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List of publications of AIIMS, New Delhi for the month of MARCH, 2015
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1: Agarwal T, Bandivadekar P, Satpathy G, Sharma N, Titiyal JS. Detection of fungal hyphae using smartphone and pocket magnifier: going cellular. Cornea. 2015 Mar;34(3):355-7. doi: 10.1097/ICO.0000000000000359. PubMed PMID: 25611399.

PURPOSE: The aim of this study was to detect fungal hyphae in a corneal scraping sample using a cost-effective assembly of smartphone and pocket magnifier.

METHODS: In this case report, a tissue sample was obtained by conventional corneal scraping from a clinically suspicious case of mycotic keratitis. The smear was stained with Gram stain, and a 10% potassium hydroxide mount was prepared. It was imaged using a smartphone coupled with a compact pocket magnifier and integrated light-emitting diode assembly at point-of-care. Photographs of multiple sections of slides were viewed using smartphone screen and pinch-to-zoom function. The same slides were subsequently screened under a light microscope by an experienced microbiologist. The scraping from the ulcer was also inoculated on blood agar and Sabouraud dextrose agar.

RESULTS: Smartphone-based digital imaging revealed the presence of gram-positive organism with hyphae. Examination under a light microscope also yielded similar findings. Fusarium was cultured from the corneal scraping, confirming the diagnosis of mycotic keratitis. The patient responded to topical 5% natamycin therapy, with resolution of the ulcer after 4 weeks.

CONCLUSIONS: Smartphones can be successfully used as novel point-of-care, cost-effective, reliable microscopic screening tools.

2: Aggarwal S, Sharma SC, Das SN. Galectin-1 and galectin-3: plausible tumour markers for oral squamous cell carcinoma and suitable targets for screening high-risk population. Clin Chim Acta. 2015 Mar 10;442:13-21. doi: 10.1016/j.cca.2014.12.038. Epub 2015 Jan 9. PubMed PMID: 25578395.

BACKGROUND: Galectins are a family of carbohydrate binding proteins that regulate several cellular functions such as growth, migration, adhesion and apoptosis.

METHODS: We investigated the expression of galectin (gal)-1 and galectin (gal)-3 in patients with oral squamous cell carcinoma (OSCC) and observed their effects on growth and survival of OSCC cell lines.
RESULTS: OSCC patients expressed significantly higher levels of gal-1 and gal-3 in circulation ($p<0.0001$) and at the tumour sites ($p<0.01$) as compared to controls. Patients with higher tumour load showed significantly higher expression of both galectins than those with lower tumour load. In ROC analysis, serum levels of gal-1 and gal-3 at cut-off values of 4.875 and 0.871ng/ml respectively, discriminated between healthy subjects and patients with more than 80% sensitivity and specificity. Similarly, logistic regression analysis revealed about 3-times higher risk of OSCC in subjects over expressing these proteins. Further, exogenous gal-1 and gal-3 significantly increased survival, proliferation and angiogenesis in OSCC cell lines.

CONCLUSIONS: Serum levels of gal-1 and gal-3 may serve as plausible markers for oral squamous cell carcinoma and may be useful in screening population at a higher risk.

3: Alper BS, Malone-Moses M, McLellan JS, Prasad K, Manheimer E. Thrombolysis in acute ischaemic stroke: time for a rethink? BMJ. 2015 Mar 17;350:h1075. doi: 10.1136/bmj.h1075. PubMed PMID: 25786912.

4: Alphonsa A, Sharma KK, Sharma G, Bhatia R. Knowledge regarding oral anticoagulation therapy among patients with stroke and those at high risk of thromboembolic events. J Stroke Cerebrovasc Dis. 2015 Mar;24(3):668-72. doi: 10.1016/j.jstrokecerebrovasdis.2014.11.007. Epub 2015 Jan 7. PubMed PMID: 25577429.

BACKGROUND: Apart from atrial fibrillation, indications for oral anticoagulation common in our clinical practice include rheumatic heart disease and mechanical heart valve replacement. Evaluation of current patient knowledge regarding oral anticoagulation therapy (OAT) is the first step in improving the quality of anticoagulation therapy and patient care. The aim of the present study was to assess the knowledge regarding OAT among patients with stroke and those at high risk of thromboembolic events in a tertiary care hospital in India.

METHODS: A descriptive cross-sectional design was used; 240 patients on OAT because of various indications (mechanical heart valve replacement, rheumatic heart disease, atrial fibrillation, and stroke) attending the neurology and cardiology outpatient clinics and inpatient services were recruited. A structured self-developed questionnaire was used to assess the knowledge in these patients.

RESULTS: Most patients (62.9%) were ignorant about the target prothrombin time/international normalized ratio (PT/INR) levels with only 30% having their recent INR within the target range; 50% of the patients had a poor knowledge score, and the knowledge gap was most prominent in the domains of dietary interactions followed by drug interactions, adverse effects, and PT/INR monitoring. Knowledge score also had a significant association with gender, education, monthly income, and place of residence ($P < .05$).

CONCLUSION: Patient's knowledge about OAT was suboptimal. The findings support the need for educational interventions to improve the knowledge regarding OAT and, thereby, achieve an appropriate and safe secondary prevention of stroke.

5: Anand S, Shivashankar R, Ali MK, Kondal D, Binukumar B, Montez-Rath ME, Ajay VS, Pradeepa R, Deepa M, Gupta R, Mohan V, Narayan KM, Tandon N, Chertow GM, Prabhakaran D. Prevalence of chronic kidney disease in two major Indian cities and projections for associated cardiovascular disease. Kidney Int. 2015 Jul;88(1):178-85. doi: 10.1038/ki.2015.58. Epub 2015 Mar 18. PubMed PMID: 25786102.

India is experiencing an alarming rise in the burden of noncommunicable diseases, but data on the incidence of chronic kidney disease (CKD) are sparse. Using the Center for Cardiometabolic Risk Reduction in South Asia surveillance study (a population-based survey of Delhi and Chennai, India) we estimated overall, and age-, sex-, city-, and diabetes-specific prevalence of CKD, and defined the distribution of the study population by the Kidney Disease Improving Global Outcomes (KDIGO) classification scheme. The likelihood of cardiovascular events in participants with and without CKD was estimated by the Framingham and Interheart Modifiable Risk Scores. Of the 12,271 participants, 80% had complete data on serum creatinine and albuminuria. The prevalence of CKD and albuminuria, age standardized to the World Bank 2010 world population, was 8.7% (95% confidence interval: 7.9-9.4%) and 7.1% (6.4-7.7%), respectively. Nearly 80% of patients with CKD had an abnormally high hemoglobin A1c (5.7 and above). Based on KDIGO guidelines, 6.0, 1.0, and 0.5% of study participants are at moderate, high, or very high risk for experiencing CKD-associated adverse outcomes. The cardiovascular risk scores placed a greater proportion of patients with CKD in the high-risk categories for experiencing cardiovascular events when compared with participants without CKD. Thus, 1 in 12 individuals living in two of India's largest cities have evidence of CKD, with features that put them at high risk for

adverse outcomes.

PMID: 25786102 [PubMed - in process]

6: Aravindan A, Subramaniam R, Baidya DK. Reliability and interpretation of pulmonary function tests when morbid obesity combines with chronic obstructive pulmonary disease and neuromuscular weakness. J Clin Anesth. 2015 Jun;27(4):369-70. doi: 10.1016/j.jclinane.2015.03.015. Epub 2015 Mar 23. PubMed PMID: 25814007.

Perioperative pulmonary function test may be altered and become unreliable in mixed respiratory disorders including morbid obesity, chronic obstructive pulmonary disease, and neuromuscular weakness. Interpretation of such tests risk stratification thereof may depend on careful clinical assessment and other investigation.

7: Arora S, Singh Dhull V, Karunanithi S, Kumar Parida G, Sharma A, Shamim SA. (99m)Tc-MDP SPECT/CT as the one-stop imaging modality for the diagnosis of early setting of Kienbock's disease. Rev Esp Med Nucl Imagen Mol. 2015 May-Jun;34(3):185-7. doi: 10.1016/j.remn.2014.10.005. Epub 2015 Mar 29. PubMed PMID: 25824583.

(99m)Tc-Methylene diphosphonate (MDP) triple phase bone scintigraphy (BS) has a role in early diagnosis of Kienbock's disease, especially when the X-ray is negative. Early diagnosis can result in prompt management of the patient since wrist pain in older individuals due to aging may go unnoticed or be due to other diagnoses with the production of greater damage and eventually a worse prognosis. Herein, we present a case report of a 29-year-old female with Kienbock's disease in whom the X-ray was negative and MRI incorrect. The (99m)Tc-MDP SPECT/CT BS helped the diagnosis of the disease in an early stage (stage 1) and had a clinical impact on the patient's management.

8: Arora S, Singh P, Singh PM, Trikha A. Procalcitonin Levels in Survivors and Nonsurvivors of Sepsis: Systematic Review and Meta-Analysis. Shock. 2015 Mar;43(3):212-21. doi: 10.1097/SHK.0000000000000305. PubMed PMID: 25423128.

