac Disease: A Systematic Review and Meta-Analysis. Am J Gastroenterol. 2015 Nov;110(11):1539-48. doi: 10.1038/ajg.2015.296. Epub 2015 Sep 29. Review. PubMed PMID: 26416192.

OBJECTIVES: First-degree relatives (FDRs) of patients with celiac disease (CD) are at high risk for CD and prevalence among them varies from 1.6 to 38%. The risk of having CD among FDRs if the FDR is sister, brother, mother, father, son, or daughter of index patient with CD is not known. We conducted a meta-analysis and calculated pooled prevalence of CD among FDRs, second-degree relatives (SDRs), and specific relations with index patient.
METHODS: On search of literature, 2,259 articles appeared of which 54 articles were included in this meta-analysis. Diagnosis of CD was based on standard criteria.

RESULTS: Pooled prevalence of CD was 7.5% (95% confidence interval (CI) 6.3%, 8.8%) in 10,252 FDRs and 2.3% (95% CI 1.3%, 3.8%) in 642 SDRs. Pooled prevalence of CD was highest in siblings (8.9%), followed by offsprings (7.9%) and parents (3.0%). Female FDRs had higher prevalence than male FDRs (8.4% vs. 5.2%, P=0.047). While sisters and daughters of index patient had the highest risk of having CD (1 in 7 and 1 in 8, respectively), the risk was 1 in 13 in sons, 1 in 16 in brothers, 1 in 32 in mothers, and 1 in 33 in fathers. There were also differences in the pooled prevalence of CD in FDRs according to their geographic location.
CONCLUSIONS: Pooled prevalence of CD among FDRs is 7.5% and varies considerably with their relationship with the index patient. The risk of CD in FDRs also varies according to gender and geographical location.

91: Singh P, Singh S, Mirdha BR, Guleria R, Agarwal SK, Mohan A. Evaluation of Loop-Mediated Isothermal Amplification Assay for the Detection of Pneumocystis jirovecii in Immunocompromised Patients. Mol Biol Int. 2015;2015:819091. doi: 10.1155/2015/819091. Epub 2015 Nov 19. PubMed PMID: 26664746; PubMed Central PMCID: PMC4668309.

Pneumocystis pneumonia (PCP) is one of the common opportunistic infection among HIV and non-HIV immunocompromised patients. The lack of a rapid and specific diagnostic test necessitates a more reliable laboratory diagnostic test for PCP. In the present study, the loop-mediated isothermal amplification (LAMP) assay was evaluated for the detection of Pneumocystis jirovecii. 185 clinical respiratory samples, including both BALF and IS, were subjected to GMS staining, nested PCR, and LAMP assay. Of 185 respiratory samples, 12/185 (6.5%), 41/185 (22.2%), and 49/185 (26.5%) samples were positive by GMS staining, nested PCR, and LAMP assay, respectively. As compared to nested PCR, additional 8 samples were positive by LAMP assay and found to be statistically significant ($p < 0.05$) with the detection limit of 1 pg. Thus, the LAMP assay may serve as a better diagnostic tool for the detection of P. jirovecii with high sensitivity and specificity, less turn-around time, operational simplicity, single-step amplification, and immediate visual detection.

92: Singh Y, Mirdha BR, Guleria R, Khalil S, Panda A, Chaudhry R, Mohan A, Kabra SK, Kumar L, Agarwal SK. Molecular detection of DHFR gene polymorphisms in Pneumocystis jirovecii isolates from Indian patients. J Infect Dev Ctries. 2015 Nov 30;9(11):1250-6. doi: 10.3855/jidc.6810. PubMed PMID: 26623634.

INTRODUCTION: Pneumocystis pneumonia (PCP) is an opportunistic life-threatening infection, especially for immunocompromised individuals. A trimethoprim-sulfamethoxazole (TMP-SMX) combination is commonly used for the treatment of PCP, targeting both dihydrofolate reductase (DHFR) and dihydropteroate synthase (DHPS) enzymes. Several studies have already shown that polymorphisms in the DHPS gene are associated with drug resistance. The present study analyzed DHFR gene polymorphisms in Pneumocystis jirovecii recovered from clinical samples from patients admitted to a tertiary care health center in New Delhi, India.
METHODOLOGY: Detection of P. jirovecii was performed using Gomori methenamine silver staining (GMS) and nested polymerase chain reaction (PCR) assay targeting the mitochondrial large subunit ribosomal RNA (mt LSU rRNA) gene. The DHFR gene was amplified using nested PCR protocol and was sequenced for detection of polymorphisms.
RESULTS: Of 180 clinical samples, only 4% (7/180) were positive by GMS staining, and 10% (18/180) were positive by mt LSU rRNA PCR assay. Of these 18 positive samples, only 77% (14/18) were amplified by the DHFR gene PCR assay. A total of 16 nucleotide substitutions were observed in 42% (6/14) samples targeted for the DHFR gene, of which 8 nucleotide substitutions were synonymous and the rest were non-synonymous.
CONCLUSIONS: The DHFR gene mutations found in this study may possibly indicate an association of process likely to contribute to therapeutic failure or an