Procalcitonin (PCT) is an acute-phase reactant that has been used to diagnose and potentially track the treatment of sepsis. Procalcitonin values rise initially as the infection sets in and eventually fall with resolution. Its level has been reported to be significantly higher in potential nonsurvivors of a septic episode than among survivors. However, there is also a significant amount of evidence against this. We thus conducted a meta-analysis to pool data from all the available studies regarding PCT levels in survivors and nonsurvivors of sepsis. An extensive literature search was conducted using the key words "procalcitonin," "sepsis," and "prognosis." The references of the relevant studies were also scanned. The data from the eligible studies were extracted and analyzed for any significant pooled mean difference between survivors and nonsurvivors both on days 1 and 3. The mean difference in the day 1 PCT values between survivors and nonsurvivors was found to be statistically significant (P = 0.02). The mean difference on day 3 was also statistically significant (P = 0.002). However, in a subgroup consisting of studies on patients with severe sepsis and septic shock, day 1 difference was not found to be significant (P = 0.62). We found heterogeneity of 90% in our study population, which decreased to 62% after exclusion of studies conducted in emergency department patients. Procalcitonin levels in early stages of sepsis are significantly lower among survivors as compared with nonsurvivors of sepsis.

9: Ateeq B, Kunju LP, Carskadon SL, Pandey SK, Singh G, Pradeep I, Tandon V, Singhai A, Goel A, Amit S, Agarwal A, Dinda AK, Seth A, Tsodikov A, Chinnaiyan AM, Palanisamy N. Molecular profiling of ETS and non-ETS aberrations in prostate cancer patients from northern India. Prostate. 2015 Jul;75(10):1051-62. doi: 10.1002/pros.22989. Epub 2015 Mar 23. PubMed PMID: 25809148.

BACKGROUND: Molecular stratification of prostate cancer (PCa) based on genetic aberrations including ETS or RAF gene-rearrangements, PTEN deletion, and SPINK1 over-expression show clear prognostic and diagnostic utility. Gene rearrangements involving ETS transcription factors are frequent pathogenetic somatic events observed in PCa. Incidence of ETS rearrangements in Caucasian PCa patients has been reported, however, occurrence in Indian population is largely unknown. The aim of this study was to determine the prevalence of the ETS and RAF kinase gene rearrangements, SPINK1 over-expression, and PTEN deletion in this cohort.
METHODS: In this multi-center study, formalin-fixed paraffin embedded (FFPE) PCa specimens (n = 121) were procured from four major medical institutions in India. The tissues were sectioned and molecular profiling was done using immunohistochemistry (IHC), RNA in situ hybridization (RNA-ISH) and/or fluorescence in situ hybridization (FISH).
RESULTS: ERG over-expression was detected in 48.9% (46/94) PCa specimens by IHC, which was confirmed in a subset of cases by FISH. Among other ETS family members, while ETV1 transcript was detected in one case by RNA-ISH, no alteration in ETV4 was observed. SPINK1 over-expression was observed in 12.5% (12/96) and PTEN deletion in 21.52% (17/79) of the total PCa cases. Interestingly, PTEN deletion was found in 30% of the ERG-positive cases (P = 0.017) but in only one case with SPINK1 over-expression (P = 0.67). BRAF and RAF1 gene rearrangements were detected in ~1% and ~4.5% of the PCa cases, respectively.
CONCLUSIONS: This is the first report on comprehensive molecular profiling of the major spectrum of the causal aberrations in Indian men with PCa. Our findings suggest that ETS gene rearrangement and SPINK1 over-expression patterns in North Indian population largely resembled those observed in Caucasian population but differed from Japanese and Chinese PCa patients. The molecular profiling data presented in this study could help in clinical decision-making for the pursuit of surgery, diagnosis, and in selection of therapeutic intervention. Prostate 75:1051-1062, 2015. © 2015 The Authors. The Prostate, published by Wiley Periodicals, Inc.

10: Bagri NK, Jose B, Shah SK, Bhutia TD, Kabra SK, Lodha R. Impact of Malnutrition on the Outcome of Critically Ill Children. Indian J Pediatr. 2015 Jul;82(7):601-5. doi: 10.1007/s12098-015-1738-y. Epub 2015 Mar 26. PubMed PMID: 25804317.

OBJECTIVE: To assess the impact of nutritional status on outcomes like mortality rate, length of mechanical ventilation and length of Pediatric Intensive Care Unit (PICU) stay, in critically ill children.

METHODS: In this retrospective study conducted at a tertiary care center, records of 332 critically ill children between 1 mo to 15 y of age for whom anthropometric parameters were available were included. Anthropometric parameters for the study subjects were used to assess the nutritional status using the WHO growth charts as the reference. The study subjects were categorized as non-malnourished, moderately, and severely malnourished, defined by Body mass index (BMI) for age 0 to -2 SD, -2 to -3 SD and less than -3 SD of WHO growth charts, respectively. Various outcomes like mortality, duration of PICU stay and duration of mechanical ventilation were assessed in the 3 groups based on the nutritional status.

RESULTS: The prevalence of malnutrition in the index study was 51.2 % with an overall mortality of 38.8 %. No difference was found between mortality rates and proportion of ventilated children in the three study groups. However, more

children who were severely malnourished had significantly prolonged ICU stay (>7 d) as well as duration of mechanical ventilation (>7 d). When the outcome variables were compared after adjusting for PIM2 scores, there were increasing odds of mortality, ventilation, prolonged PICU stay and duration of mechanical ventilation with increasing severity of malnutrition.

CONCLUSIONS: After stabilization of the initial critical phase, PICU outcome is influenced by the nutritional status of the children.

PMID: 25804317 [PubMed - in process]

11: Bajaj MS, Angmo D, Pushker N, Hada M. Modified technique of levator plication for the correction of Marcus Gunn jaw-winking ptosis: a case series. Int Ophthalmol. 2015 Aug;35(4):587-591. Epub 2015 Mar 27. PubMed PMID: 25813374.

To conduct a study on ptotic eyelids with Marcus Gunn jaw-winking ptosis operated via a technique of modified levator plication, prospective interventional case series. Ten ptotic eyelids with Marcus Gunn jaw-winking phenomenon (MGJWP) underwent modified levator plication surgery. Postoperatively, all cases were followed up for at least 6 months. Outcome parameters included amount of ptosis correction, amount of MGJWP correction, palpebral aperture height, lid lag, and lagophthalmos. The mean amount of ptosis was 4.25 ± 0.79 mm (range of 3-6 mm), mean amount of MGJWP was 5.10 ± 2.27 mm (range 2-9 mm), and the mean levator function was 8.3 ± 2.27 mm (range of 4-12 mm). At 6 months follow-up, good correction of ptosis was seen in nine out of ten patients. Resolution of MGJWP (≤1 mm of excursion of upper eyelid with synkinetic mouth movement) was seen in three patients. Improvement in MGJWP (>1 mm of excursion of upper eyelid with synkinetic mouth movement) was seen in seven patients. The mean post-operative lagophthalmos was 0.80 ± 0.88 mm. The modified levator plication technique was effective in the treatment of MGJWP. This modified technique of levator plication is anatomically less destructive and hence more acceptable, with the added advantages of less post-operative lagophthalmos and no lid contour defects.

PMID: 25813374 [PubMed - as supplied by publisher]

12: Bajpai D, Banerjee A, Pathak S, Thakur B, Jain SK, Singh N. Single nucleotide polymorphisms in the DNA repair genes in HPV-positive cervical cancer. Eur J Cancer Prev. 2015 Mar 25. [Epub ahead of print] PubMed PMID: 25812040.

Genetic variation in DNA repair genes can modulate DNA repair capacity and may be related to the risk of cancer. The human papillomavirus is considered to be a necessary but not sufficient cause for cervical cancer and, therefore, other factors contribute to the carcinogenesis. A hereditary component for this neoplasia has been reported. Evaluation of the association of six polymorphisms was carried out in the following DNA repair genes: XRCC1 (Arg194Trp, Arg280His, and Arg399Gln), ERCC1 (Asp118Asp), ERCC2 (Lys751Gln), and ERCC4 (Arg415Gln). The cases (n=110) included 65 squamous cell carcinomas (SCCs) and 45 squamous intraepithelial lesions (SIL). Controls (n=68) were recruited from among women without cervical abnormalities. Genotypes were determined by PCR-restriction fragment length polymorphism and DNA sequencing. A positive association was observed between the polymorphisms of XRCC1 genes, that is, in codons 194 [P=0.001, odds ratio (OR)=20.1, 95% confidence interval (CI)=5.9-68.8], 280 (P=0.001, OR=5.4, 95% CI=2.3-12.6), and 399 (P=0.008, OR=4.2, 95% CI=1.5-12.1) and cervical cancer. SIL patients also showed a significant association with codon 194 (P=0.012, OR=3.8, 95% CI=1.3-10.6), but not with 280 (P=0.35) and 399 (P=0.81). A positive correlation was also found in ERCC4 Gln415Gln in both SCCs and SILs (P=0.001, OR=21.3, 95% CI=7.1-64.0 and P=0.001, OR=7.8, 95% CI=2.9-20.9, respectively). For ERCC2 Gln751Gln, the association was significant for both SCCs (P=0.001, OR=10.1, 95% CI=2.6-37.9) and SILs (P=0.001, OR=8.9, 95% CI=2.8-28.3). However, the risk of SCC did not appear to differ significantly among individuals with the ERCC1 Asp118Asp genotype (P=0.404). For SILs, it appeared to be a protective genotype (95% CI=0.1-0.7). This study indicates that variant types of

DNA repair genes play an important role in modifying individual susceptibility to SCC.

13: Bal C, Ballal S, Soundararajan R, Chopra S, Garg A. Radioiodine remnant ablation in low-risk differentiated thyroid cancer patients who had R0 dissection is an over treatment. Cancer Med. 2015 Mar 9. doi: 10.1002/cam4.443. [Epub ahead of print] PubMed PMID: 25755077.

Low-risk (LR) differentiated thyroid cancer (DTC) patients should be ablated or not, albeit, with small dose of radioiodine is highly controversial. We hypothesized that those LR DTC patients who were surgically ablated need no radioiodine remnant ablation (RRA). This study aims to evaluate the long-term outcome in these two groups of patients. Retrospective cohort study conducted from January 1991 to December 2012. Based on extent of surgical resection and histopathology, LR DTC patients were classified as Gr-1: 169 patients, who were surgically ablated; Gr-2: 153 patients, who had significant remnant in thyroid bed. Basal parameters were comparable between two groups except pretherapy 24 h radioiodine uptake (0.16 ± 0.01% vs. 5.64 ± 0.46%; P < 0.001). No patient received RRA in Gr-1; Gr-2 patients were administered 30 mCi (131) I. Total number of events (recurrence, persistent, and progression of disease), with median follow up of 10.3 years, was observed in 10/322 (3.1%) of LR DTC patients. Only one patient had disease recurrence from Gr-1, who became disease-free after radioiodine therapy. Similarly, one patient from 126, who was ablated with single dose of RRA, had recurrence from Gr-2. However, 8/27 (29.7%) patients from Gr-2 had persistent disease; even two of them subsequently developed disease progression, who failed first-dose of RRA. The event-free survival rates were 99.4% and 94.1% (P = 0.006) in Gr-1 and Gr-2, respectively. RRA is an overtreatment in surgically ablated LR DTC patients. Successfully ablated RRA patients also had similar long-term outcome, however, those who failed, should be re-stratified as intermediate-risk category, and managed aggressively.

14: Ballal S, Soundararajan R, Garg A, Chopra S, Bal C. Intermediate-risk differentiated thyroid carcinoma patients who were surgically ablated do not need adjuvant radioiodine therapy: long-term outcome study. Clin Endocrinol (Oxf). 2015 Mar 30. doi: 10.1111/cen.12779. [Epub ahead of print] PubMed PMID: 25823589.

OBJECTIVE: The mute question is whether patients with DTC of intermediate risk of recurrence, second most common presentation, who were surgically ablated in the first place, ever needed adjuvant RAI therapy? This study exclusively evaluated the long-term outcome in intermediate-risk patients with DTC.

DESIGN: Two-arm retrospective cohort study conducted between years 1991 and 2012.
SETTING: Institutional practice.
PATIENTS: Intermediate-risk DTC patients, with pathologically proven T1/2 N1 M0, T3 with/without N1 M0 disease, with a minimum follow-up of 12 months, were included. Of 254 patients who fulfilled the inclusion/exclusion criteria, 125 patients were surgically ablated (Gr-I) and 129 patients had significant remnant and/nodal disease (Gr-II). No radioiodine in Gr-I and adjuvant RAI therapy was administered in Gr-II patients.

MEASUREMENTS: Baseline characteristics were compared and overall survival, event-free survival, disease-free survival/overall remission rates and recurrence rates were calculated for both the groups.

RESULTS: All baseline patient characteristics were comparable except 24-h RAIU between two groups. Depending on adjuvant radioiodine therapy outcome, Gr-II patients were subclassified as Gr-IIa (ablated) and Gr-IIb (not ablated). With a median follow-up duration of 10·3 years (range: 1-21 years), 12/125 (9·6%) patients had disease recurrence and 10 (8%) showed persistent disease in Gr-I. In Gr-IIa, 6/102 (5·9%) patients recurred but only one of them was successfully

ablated with (131) I, and 5 (4·9%) had persistent disease. However, in Gr-IIb, 27 patients who failed first-dose adjuvant RAI therapy, 8/27 (29·6%) showed persistent disease (P = 0·000). Overall survival was 100%; however, disease-free survival rates were 92% and 90%, in Gr-I and Gr-II, respectively.

CONCLUSION: Intermediate-risk surgically ablated patients do not need adjuvant RAI therapy and patients who failed to achieve ablation with first dose of (131) I may be dynamically risk stratified as high-risk category and managed aggressively.

15: Banik S, Prabhakar H. Is dexmedetomidine really superior to propofol? J Anesth. 2015 Mar 27. [Epub ahead of print] PubMed PMID: 25812805.

16: Bansal AK, Vishnubhatla S, Bakhshi S. Correlation of serum immunoglobulins with infection-related parameters during induction chemotherapy of pediatric acute myeloid leukemia: a prospective study. Pediatr Hematol Oncol. 2015 Mar;32(2):129-37. doi: 10.3109/08880018.2014.955620. Epub 2014 Sep 24. PubMed PMID: 25250972.

BACKGROUND: Immune dysfunction may be a contributing factor for infections during induction chemotherapy of pediatric acute myeloid leukemia (AML); but this has not been evaluated as yet.

PROCEDURE: From April 2010 to May 2011, 45 consecutive de novo pediatric AML patients were prospectively evaluated along with nine healthy controls. Immunoglobulins (Ig) (n = 45) were measured at diagnosis and day 15.

RESULTS: There were 25 male and 20 female patients with a median age of 9 years (range 1-18 years). Baseline Ig did not correlate with any of the infection-related parameters during induction. At day 15, Ig levels reduced from baseline (IgG p = 0.46, IgA p = 0.027, IgM p < 0.001). Day 15 IgG levels were lower in patients with persistent fever >7 days (p = 0.029) and fungal infection (p = 0.035).

CONCLUSION: This is the first study which has evaluated derangement in Ig with infection-related parameters in pediatric AML. At day 15, immunoglobulins decrease and reduced IgG levels correlate with infection-related parameters. Use of intravenous immunoglobulins in pediatric AML cases needs to be further evaluated to assess whether it can reduce infection-related morbidity.

17: Basak T, Varshney S, Hamid Z, Ghosh S, Seth S, Sengupta S. Identification of metabolic markers in coronary artery disease using an untargeted LC-MS based metabolomic approach. J Proteomics. 2015 Mar 17. pii: S1874-3919(15)00095-0. doi: 10.1016/j.jprot.2015.03.011. [Epub ahead of print] PubMed PMID: 25790721.

Coronary artery disease (CAD), a complex metabolic disorder, is one of the largest causes of death worldwide. Both environmental and genetic factors contribute to the etiology of this metabolic disease. The gene-environment interaction could lead to modulation of various metabolic pathways resulting in altered levels of various metabolites. Thus, identifying metabolites could aid in deciphering pathways that could be involved in the pathophysiology of the disease. With the advent of high resolution mass spectrometry based methodologies, it is now possible to screen thousands of metabolites in a single snapshot thus, allowing the identification of potential disease metabolite markers. In this work, using an untargeted metabolomic approach, we attempted to identify metabolites that have altered levels in CAD patients. Using reverse phase and HILIC based chromatography followed by mass spectrometry we identified a total of 32 metabolites (2 fold; p<0.05) in plasma whose levels were significantly altered in CAD samples. Further, we have validated the

discriminative ability of these metabolites in an independent set of CAD and control samples using multivariate PLS-DA analysis. Interestingly, Lyso PC (18:0), Cortisol, Lyso PC (P-17:0), and glycerophosphocholine were among the top discriminators for CAD which implies involvement of phosphatidylcholine pathway in the pathogenesis of atherosclerosis.BIOLOGICAL SIGNIFICANCE: Herein, we report that an unbiased metabolomic study has the potential to identify newer markers which are involved in several important biological pathways like lipid metabolism, phosphatidylcholine pathway etc. which in turn are implicated in CAD. These markers could be of potential clinical importance for screening subjects at risk of CAD. This article is part of a Special Issue entitled: Proteomics in India.

18: Behera C, Swain R, Mridha AR, Pooniya S. Suicide by injecting lispro insulin with an intravenous cannula. Med Leg J. 2015 Mar 6. pii: 0025817215573171. [Epub ahead of print] PubMed PMID: 25748289.