evolutionary process, and warrant continuous monitoring.

93: Sinha AC, Singh PM. Optimal Drug Dosing in the Obese--Still Many Years Ahead. Obes Surg. 2015 Nov;25(11):2159-60. doi: 10.1007/s11695-015-1826-0. PubMed PMID: 26224374.

94: Sinha R, Maitra S. The Effect of Peribulbar Block with General Anesthesia for Vitreoretinal Surgery in Premature and Ex-Premature Infants with Retinopathy of Prematurity. A A Case Rep. 2015 Nov 9. [Epub ahead of print] PubMed PMID: 26556110.

Safe anesthesia in premature and ex-premature infants remains a challenge for the anesthesiologist. These infants are at risk of postoperative apnea, desaturation, and bradycardia after general anesthesia. We describe our experience of peribulbar block in 24 infants who underwent vitreoretinal surgery for retinopathy of prematurity. None of our patients had postoperative apnea or required neonatal intensive care admission. A possible opioid and muscle relaxant-sparing effect of peribulbar block might have reduced the incidence of postoperative complications.

95: Som D, Tak M, Setia M, Patil A, Sengupta A, Chilakapati CM, Srivastava A, Parmar V, Nair N, Sarin R, Badwe R. A grid matrix-based Raman spectroscopic method to characterize different cell milieu in biopsied axillary sentinel lymph nodes of breast cancer patients. Lasers Med Sci. 2016 Jan;31(1):95-111. doi: 10.1007/s10103-015-1830-6. Epub 2015 Nov 9. PubMed PMID: 26552923.

Raman spectroscopy which is based upon inelastic scattering of photons has a potential to emerge as a noninvasive bedside in vivo or ex vivo molecular diagnostic tool. There is a need to improve the sensitivity and predictability of Raman spectroscopy. We developed a grid matrix-based tissue mapping protocol to acquire cellular-specific spectra that also involved digital microscopy for localizing malignant and lymphocytic cells in sentinel lymph node biopsy sample. Biosignals acquired from specific cellular milieu were subjected to an advanced supervised analytical method, i.e., cross-correlation and peak-to-peak ratio in addition to PCA and PC-LDA. We observed decreased spectral intensity as well as shift in the spectral peaks of amides and lipid bands in the completely metastatic (cancer cells) lymph nodes with high cellular density. Spectral library of normal lymphocytes and metastatic cancer cells created using the cellular specific mapping technique can be utilized to create an automated smart diagnostic tool for bench side screening of sampled lymph nodes. Spectral library of normal lymphocytes and metastatic cancer cells created using the cellular specific mapping technique can be utilized to develop an automated smart diagnostic tool for bench side screening of sampled lymph nodes supported by ongoing global research in developing better technology and signal and big data processing algorithms.

96: Sudharsan S, Subhapradha N, Seedevi P, Shanmugam V, Madeswaran P, Shanmugam A, Srinivasan A. Antioxidant and anticoagulant activity of sulfated polysaccharide from Gracilaria debilis (Forsskal). Int J Biol Macromol. 2015 Nov;81:1031-8. doi: 10.1016/j.ijbiomac.2015.09.046. Epub 2015 Sep 28. PubMed PMID: 26424206.