Suicide by injecting insulin is not uncommon both in diabetic and non-diabetic people. The victim usually uses an insulin syringe or a traditional syringe attached to a needle for the injection of insulin, of either animal or synthetic origin. We report a case of suicide by a non-diabetic physician by injecting lispro insulin through an intravenous cannula. To the best of our knowledge, the use of an intravenous cannula for the injection of insulin for suicide is unusual and is rarely reported in the medico-legal literature.

19: Bhakuni T, Sharma A, Rashid Q, Kapil C, Saxena R, Mahapatra M, Jairajpuri MA. Antithrombin III deficiency in Indian patients with deep vein thrombosis: identification of first India based AT variants including a novel point mutation (T280A) that leads to aggregation. PLoS One. 2015 Mar 26;10(3):e0121889. doi: 10.1371/journal.pone.0121889. eCollection 2015. PubMed PMID: 25811371; PubMed Central PMCID: PMC4374914.

Antithrombin III (AT) is the main inhibitor of blood coagulation proteases like thrombin and factor Xa. In this study we report the identification and characterization of several variants of AT for the first time in Indian population. We screened 1950 deep vein thrombosis (DVT) patients for AT activity and antigen levels. DNA sequencing was further carried out in patients with low AT activity and/or antigen levels to identify variations in the AT gene. Two families, one with type I and the other with type II AT deficiency were identified. Three members of family I showed an increase in the coagulation rates and recurrent thrombosis in this family was solely attributed to the rs2227589 polymorphism. Four members of family II spanning two generations had normal antigen levels and decreased AT activity. A novel single nucleotide insertion, g.13362_13363insA in this family in addition to g.2603T>C (p.R47C) mutation were identified. AT purified from patient's plasma on hi-trap heparin column showed a marked decrease in heparin affinity and thrombin inhibition rates. Western blot analysis showed the presence of aggregated AT. We also report a novel point mutation at position g.7549 A>G (p.T280A), that is highly conserved in serpin family. Variant protein isolated from patient plasma indicated loss of regulatory function due to in-vivo polymerization. In conclusion this is the first report of AT mutations in SERPINC1 gene in Indo-Aryan population where a novel point mutation p.T280A and a novel single nucleotide insertion g.13362_13363insA are reported in addition to known variants like p.R47C, p.C4-X and polymorphisms of rs2227598, PstI and DdeI.

20: Bhalla A, Kandasamy D, Veedu P, Mohan A, Gamanagatti S. A retrospective analysis of 334 cases of hemoptysis treated by bronchial artery embolization. Oman Med J. 2015 Mar;30(2):119-28. doi: 10.5001/omj.2015.26. PubMed PMID: 25960838; PubMed Central PMCID: PMC4412455.

OBJECTIVES: To analyze the safety and efficacy of bronchial artery embolization (BAE) in the management of hemoptysis.
METHODS: We conducted a retrospective study of 334 patients who had undergone BAE for hemoptysis from January 2007 to July 2013. Our study included 255 (76.3%) males and 79 (23.7%) females with an age range from five to 81 years old. All relevant arteries were evaluated but only those arteries that showed hypertrophy and significant blush were targeted. Polyvinyl alcohol (PVA) was used in all patients and gel foam was used in combination with PVA where there was significant shunting.

RESULTS: Mild hemoptysis was seen in 70 patients, moderate in 195 patients, and severe in 69 patients. On imaging, right side disease was seen in 101 patients, left side involvement in 59 patients, and bilateral involvement in 174 patients. Post-tubercular changes were the predominant pathology seen in 248 patients. Among 334 patients (386 procedures), 42 patients underwent the procedure twice and five patients underwent the procedure thrice. A total of 485 arteries were attempted of which 440 arteries were successfully embolized. Right intercosto-bronchial was the most common culprit artery present in 157 patients, followed by common bronchial (n=97), left bronchial (n=55), and right bronchial (n=45). We embolized a maximum of four arteries in one session. Immediate complications such as dissection and rupture occurred in only nine sessions (2.3%). Twenty-five procedures (6.5%) were repeated within two months, which were due to technical or clinical failure and 27 procedures (7%) were repeated after two months.

CONCLUSIONS: BAE is a safe and effective procedure with a negligible complication rate. Our approach of targeting hypertrophied arteries was effective.

21: Bhari N, Chiramel MJ, Vedi KK, Nath D, Sandip S, Kumar R, Kumar L, Sharma VK, Sethuraman G. Necrobiotic xanthogranuloma with multiple myeloma. Clin Exp Dermatol. 2015 Mar 21. doi: 10.1111/ced.12620. [Epub ahead of print] PubMed PMID: 25809408.

22: Bhatnagar S, Kumar P, Mohan T, Verma P, Parida MM, Hoti SL, Rao DN. Evaluation of multiple antigenic peptides based on the Chikungunya E2 protein for improved serological diagnosis of infection. Viral Immunol. 2015 Mar;28(2):107-12. doi: 10.1089/vim.2014.0031. Epub 2014 Nov 20. PubMed PMID: 25412351.

In recent years, Chikungunya virus (CHIKV) reemerged and numerous outbreaks were reported all over the world. After screening CHIKV-positive sera, we had already reported many dominant epitopes within the envelope E2 protein of CHIKV. In the present study, we aimed at developing a highly sensitive immunodiagnostic assay for CHIKV based on a multiple antigenic peptide (MAP) approach using selective epitopes of the E2 protein. MAPs in four different E2 peptide combinations were screened with CHIKV-positive sera. The MAPs reacted with all CHIKV-positive sera and no reactivity was seen with healthy or dengue-positive sera. Our results indicate that MAP 1 seems to be an alternate antigen to full-length protein E2 for immunodiagnosis of CHIKV infections with high sensitivity and specificity.

23: Biswas B, Thakar A, Mohanti BK, Vishnubhatla S, Bakhshi S. Prognostic factors in head and neck Ewing sarcoma family of tumors. Laryngoscope. 2015 Mar;125(3):E112-7. doi: 10.1002/lary.24985. Epub 2014 Oct 27. PubMed PMID: 25345585.

OBJECTIVES/HYPOTHESIS: Data on the Ewing sarcoma family of tumors (ESFT) of the head and neck region with uniform chemotherapy protocols are minimal. We

evaluated outcome and prognostic factors in these patients treated with a uniform chemotherapy protocol.

STUDY DESIGN: Single institution observational study.
METHODS: This is a single-institution review of patients treated between June 2003 and November 2011. Patients received neoadjuvant chemotherapy (NACT), surgery, and/or radiotherapy as a local treatment followed by adjuvant chemotherapy.

RESULTS: Thirty-five cases of head and neck ESFT were treated with a uniform chemotherapy protocol. The median age was 12 years (range, 1-43 years); three (9%) had metastases. Nine patients underwent surgery, of which eight received adjuvant radiotherapy; 23 received definitive radiotherapy post-NACT. At a median follow-up of 58 months (range. 3.7-133.7 months), 5-year event-free survival (EFS), overall survival (OS), and local control rate were 55.1±9.2%, 68.3±8.3%, and 74.1±8.5%, respectively. Multivariate analysis showed that baseline white blood cell (WBC) count independently prognosticated EFS (P=.04), with patients who had WBC ≤11,000/μL had superior EFS, although no difference for OS was observed.

CONCLUSIONS: This is one of the largest studies of head and neck ESFT treated with a uniform chemotherapy protocol with intent-to-treat analysis. Within the limitations of the small size, baseline low WBC count appeared to have a superior outcome.

24: Chandra PS, Goyal N. In reply: facetal orientation in congenital atlantoaxial dislocation: there are angles and there are "angles". Neurosurgery. 2015 Mar;76(3):E355-8. doi: 10.1227/NEU.0000000000000641. PubMed PMID: 25603112.

25: Chappity P, Alok T, Rohit V. Endonasal Endoscopic Approach in Management of Paediatric CSF Rhinorrhoea Cases. Indian J Otolaryngol Head Neck Surg. 2015 Mar;67(1):88-92. doi: 10.1007/s12070-014-0795-2. Epub 2014 Nov 12. PubMed PMID: 25621241; PubMed Central PMCID: PMC4298586.

Though endoscopic repair has been the proven to be the gold standard for the repair of cerebrospinal fluid rhinorrhoea in adult patients, the type of approach to be used in paediatric patients especially those below 5 years is still a challenge with no clear cut guidelines. The objective of this study was to evaluate the efficacy of using endonasal endoscopic approach for treating paediatric patients aged less than 5 years diagnosed with cerebrospinal fluid rhinorrhoea. This was a retrospective analysis of five cases of paediatric CSF rhinorrhoea operated in a tertiary health care centre with an age of less than 5 years from October 2002 to September 2010. All the five cases treated by endoscopic approach have no further complaints of CSF leak or meningitis with a follow up period of a minimum period of 6 months. Two cases were further detected to have meningocele and meningoencephalocele which was detected preoperatively and treated by reduction and excision respectively. The good results obtained by endoscopic closure with lack of major complications and the decreased morbidity for the patient suggests that the endoscopic approach should be considered the first line of approach in pediatric population. But we would warrant a careful selection procedure and availability of adequate expertise for this approach to avoid complications.

26: Chaudhary P, de Araújo Viana C, Ramos MV, Kumar VL. Antiedematogenic and antioxidant properties of high molecular weight protein sub-fraction of Calotropis procera latex in rat. J Basic Clin Pharm. 2015 Mar;6(2):69-73. doi: 10.4103/0976-0105.152098. PubMed PMID: 25767367; PubMed Central PMCID: PMC4357003.

OBJECTIVES: The aim was to evaluate the effect of high molecular weight protein fraction of Calotropis procera latex on edema formation and oxidative stress in carrageenan-induced paw inflammation.
METHODS: A sub-plantar injection of carrageenan was given to induce edema in the hind paw of the rat. The inhibitory effect of high molecular weight protein fraction of C. procera latex was evaluated following intravenous administration (5 and 25 mg/kg body weight) and was compared with that of diclofenac given orally (5 mg/kg). The levels of reduced glutathione (GSH), thiobarbituric acid reactive substances (TBARS) and myeloperoxidase (MPO) were measured in the inflamed paw tissue at the end of the study.
RESULTS: The high molecular weight protein fraction obtained from the latex of C. procera produced a dose-dependent inhibition of edema formation that was accompanied by normalization of levels of oxidative stress markers (GSH and TBARS) and MPO, a marker for neutrophils in the paw tissue.
CONCLUSIONS: The high molecular weight protein fraction of C. procera latex ameliorates acute inflammation in the paw through its antioxidant effect.

27: Chauhan A, Sharma U, Jagannathan NR, Gupta YK. Rapamycin ameliorates brain metabolites alterations after transient focal ischemia in rats. Eur J Pharmacol. 2015 Jun 15;757:28-33. doi: 10.1016/j.ejphar.2015.03.006. Epub 2015 Mar 23. PubMed PMID: 25814258.

Rapamycin has been shown to protect against middle cerebral artery occlusion (MCAo) induced ischemic injury. In this study, the neuroprotective effect of rapamycin on the metabolic changes induced by MCAo was evaluated using nuclear magnetic resonance (NMR) spectroscopy of brain tissues. MCAo in rats was induced by insertion of nylon filament. One hour after ischemia, rapamycin (250 μg/kg, i.p.) in dimethyl sulfoxide was administered. Reperfusion was done 2h after ischemia. Twenty-four hours after ischemia phospholipase A2 (PLA2) levels and metabolic changes were assessed. Perchloric acid extraction was performed on the brain of all animals (n=7; sham, vehicle; DMSO and rapamycin 250 μg/kg) and the various brain metabolites were assessed by NMR spectroscopy. In all 44 metabolites were assigned in the proton NMR spectrum of rat brain tissues. In the vehicle group, we observed increased lactate levels and decreased levels of glutamate/glutamine, choline containing compounds, creatine/phosphocreatine (Cr/PCr), taurine, myo-inositol, γ-amino butryic acid (GABA), N-aspartyl aspartate (NAA), purine and pyrimidine metabolites. In rapamycin treated rats, there was increase in the levels of choline containing compounds, NAA, myo-inositol, glutamate/glutamine, GABA, Cr/PCr and taurine as compared to those of vehicle control ($P<0.05$). Rapamycin treatment reduced PLA2 levels as compared to vehicle group ($P<0.05$). Our findings indicated that rapamycin reduced the increased PLA2 levels and altered brain metabolites after MCAo. These protective effects might be attributed to its effect on cell membrane metabolism; glutamate induced toxicity and calcium homeostasis in stroke.

28: Chopra S, Garg A, Ballal S, Bal CS. Lung metastases from differentiated thyroid carcinoma: prognostic factors related to remission and disease-free survival. Clin Endocrinol (Oxf). 2015 Mar;82(3):445-52. doi: 10.1111/cen.12558. Epub 2014 Aug 8. PubMed PMID: 25040494.

OBJECTIVE: Distant metastases, although rare, account for maximum disease-related mortality in differentiated thyroid cancer (DTC). Lungs and bones are the most frequent sites of metastases. We sought to identify the prognostic factors in adult DTC patients presenting with pulmonary metastases at initial diagnosis.
DESIGN: Retrospective cohort study.
PATIENTS: From the medical records of 4370 patients, 200 patients aged more than 21 years who were identified to have pulmonary metastases at the time of diagnosis were included in the analysis.
RESULTS: The sites of metastases were lungs alone in 133 (67%) patients, and additional sites in remaining 67 (33%) patients were as follows: bones in 59,

liver in 4, brain in 2 and both bone and liver in two patients. During the mean follow-up of 61 months (range, 12-312 months), 76 patients achieved remission, 121 (60·5%) patients had biochemically and/or structurally persistent disease and three patients showed disease progression. Multivariate analysis revealed presence of macro-nodular (chest X-ray positive) pulmonary metastases and concomitant skeletal metastases as independent factors decreasing the likelihood of remission. Of the 76 patients with remission, 16 (21%) developed subsequent recurrence. Patient age >45 years and follicular histopathology were independently associated with greater hazards of developing recurrence.
CONCLUSION: This study suggests that the patients with macro-nodular lung metastases and/or concomitant skeletal metastases have reduced odds of achieving remission. Moreover, significant number of patients recur even after complete remission with RAI treatment, hence strict surveillance is recommended especially in patients with age >45 years and/or with follicular histology of DTC.

29: Das RR, Sankar J, Naik SS. Efficacy and safety of diosmectite in acute childhood diarrhoea: a meta-analysis. Arch Dis Child. 2015 Jul;100(7):704-12. doi: 10.1136/archdischild-2014-307632. Epub 2015 Mar 17. PubMed PMID: 25784748.

OBJECTIVE: We evaluated the role of diosmectite as an add-on treatment to the 'recommended treatment' of acute diarrhoea in children.
METHODS: We searched all published literature through the major databases: Medline via Ovid, PubMed, CENTRAL, Embase and Google Scholar till May 2014. Randomised clinical trials comparing diosmectite versus placebo were included (PROSPERO registration: CRD42014013783).

MAIN OUTCOME MEASURES: The primary outcome measures were duration of acute diarrhoea (h), and day-to-day cure rates (%). The secondary outcome measures were stool output (volume), stool output (frequency) and adverse events.
RESULTS: Of 384 citations retrieved, a total of 13 randomised clinical trials (2164 children, 1-60 months old) were included in the meta-analysis. A dose of 3-6 grams per day of diosmectite was given for a duration from 3 days until recovery. Compared with placebo, diosmectite significantly decreased the duration of acute diarrhoea (mean difference, -23.39; 95% CI -28.77 to -18.01), and increased the cure rate (%) at day 5 (OR, 4.44; 95% CI 1.66 to 11.84), without any increases in the risk of adverse events. Diosmectite was effective in all types of acute childhood diarrhoea except dysentery. Because, most of the trials were open-label, and there was a high possibility of publication bias, the GRADE evidence generated was of 'low quality'.

CONCLUSIONS: Diosmectite may be a useful additive in the treatment of acute childhood diarrhoea. As the evidence generated was of 'low quality', future research is needed with higher quality designs before any firm recommendations can be made.
TRIAL REGISTRATION NUMBER: PROSPERO registration: CRD42014013783.

30: Devaraja K, Sikka K, Kumar R, Thakar A. Sinonasal malignancies: long term follow up after surgical management-an analysis of outcomes. Indian J Otolaryngol Head Neck Surg. 2015 Mar;67(1):28-33. doi: 10.1007/s12070-014-0742-2. Epub 2014 Jun 29. PubMed PMID: 25621228; PubMed Central PMCID: PMC4298580.

Sinonasal malignancies are rare and survival analysis in affected patients is arduous and perplexing due to various factors. In this review article, attempt has been made to overcome some of those factors while analysing survival outcomes.AIMS AND OBJECTIVES: The aim of this study was to share the experience of a tertiary care centre in the surgical management of sinonasal malignancies

over 12 years.
MATERIALS AND METHODS: This study is a retrospective chart review, and in this study, hospital records of 58 patients with biopsy proven sinonasal malignancies were studied. Only the patients undergoing primary or salvage surgery at our institution from May-2000 to April-2012 with a minimum follow up of 2 years were included. Statistical analyses such as means, proportions, Kaplan-Meier analysis and Cox's regression model were done.

RESULTS: Majority of the patients were males (n = 43) belonging to fourth and fifth decades. Squamous cell carcinoma was the most common (n = 17) histopathological type, followed by adenoid cystic carcinoma (n = 14). Majority presented with stage IV disease (n = 42). 17 patients were operated for recurrent disease. Over all 5 year survival was 72 % and disease free survival was 44 %. Separate analysis for epithelial and matched non-epithelial group showed poorer prognosis with epithelial group (p = 0.0120). Multivariate analysis showed histopathological type (epithelial) and presence of pathological risk factors (positive margins and/or perineural invasion) affecting survival.

CONCLUSIONS: Advanced stage presentation is the norm for sinonasal malignancies. This study noted a 5 year overall survival of 72 % and disease free survival of 44 %. Epithelial histopathology carries poorer prognosis then other counterparts and incomplete removal is shown to add to poor prognosis independently.