Sulfated polysaccharide was isolated from Gracilaria debilis and purified through gel chromatography and their molecular weight was determined through AGE and PAGE. The total sugars in the crude, fractionated and purified polysaccharide were estimated as 52.65%, 59.70% and 67.60%, respectively. The ash and moisture content of crude and purified polysaccharide was found to be 14.2% and 23.5% and the polysaccharide was free from protein contamination. The sulfate and uronic acid contents in the crude, fractionated and purified were estimated as 14.08%, 15.33% and 16.01% and 10.12%, 13.56%, 16.70%. The elemental composition including carbon (crude - 23.12%, purified - 21.05%), hydrogen (crude - 3.4%, purified -

4.13%) and nitrogen (crude - 1.22%, purified - 0.56%) were also analyzed. The anticoagulant activity of the sulfated polysaccharide through APTT and PT was estimated at 14.11 and 8.23IU/mg. The purified polysaccharide with the molecular mass of 20kDa showed highest antioxidant activity (38.57%, 43.48% and 38.88%) in all the assays tested such as DPPH hydroxyl radical, superoxide radical, hydroxyl radical scavenging activities and the structural property was analyzed through FT-IR and (1)H NMR spectrum. The results together suggest that the isolated low molecular weight sulfated polysaccharide will demonstrate as a enormously available alternative natural source of antioxidant for industrial uses.

97: Talwar S, Bansal A, Choudhary SK, Kothari SS, Juneja R, Saxena A, Airan B. Results of Fontan operation in patients with congenitally corrected transposition of great arteriesâ€ . Interact Cardiovasc Thorac Surg. 2015 Nov 20. pii: ivv316. [Epub ahead of print] PubMed PMID: 26590305.

OBJECTIVES: The purpose of this study was to examine the outcome after the Fontan operation in patients with congenitally corrected transposition of great arteries with ventricular septal defect and pulmonary stenosis (ccTGA-VSD-PS).
METHODS: Patient- and procedure-related variables were analysed in 23 patients with ccTGA-VSD-PS operated between April 2003 and April 2015.
RESULTS: The mean age was 14.07 ± 6.38 years (range 4-23, median 11 years), with 82% patients being male (19/23). Dextrocardia was present in 52% (12/23) of patients and left superior vena cava was present in 26% (6/23) of patients. Most patients underwent extracardiac Fontan (n = 18), whereas in 5 patients lateral tunnel Fontan was performed. All patients received polytetrafluoroethylene grafts of size 18-22 mm for extracardiac Fontan. In 8 patients, conduits were fenestrated to reduce the intraconduit pressure. The mean hospital stay was 15.7 ± 11.24 days (5-60, median 14 days). The most common cause for prolonged hospital stay was pleural effusion in 5 patients (21.7%). One 7-year old patient developed conduit thrombosis, intracranial bleed, seizures and died. The mean follow-up was 46.4.4 ± 32.2 months (range 8-142, median 42 months) and was available for 21 patients (91.3%). There was 1 mid-term non-cardiac death after 3 years of operation. Of the total, 85.7% (18/21) patients in follow-up are in NYHA class I, whereas 3 patients are in class II. The actuarial event-free survival rate was 81.8 ± 13.2% at 10 years.
CONCLUSIONS: In ccTGA-VSD-PS patients with non-routable VSD and in those with difficult options for biventricular repair, the Fontan approach provides satisfactory mid-term palliation.

98: Talwar S, Kumar MV, Bhoje A, Choudhary SK, Airan B. Atrial Switch Operation in a Late Presenter With d-Transposed Great Arteries, Juxtaposed Atrial Appendages, and Bilateral Superior Caval Veins. World J Pediatr Congenit Heart Surg. 2015 Nov 19. pii: 2150135115588336. [Epub ahead of print] PubMed PMID: 26586307.

A 26-year-old patient with d-transposition of great arteries (d-TGA), bilateral superior vena cava, and juxtaposed atrial appendages underwent a successful atrial switch operation. It is extremely uncommon to encounter a previously unpalliated patient with d-TGA at this age. Unusual morphologic features in this patient necessitated technical modifications to successfully accomplish an atrial switch procedure.

99: Talwar S, Kumar R, Bhoje A, Choudhary SK, Airan B. Anatomical Repair of an Unusual Combination of Tetralogy of Fallot and Atrioventricular Septal Defect With Unroofed Coronary Sinus. J Card Surg. 2015 Nov;30(11):849-52. doi:

10.1111/jocs.12638. Epub 2015 Sep 17. PubMed PMID: 26377366.

A 30-month-old female was admitted with recurrent spells and severe cyanosis. Preoperative echocardiography was diagnostic of tetralogy of Fallot with an atrial septal defect of the primum type, unroofed coronary sinus, and a left superior vena cava draining into the left atrium. At surgery the patient was found to have a complete atrioventricular septal defect in addition to these anomalies. Complete anatomical correction was achieved through the right atrial approach.

100: Talwar S, Kothari SS, Choudhary SK, Airan B. Stenting of ventricular septal defects to retrain the left ventricle in patients with transposition of the great arteries and restrictive ventricular septal defect. J Thorac Cardiovasc Surg. 2015 Nov;150(5):1364-6. doi: 10.1016/j.jtcvs.2015.07.093. Epub 2015 Aug 1. PubMed PMID: 26318352.

101: Tewari N, Singh N, Singh S, Agarwal N, Gupta NK. Corpus alienum on hard palate - An unusual "misdiagnosis" of foreign body: A case report. Int J Pediatr Otorhinolaryngol. 2015 Dec;79(12):2463-5. doi: 10.1016/j.ijporl.2015.10.020. Epub 2015 Nov 3. PubMed PMID: 26545792.

Corpus alienum or foreign body on hard palate is a rare presentation and often associated with a scare secondary to misdiagnosis. The potential dangers of respiratory obstruction, mucosal tear, nasopharyngeal inflammation and gastro-intestinal bleeding make these non-invasive foreign bodies, life threatening. A case report of a three year old girl with a 2.5cm×2cm plastic sticker lodged on hard palate for four months and misdiagnosed as salivary gland tumor has been reported along with a literature review.

102: Thakur V, Asad M, Jain S, Hossain ME, Gupta A, Kaur I, Rathore S, Ali S, Khan NJ, Mohmmed A. Eps15 homology domain containing protein of Plasmodium falciparum (PfEHD) associates with endocytosis and vesicular trafficking towards neutral lipid storage site. Biochim Biophys Acta. 2015 Nov;1853(11 Pt A):2856-69. doi: 10.1016/j.bbamcr.2015.08.007. Epub 2015 Aug 15. PubMed PMID: 26284889.

The human malaria parasite, Plasmodium falciparum, takes up numerous host cytosolic components and exogenous nutrients through endocytosis during the intra-erythrocytic stages. Eps15 homology domain-containing proteins (EHDs) are conserved NTPases, which are implicated in membrane remodeling and regulation of specific endocytic transport steps in eukaryotic cells. In the present study, we have characterized the dynamin-like C-terminal Eps15 homology domain containing protein of P. falciparum (PfEHD). Using a GFP-targeting approach, we studied localization and trafficking of PfEHD in the parasite. The PfEHD-GFP fusion protein was found to be a membrane bound protein that associates with vesicular network in the parasite. Time-lapse microscopy studies showed that these vesicles originate at parasite plasma membrane, migrate through the parasite cytosol and culminate into a large multi-vesicular like structure near the food-vacuole. Co-staining of food vacuole membrane showed that the multi-vesicular structure is juxtaposed but outside the food vacuole. Labeling of parasites with neutral lipid specific dye, Nile Red, showed that this large structure is neutral lipid storage site in the parasites. Proteomic analysis identified endocytosis modulators as PfEHD associated proteins in the parasites. Treatment of parasites with endocytosis inhibitors obstructed the development of PfEHD-labeled vesicles and blocked their targeting to the lipid storage site. Overall, our data suggests that the PfEHD is involved in endocytosis and plays a role in the generation of endocytic vesicles at the parasite plasma membrane, that are subsequently targeted to the neutral lipid generation/storage site localized near the food

vacuole.

103: Tiwari P, Thomas MK, Pathania S, Dhawan D, Gupta YK, Vishnubhatla S, Bakhshi S. Serum Creatinine Versus Plasma Methotrexate Levels to Predict Toxicities in Children Receiving High-dose Methotrexate. Pediatr Hematol Oncol. 2015 Nov;32(8):576-84. doi: 10.3109/08880018.2015.1087612. Epub 2015 Nov 11. PubMed PMID: 26558505.