31: Doshi S, Ramakrishnan S, Gupta SK. Invasive hemodynamics of constrictive pericarditis. Indian Heart J. 2015 Mar-Apr;67(2):175-182. doi: 10.1016/j.ihj.2015.04.011. Epub 2015 May 13. Review. PubMed PMID: 26071303; PubMed Central PMCID: PMC4475854.

Cardiac catheterization and hemodynamic study is the gold standard for the diagnosis of pericardial constriction. Careful interpretation of the hemodynamic data is essential to differentiate it from other diseases with restrictive physiology. In this hemodynamic review we shall briefly discuss the physiologic basis of various hemodynamic changes seen in a patient with constrictive pericarditis.

32: Duseja A, Singh SP, Saraswat VA, Acharya SK, Chawla YK, Chowdhury S, Dhiman RK, Jayakumar RV, Madan K, Misra SP, Mishra H, Modi SK, Muruganathan A, Saboo B, Sahay R, Upadhyay R. Non-alcoholic Fatty Liver Disease and Metabolic Syndrome-Position Paper of the Indian National Association for the Study of the Liver, Endocrine Society of India, Indian College of Cardiology and Indian Society of Gastroenterology. J Clin Exp Hepatol. 2015 Mar;5(1):51-68. doi: 10.1016/j.jceh.2015.02.006. Epub 2015 Mar 6. Review. PubMed PMID: 25941433; PubMed Central PMCID: PMC4415196.

Non-alcoholic fatty liver disease (NAFLD) is closely associated with metabolic syndrome. Prevalence of metabolic risk factors including diabetes mellitus, obesity, etc. is rapidly increasing in India putting this population at risk for NAFLD. Patients with NAFLD are at increased risk for liver-related morbidity and mortality and also cardiovascular disease risk and increased incidence of diabetes mellitus on long-term follow-up. Management of patients with NAFLD may require a multi-disciplinary approach involving not only the hepatologists but also the internists, cardiologists, and endocrinologists. This position paper which is a combined effort of the Indian National Association for Study of the Liver (INASL), Endocrine Society of India (ESI), Indian College of Cardiology (ICC) and the Indian Society of Gastroenterology (ISG) defines the spectrum of NAFLD and the association of NAFLD with insulin resistance and metabolic syndrome besides suggesting preferred approaches for the diagnosis and management of patients with NAFLD in the Indian context.

33: Ganapathy VP, Das RR, Chinnakkannan S, Panda SS. An unusual presentation of hydrochloric acid ingestion: a mystery unraveled. Pediatr Emerg Care. 2015 Mar;31(3):207-8. doi: 10.1097/PEC.0000000000000382. PubMed PMID: 25738240.

BACKGROUND: Unintentional acid ingestion is less commonly encountered than alkali ingestion. The injury develops for hours to days after ingestion and often results in progressively increasing difficulty in airway management. However, gastric perforation is rare.
CASE: A 3-year-old boy presented to us with an orotonsillopharyngeal membrane and severe upper airway obstruction. Subsequently, he was diagnosed with a case of gastric perforation due to unintentional hydrochloric acid ingestion. He was treated with partial gastrectomy and feeding jejunostomy, and the recovery was good.

CONCLUSIONS: Unintentional hydrochloric acid ingestion is rare in children. The manifestations masquerade many other clinical conditions, and the diagnosis is difficult in cases in which history of ingestion is not available. Treatment is symptomatic, and emergency surgery is indicated in case of gastrointestinal perforation.

34: Garg PK, Imrie CW. Severity classification of acute pancreatitis: the continuing search for a better system. Pancreatology. 2015 Mar-Apr;15(2):99-100. doi: 10.1016/j.pan.2015.01.005. Epub 2015 Jan 31. PubMed PMID: 25700979.

35: Ghosh-Jerath S, Devasenapathy N, Singh A, Shankar A, Zodpey S. Ante natal care (ANC) utilization, dietary practices and nutritional outcomes in pregnant and recently delivered women in urban slums of Delhi, India: an exploratory cross-sectional study. Reprod Health. 2015 Mar 20;12:20. doi: 10.1186/s12978-015-0008-9. PubMed PMID: 25889714; PubMed Central PMCID: PMC4396888.

BACKGROUND: Antenatal Care (ANC) is one of the crucial factors in ensuring healthy outcomes in women and newborns. Nutrition education and counselling is an integral part of ANC that influences maternal and child health outcomes. A cross sectional study was conducted in Pregnant Women (PW) and mothers who had delivered in the past three months; Recently Delivered Women (RDW) in urban slums of North-east district of Delhi, India, to explore ANC utilization, dietary practices and nutritional outcomes.

METHODS: A household survey was conducted in three urban slums to identify PW and RDW. Socio-economic and demographic profile, various components of ANC received including nutrition counselling, dietary intake and nutritional outcomes based on anthropometric indices and anaemia status were assessed. Socio-demographic characteristics, nutrient intake and nutritional status were compared between those who availed ANC versus those who did not using logistic regression. Descriptive summary for services and counselling received; dietary and nutrient intake during ANC were presented.
RESULTS: Almost 80% (274 out of 344) women received some form of ANC but the package was inadequate. Determinants for non-utilization of ANC were poverty, literacy, migration, duration of stay in the locality and high parity. Counselling on nutrition was reported by a fourth of the population. Nutrient intake showed suboptimal consumption of protein and micronutrients like iron, calcium, vitamin A, vitamin C, thiamine, riboflavin niacin, zinc and vitamin B12 by more than half of women. A high prevalence of anaemia among PW (85%) and RDW (97.1%) was observed. There was no difference in micronutrient intake and anaemia prevalence among women who received ANC versus who did not.

CONCLUSIONS: Pregnant women living in urban poor settlements have poor nutritional status. This may be improved by strengthening the nutrition counselling component of ANC which was inadequate in the ANC package received. Empowering community based health workers in providing effective nutrition

counselling should be explored given the overburdened public health system.

36: Goyal S, Puri T, Julka PK. Breast cancer with inguinal node recurrence. J Egypt Natl Canc Inst. 2015 Mar;27(1):41-3. doi: 10.1016/j.jnci.2014.10.001. Epub 2014 Nov 1. PubMed PMID: 25455282.

Surgery and irradiation for breast cancer may interfere with conventional pathways of spread, leading to bizarre patterns of dissemination through lymphatics or through hematogenous route. Lymphoscintigraphic studies may help identify nodal involvement. Other possible reasons could be occurrence of primary breast cancer in accessory breast tissue retained in the vulva following involution of milk line. We describe a case of triple negative breast cancer, who developed contralateral breast cancer during treatment. Three years later, she developed isolated inguinal nodal metastases, which responded to local radiotherapy and chemotherapy. However, the patient relapsed after 2 years and could not be salvaged thereafter.

37: Gupta M, Radhakrishnan N, Mahapatra M, Saxena R. Trisomy Chromosome 6 as a Sole Cytogenetic Abnormality in Acute Myeloid Leukemia. Turk J Haematol. 2015 Mar 5;32(1):77-79. doi: 10.4274/tjh.2013.0107. PubMed PMID: 25805680.

Identification of cytogenetic abnormalities plays an important role in the diagnosis and prognosis of leukemias. Isolated trisomy 6 is a rare abnormality, the prognostic significance of which is not well established. We report one case of acute myeloid leukemia (AML-M5 variant) with trisomy 6 as the sole cytogenetic abnormality. Previously, trisomy 6 has been reported in aplastic anemia, myelodysplastic syndrome, and AML, usually associated with hypocellular marrow. However, our patient had a very short history and hypercellular marrow infiltrated with blasts. We report this case due to the rarity of the condition. More studies are required to ascertain the role of trisomy 6 in the development of leukemia as well as in prognosis.

38: Gupta N, Khan R, Kumar R, Kumar L, Sharma A. Versican and its associated molecules: potential diagnostic markers for multiple myeloma. Clin Chim Acta. 2015 Mar 10;442:119-24. doi: 10.1016/j.cca.2015.01.012. Epub 2015 Jan 23. PubMed PMID: 25623955.

BACKGROUND: Multiple myeloma (MM) represents a malignancy of B-cells characterized by proliferation of malignant plasma cells in the bone marrow (BM). Versican (VCAN), an extracellular matrix (ECM) protein, appears to be involved in multiple processes in several cancers. Identifying optimum diagnostic markers and delineating its association with disease severity might be important for controlling MM.

METHODS: Expression of VCAN and its associated molecules (β-catenin, β1 integrin and FAK) were investigated in 60 subjects to evaluate their usefulness as diagnostic marker. Circulatory and molecular levels of above molecules were analyzed in their BM and Blood using ELISA, Q-PCR and western blotting along with their ROC curve analysis.
RESULTS: Circulatory levels of VCAN, β-catenin and FAK were significantly higher in patients with varying significance in each stage. β-Catenin and FAK intracellular levels were significantly elevated in patients. mRNA levels of all molecules were significantly higher in BMMNCs while VCAN and β-catenin also showed increase in PBMCs. Upregulation of these molecules was also observed at protein level. ROC curve analysis for VCAN showed absolute combination of sensitivity and specificity for diagnosis in serum.