Facilities for measuring methotrexate (MTX) levels are not available everywhere, potentially limiting administration of high-dose methotrexate (HDMTX). We hypothesized that serum creatinine alteration after HDMTX administration predicts MTX clearance. Overall, 122 cycles in 50 patients of non-Hodgkin lymphoma or acute lymphoblastic leukemia aged ≤18 years receiving HDMTX were enrolled prospectively. Plasma MTX levels were measured at 12, 24, 36, 48, 60, and 72 hours; serum creatinine was measured at baseline, 24, 48, and 72 hours. Correlation of plasma MTX levels with creatinine levels and changes in creatinine from baseline (Δ creatinine) were evaluated. Plasma MTX levels at 72 hours showed positive correlation with serum creatinine at 48 hours (P = .011) and 72 hours (P = .013) as also Δ creatinine at 48 hours (P = .042) and 72 hours (P = .045). However, cut-off value of either creatinine or Δ creatinine could not be established to reliably predict delayed MTX clearance. Greater than 50% Δ creatinine at 48 and 72 hours significantly predicted grade 3/4 leucopenia (P = .036 and P = .001, respectively) and thrombocytopenia (P = .012 and P = .009, respectively) but not mucositis (P = .827 and P = .910, respectively). Delayed MTX elimination did not predict any grade 3/4 toxicity. In spite of demonstration of significant correlation between serum creatinine and Δ creatinine with plasma MTX levels at 72 hours, cut-off value of either variable to predict MTX delay could not be established. Thus, either of these cannot be used as a surrogate for plasma MTX estimation. Interestingly, Δ creatinine effectively predicted hematological toxicities, which were not predicted by delayed MTX clearance.

104: Tiwari V, Khan SA, Kumar A, Poudel R, Kumar VS. Functional improvement after hip arthroscopy in cases of active paediatric hip joint tuberculosis: a retrospective comparative study vis-Ã -vis conservative management. J Child Orthop. 2015 Dec;9(6):495-503. doi: 10.1007/s11832-015-0705-5. Epub 2015 Nov 16. PubMed PMID: 26573054; PubMed Central PMCID: PMC4661146.

PURPOSE: Tuberculosis of the hip joint is a significant cause of preventable disability, especially in children. The aim of our study was to evaluate the functional results of hip arthroscopy done in a cohort of patients with hip joint tuberculosis and to compare them with the outcome of conservatively managed cases.
METHODS: This was a retrospective cohort study in which we evaluated the records of 22 hip arthroscopies performed in known cases of tuberculosis of the hip joint in children less than 12 years of age. A note of the demographic and clinical parameters like age, duration of symptoms, stage of the disease, time period of follow-up, any complications during surgery, and pre- and post-operative modified Harris hip score (MHHS) was made in all cases. We compared the results with an age-matched cohort of 44 children with hip joint tuberculosis who were treated non-operatively with anti-tuberculosis therapy and traction in the same tertiary care institute.
RESULTS: The arthroscopic findings in our series included synovitis, chondral erosions of the femoral head and/or acetabulum, pannus formation over the femoral head and/or acetabulum, and labral tears. The various arthroscopic procedures which were done included joint lavage, synovectomy, labral debridement and cheilectomy. The mean follow-up was 45 months, with the minimum being 36 months. There was a statistically significant change in the mean MHHS after hip arthroscopic procedures ($p < 0.001$); the difference in the mean post- and pre-operative MHHS was independent of age, stage or duration of follow-up. There was a statistically significant difference ($p < 0.05$) between the magnitude of

improvement in MHHS after hip arthroscopy and that after conservative management.
CONCLUSIONS: Arthroscopy of the hip joint in children in cases of tuberculosis can serve as an emerging therapeutic modality. It is an effective and safe minimally invasive procedure, and helps in improving the functional outcome in early disease.

105: Tripathi A, Kabra SK, Sachdev HP, Lodha R. Mortality and Other Outcomes in Relation to First Hour Fluid Resuscitation Rate: A Systematic Review. Indian Pediatr. 2015 Nov 8;52(11):965-72. PubMed PMID: 26615345.
OBJECTIVE: To determine the effect of different regimen of first hour fluid administration rates on mortality and severe consequences of impaired circulation in 2 to 60 months old children with impaired circulation.
DESIGN: Systematic review of randomized controlled trials.
DATA SOURCES: Various databases including PubMed, Cochrane Library and EMBASE were searched.
RESULTS: We found only two relevant trials; one was excluded as there was no comparator arm. Only one study (The FEAST Trial) compared boluses with maintenance fluid alone in children with severe febrile illness and one or more signs of impaired perfusion. The 48 hour mortality was more in the bolus group (RR 1.45, 95% CI 1.13,1.86). The quality of evidence is rated as moderate. For the children who met the WHO criteria for shock (severely impaired circulation) (n=65 children), those receiving boluses had higher mortality (RR 2.40, 95% CI 0.84, 6.88); the quality of evidence was rated as very low.
CONCLUSION: A single large randomized controlled trial conducted in low-resource settings indicates that administration of fluid bolus is associated with higher mortality in comparison to the maintenance fluids alone in children with severe febrile illness and one or more signs of impaired perfusion. The findings are not generalizable to contexts with different severity of and different causes of shock and in centers with better facilities. There is urgent need for research in different settings to determine the optimal rate of fluid resuscitation in the first hour in children presenting with impaired circulation, particularly with severely impaired circulation.