CONCLUSIONS: Significant elevation of VCAN and its associated molecules imply their role in MM. Optimal sensitivity and specificity of VCAN might utilize its importance as potential marker for active disease.

39: Gupta N, Singh PK, Kumar M, Shastri S, Gulati S, Kumar A, Agarwala A, Kapoor S, Nair M, Sapra S, Dubey S, Singh A, Kaur P, Kabra M. Glutaric Acidemia Type 1-Clinico-Molecular Profile and Novel Mutations in GCDH Gene in Indian Patients. JIMD Rep. 2015;21:45-55. doi: 10.1007/8904_2014_377. Epub 2015 Mar 12. PubMed PMID: 25762492; PubMed Central PMCID: PMC4470956.

Glutaric acidemia I (GA I, #231670) is one of the treatable, autosomal recessively inherited metabolic disorders. Macrocephaly, acute encephalitis-like crises, dystonia and characteristic frontotemporal atrophy are the hallmarks of this disease. In this communication, we present the clinical, biochemical and molecular profile of seventeen GA I patients from 15 unrelated families from India and report seven novel mutations in GCDH gene (c.281G>A (p.Arg94Gln), c.401A>G (p.Asp134Gly), c.662T>C (p.Leu221Pro), c.881G>C (p.Arg294Pro), c.1173dupG (p.Asn392Glufs*5), c.1238A>G (p.Tyr413Cys) and c.1241A>C (p.Glu414Ala)). Out of these, c.662T>C (p.Leu221Pro) in exon 8 and c.281G>A (p.Arg94Gln) allele in exon 4 were low excretor alleles, whereas c.1241A>C (p.Glu414Ala), c.1173dupG and c.1207C>T (p.His403Tyr) in exon 11 were high excretor alleles. We conclude that c.1204C>T (p.Arg402Trp) is probably the most common mutant allele. Exons 11 and 8 are the hot spot regions of GCDH gene in Indian patients with GA I. An early diagnosis and timely intervention can improve the underlying prognosis. Molecular confirmation is helpful in providing genetic counselling and prenatal diagnosis in subsequent pregnancy.

40: Gupta S, Sinha G, Sharma R, Nayak B, Patil B, Kashyap B, Shameer A, Dada T. Agreement between diurnal variations of intraocular pressure by Tono-Pen and Goldmann applanation tonometer in patients on topical anti-glaucoma medication. Int Ophthalmol. 2015 Mar 28. [Epub ahead of print] PubMed PMID: 25820518.

To estimate agreement in diurnal variations of intraocular pressure (IOP) by Tono-Pen (TP) and Goldmann applanation tonometer (GAT) in glaucoma patients on topical anti-glaucoma medication(s). IOP was measured at every 3 h from 7 a.m. to 10 a.m. in 50 eyes of glaucoma patients on topical medication(s). Diurnal fluctuation of IOP by each method was calculated as maximum-minimum IOP in a day. Central corneal thickness (CCT) was measured by ultrasonic pachymeter. There was good correlation between TP and GAT at all times during a day, minimum, and maximum IOPs during a day (Correlation coefficient, 0.706 at 7 a.m., 0.624 at 10 a.m., 0.682 at 1 p.m., 0.814 at 4 p.m., 0.652 at 7 p.m., 0.572 at 10 p.m., 0.668 minimum IOP, 0.689 maximum IOP). Mean IOPs by TP were always higher than GAT at all times during a day. Bland-Altman plots suggested a close relationship between the two sets of readings, and that this relationship was consistent at different times in a day, in maximum IOPs, minimum IOPs and also in fluctuation of IOPs. Linear regression analysis between the differences of diurnal fluctuation (diurnal fluctuation by GAT-diurnal fluctuation by TP) and CCT showed strong association ($R^2 = 0.857$, $p < 0.001$). The mean change in difference of diurnal fluctuation (GAT-TP) for a 10-micron increase in CCT was 0.69 mmHg. TP can be considered a reliable alternative to GAT in glaucoma patients for knowing the diurnal control of IOP; however these two methods should not be used interchangeably. Difference of diurnal fluctuation between two methods is dependent on CCT.

41: Gupta S, Goyal M, Verma D, Sharma A, Bharadwaj N, Kabra M, Kapoor S. Adverse pregnancy outcome in patients with low pregnancy-associated plasma protein-A: The Indian Experience. J Obstet Gynaecol Res. 2015 Mar 15. doi: 10.1111/jog.12662. [Epub ahead of print] PubMed PMID: 25773764.

AIM: The aim of our study was to examine the association of low pregnancy-associated plasma protein-A (PAPP-A) with adverse pregnancy outcome. MATERIAL AND METHODS: A total of 1640 consecutive pregnant women between 9(+5) and 13(+6) weeks of pregnancy were recruited. One hundred and thirty women with

PAPP-A levels < 0.4 multiple of median were followed till delivery and the outcome information was obtained for fetal loss, birthweight, growth restriction, preterm birth, reduced liquor and development of pre-eclampsia.

RESULTS: During the study period, 130 (7.92%) women had low PAPP-A and were considered as cases and 200 women with normal PAPP-A were controls. Intrauterine growth restriction was observed in 28 (21.54%) cases as compared to 10 (5%) controls. Pre-eclampsia presented in 24 (18.46%) cases and in 18 (9%) controls. Twenty (15.38%) cases had preterm delivery compared to 12 (6%) controls. Fifty-six (43.08%) cases delivered low-birthweight babies compared to 22 (11%) controls. Thus, the incidence of intrauterine growth restriction, preterm birth and low birthweight was significantly more in the cases as compared to the control group.

CONCLUSIONS: PAPP-A is a valuable analyte for predicting risk of adverse pregnancy outcome and women with low serum PAPP-A levels would benefit from closer surveillance.

42: Gupta S, Sihota R, Gupta V, Dada T, Gogia V, Sharma A. Functional pituitary tumors masquerading as primary glaucoma and effect of hypophysectomy on intraocular tension. J Glaucoma. 2015 Mar;24(3):e7-13. doi: 10.1097/IJG.0b013e31829521f2. PubMed PMID: 23970340.

We report 2 bilateral cases that presented as primary ocular hypertension and primary angle-closure glaucoma, respectively; however, they were subsequently discovered to be harboring secretory pituitary tumors. After transsphenoidal tumor resection, intraocular pressures (IOPs) in all 4 eyes returned to normal levels. Sudden rise in IOP then again served as a primary manifestation of relapse in the second patient with growth hormone secreting pituitary tumor. It was not found feasible for resurgery; thus, patient needed trabeculectomy in both eyes to achieve an optimum control of intraocular tension. We conclude that pituitary adenomas may mimic primary glaucoma without producing vertical hemianopia and cause a reversible rise in IOP. Furthermore, a careful ongoing expert ophthalmologic assessment may serve as a useful clinical marker for early relapse in these tumors.

43: Gupta V, Devi K S, Kumar S, Pandey RM, Sihota R, Sharma A, Gupta S. Risk of perimetric blindness among juvenile glaucoma patients. Ophthalmic Physiol Opt. 2015 Mar;35(2):206-11. doi: 10.1111/opo.12192. Epub 2015 Feb 9. PubMed PMID: 25664420.

AIM: To estimate rates of progression and to asssess the projected lifetime risk of blindness among treated eyes of juvenile-onset primary open glaucoma (JOAG) patients.

METHODS: Rates of change of the visual field index of JOAG patients (diagnosed between the age of 10-40 years), with at least 5 year follow up, were used to estimate the lifetime risk of perimetric blindness. Both the eyes of patients were included in the analysis wherever possible. Average life expectancy of the population was used to calculate the lifetime risk of perimetric blindness. A regression analysis of factors contributing to faster rates of progression was performed.

RESULTS: One hundred and two eyes of 54 patients were included in the study. Mean age at the time of baseline visual field was 26.6 ± 9.8 years (15-40 years). The average visual field index change per year was -0.9% (range -6.4 to +2.0% per year) and 18 eyes (17%) showed a progression greater than -2% per year. The cumulative risk of an eye losing 50% and 100% of its visual field index was 30% and 22% respectively over the patients' lifetime. The projected risk of bilateral

blindness among JOAG patients over their lifetime was 10%. Long term IOP fluctuation was significantly associated with faster rates of progression (Odds ratio = 2.74; p = 0.012).
CONCLUSIONS: Though the rate of visual field deterioration with treatment, among juvenile glaucoma patients is lower compared to that among other types of primary glaucoma, the projected lifetime risk of perimetric blindness in these eyes is similar, despite the longer duration of disease in this age group.

44: Haldar P, Kant S. Interpreting internet-based trials: StopAdvisor for smoking cessation. Lancet Respir Med. 2015 Mar;3(3):e5-6. doi: 10.1016/S2213-2600(15)00027-2. Epub 2015 Mar 9. PubMed PMID: 25773216.