106: Vallonthaiel AG, Kakkar A, Singh A, Dogra PN, Ray R. Adult granulosa cell tumor of the testis masquerading as hydrocele. Int Braz J Urol. 2015 Nov-Dec;41(6):1226-31. doi: 10.1590/S1677-5538.IBJU.2014.0187. PubMed PMID: 26742984.

Adult testicular granulosa cell tumor is a rare, potentially malignant sex cord-stromal tumor, of which 30 cases have been described to date. We report the case of a 43-year-old male who complained of a left testicular swelling. Scrotal ultrasound showed a cystic lesion, suggestive of hydrocele. However, due to a clinical suspicion of a solid-cystic neoplasm, a high inguinal orchidectomy was performed, which, on pathological examination, was diagnosed as adult granulosa cell tumor. Adult testicular granulosa cell tumors have aggressive behaviour as compared to their ovarian counterparts. They may rarely be predominantly cystic and present as hydrocele. Lymph node and distant metastases have been reported in few cases. Role of MIB-1 labelling index in prognostication is not well defined. Therefore, their recognition and documentation of their behaviour is important from a diagnostic, prognostic and therapeutic point of view.

107: Vallonthaiel AG, Kakkar A, Singh MK, Ramam M. Ochronosis with subtle histological findings. Indian J Dermatol Venereol Leprol. 2015 Nov-Dec;81(6):623-4. doi: 10.4103/0378-6323.168349. PubMed PMID: 26515848.

108: Vallonthaiel AG, Kaur K, Jain D, Singh G, Tiwari D, Pramanik R, Singh P, Sharma MC. Ewing Sarcoma of Urinary Bladder Showing EWSR1 Rearrangement on FISH Analysis and Unique Response to Chemotherapy. Clin Genitourin Cancer. 2015 Nov 11. pii: S1558-7673(15)00300-6. doi: 10.1016/j.clgc.2015.11.001. [Epub ahead of print] PubMed PMID: 26684812.

109: Verma M, Arora A, Malviya S, Nehra A, Sagar R, Tripathi M. Do expressed emotions result in stigma? A potentially modifiable factor in persons with epilepsy in India. Epilepsy Behav. 2015 Nov;52(Pt A):205-11. doi: 10.1016/j.yebeh.2015.08.008. Epub 2015 Oct 8. PubMed PMID: 26453891.
OBJECTIVE: Feeling stigmatized or having comorbid depression in a PWE may significantly influence epilepsy care and treatment. An important contributory factor to this can be the expressed emotions (EEs) from family, friends, or society. The present study aimed at understanding the influence of EEs, as exhibited by close relatives, on the perception of stigma and comorbid depression experienced by PWEs.
METHOD: Eighty PWEs aged 18years and above, both genders, visiting neurology OPD in AIIMS Hospital, were recruited. Using the PHQ-09, we subdivided them into Group I (PWEs with comorbid depression) and Group II (PWEs without comorbid depression), followed by administration of Levels of Expressed Emotions Scale and Stigma Scale for Epilepsy, respectively.
RESULTS: The comparative analysis, using independent t-test (for categorical data), Pearson's correlation (for continuous data), and multivariate regression analysis, reflected significant influence of EEs on depression and stigma, with more than 20% of the participants reporting comorbid depression, out of which more than 50% further expressed feelings of inferiority or disgrace due to the ways in which family or society discriminated them from healthy persons, thereby highlighting a greater associations of high EEs as opposed to low EEs from key individuals on patients' perception of stigma or feeling of depression.
CONCLUSION: The result suggested that EEs from a relative might go unnoticed but may significantly overwhelm the patient, thereby making him succumb to depression or feeling stigmatized. The analysis of such a clinical profile and relationship between EEs and perceived stigma/depression may help us understand the pattern of attribution styles adopted by PWEs, thereby utilizing it further for enhancing the efficacy of cognitive-behavioral therapy for facilitating sustained recovery and improved quality of life for PWEs.