45: Hansdak R, Arora J, Sharma M, Mehta V, Suri RK, Das S. Unusual branching pattern of brachial artery - Embryological basis and clinicoanatomical insight. Clin Ter. 2015 Mar-Apr;166(2):65-7. doi: 10.7417/CT.2015.1817. PubMed PMID: 25945432.

Variations in the arterial pattern of upper limb are of colossal importance to the surgeons as they are liable to iatrogenic injuries. During routine dissection for undergraduate medical students, an anomaly of brachial artery was discovered. The brachial artery terminated at higher level into ulnar and radial artery. The common interosseus artery took origin arising from radial artery. The ulnar artery did not give any branches in the forearm. Both radial and ulnar artery displayed a superficial course in the forearm. The anatomical knowledge of these variations may be of great help for the clinicians in planning and conducting flap harvesting during reconstructive surgeries and in arteriography.

46: Hari P, Hari S, Sinha A, Kumar R, Kapil A, Pandey RM, Bagga A. Antibiotic prophylaxis in the management of vesicoureteric reflux: a randomized double-blind placebo-controlled trial. Pediatr Nephrol. 2015 Mar;30(3):479-86. doi: 10.1007/s00467-014-2943-z. Epub 2014 Aug 31. PubMed PMID: 25173357.

BACKGROUND: The benefits of long-term low-dose antibiotics in preventing urinary tract infection (UTI) and renal damage in children with primary vesicoureteric reflux (VUR) are unclear.

METHODS: Children aged between 1 and 12 years with VUR grade I-IV and a microbiologically proven UTI were randomized into two groups to receive either antibiotic prophylaxis [2 mg/kg trimethoprim + sulfamethoxazole (TMP-SMX)] daily or placebo, respectively, for 12 months. Primary outcome was microbiologically confirmed symptomatic UTI. Intention-to-treat analysis using time-to-event data was performed.

RESULTS: A total of 93 children (66.7 % boys) with a median age of 4.6 years were enrolled in this study; VUR grade III-IV was present in 73.1 % of these children. At least one symptomatic UTI occurred in ten (21.3 %) patients receiving antibiotic prophylaxis and in three (6.5 %) patients receiving placebo [hazard ratio in antibiotic group 3.9; 95 % confidence interval (CI) 1- 14; log rank test P = 0.02). Compared to the group receiving placebo, the antibiotic group had a 14.8 % increased risk for developing UTI (95 % CI 1-28; P = 0.03). Of the total number of episodes of UTI, 58.3 % of those in the antibiotic group were caused by TMP-SMX-resistant bacteria compared to 20 % in the placebo group (P = 0.15). A renal scan at 12 months revealed that six of 37 (16.2 %) patients in the antibiotic group and seven of 43 (16.3 %) patients in the placebo group had new or worsening of pre-existing scar.

CONCLUSIONS: Long-term antibiotic prophylaxis with TMP-SMX is associated with increased risk of symptomatic UTI compared to placebo in children with grade I-IV

VUR.

47: Irshad K, Mohapatra SK, Srivastava C, Garg H, Mishra S, Dikshit B, Sarkar C, Gupta D, Chandra PS, Chattopadhyay P, Sinha S, Chosdol K. A combined gene signature of hypoxia and notch pathway in human glioblastoma and its prognostic relevance. PLoS One. 2015 Mar 3;10(3):e0118201. doi: 10.1371/journal.pone.0118201. eCollection 2015. PubMed PMID: 25734817; PubMed Central PMCID: PMC4348203.

Hypoxia is a hallmark of solid tumors including glioblastoma (GBM). Its synergism with Notch signaling promotes progression in different cancers. However, Notch signaling exhibits pleiotropic roles and the existing literature lacks a comprehensive understanding of its perturbations under hypoxia in GBM with respect to all components of the pathway. We identified the key molecular cluster(s) characteristic of the Notch pathway response in hypoxic GBM tumors and gliomaspheres. Expression of Notch and hypoxia genes was evaluated in primary human GBM tissues by q-PCR. Clustering and statistical analyses were applied to identify the combination of hypoxia markers correlated with upregulated Notch pathway components. We found well-segregated tumor-clusters representing high and low HIF-1α/PGK1-expressors which accounted for differential expression of Notch signaling genes. In combination, a five-hypoxia marker set (HIF-1α/PGK1/VEGF/CA9/OPN) was determined as the best predictor for induction of Notch1/Dll1/Hes1/Hes6/Hey1/Hey2. Similar Notch-axis genes were activated in gliomaspheres, but not monolayer cultures, under moderate/severe hypoxia (2%/0.2% O2). Preliminary evidence suggested inverse correlation between patient survival and increased expression of constituents of the hypoxia-Notch gene signature. Together, our findings delineated the Notch-axis maximally associated with hypoxia in resected GBM, which might be prognostically relevant. Its upregulation in hypoxia-exposed gliomaspheres signify them as a better in-vitro model for studying hypoxia-Notch interactions than monolayer cultures.

48: Ismail J, Dawman L, Sankar J. Hypocalcemia, parathyroid hormone and calcitonin levels - association in critically ill children. Indian J Pediatr. 2015 Mar;82(3):210-1. doi: 10.1007/s12098-015-1690-x. Epub 2015 Jan 22. PubMed PMID: 25604247.

49: Jain BK, Bansal A, Choudhary D, Garg PK, Mohanty D. Centchroman vs tamoxifen for regression of mastalgia: a randomized controlled trial. Int J Surg. 2015 Mar;15:11-6. doi: 10.1016/j.ijsu.2014.12.033. Epub 2015 Jan 22. PubMed PMID: 25619124.

INTRODUCTION: Several agents have been tried in the management of mastalgia. Centchroman (Ormeloxifene), a novel non-steroidal selective estrogen receptor modulator (SERM), has also been recently used in the management of mastalgia. METHODS: Eligible patients, who had mastalgia for more than 3 months, were randomized into two groups - Group A received centchroman 30 mg daily and Group B received tamoxifen 10 mg daily. Treatment was continued for a total of 12 weeks; thereafter, patients were followed for another 12 weeks without medication to assess the continuum of relief. Pain severity was measured with VAS score. Patients were considered to have complete pain relief if their VAS score decreased to 3 or less.

RESULTS: Patients, in both the groups, showed gradual improvement in mastalgia with passage of time up to 12 weeks. Following cessation of treatment at 12 weeks, partial relapse of pain was observed at 24 weeks. There was no significant difference between Group A and Group B in terms of mean VAS Score and proportion of women reporting pain relief at 4, 8, 12, and 24 weeks. Fifteen patients in Group A had side effects namely dizziness, menstrual irregularities and development of ovarian cysts. There was no side effect noted in group B.

CONCLUSION: Centchroman and tamoxifen were found to be of similar effectiveness in providing pain relief in mastalgia. High frequency of side effects, particularly development of ovarian cyst, in patients receiving centchroman is a matter of concern.

50: Jaiswal A, Mridha AR, Nath D, Bhalla AS, Thakkar A. Intraparotid facial nerve schwannoma: A case report. World J Clin Cases. 2015 Mar 16;3(3):322-6. doi: 10.12998/wjcc.v3.i3.322. PubMed PMID: 25789306; PubMed Central PMCID: PMC4360505.

Facial nerve schwannoma occurring within the parotid gland is a rare tumour. We report a case of schwannoma within the parotid gland in a young female patient, who underwent ultrasound and magnetic resonance imaging (MRI) and subsequent surgical excision of the lesion. The lesion showed hyperintensity on T2-weighted and diffusion-weighted MRI. There was no adjacent lymphadenopathy. Although hyperintensity on diffusion-weighted MRI could suggest malignant tumours, the characteristic "string sign" provided the clue for the diagnosis of schwannoma.

51: Jajodia A, Kaur H, Kumari K, Gupta M, Baghel R, Srivastava A, Sood M, Chadda RK, Jain S, Kukreti R. Evidence for schizophrenia susceptibility alleles in the Indian population: An association of neurodevelopmental genes in case-control and familial samples. Schizophr Res. 2015 Mar;162(1-3):112-7. doi: 10.1016/j.schres.2014.12.031. Epub 2015 Jan 9. PubMed PMID: 25579050.

Schizophrenia is a severe psychiatric disorder with lifetime prevalence of ~1% worldwide. A genotyping study was conducted using a custom panel of Illumina 1536 SNPs in 840 schizophrenia cases and 876 controls (351 patients and 385 controls from North India; and 436 patients, 401 controls and 143 familial samples with 53 probands containing 37 complete and 16 incomplete trios from South India). Meta-analysis of this population of Indo-European and Dravidian ancestry identified three strongly associated variants with schizophrenia: STT3A (rs548181, p=1.47×10(-5)), NRG1 (rs17603876, p=8.66×10(-5)) and GRM7 (rs3864075, p=4.06×10(-3)). Finally, a meta-analysis was conducted comparing our data with data from the Schizophrenia Psychiatric Genome-Wide Association Study Consortium (PGC-SCZ) that supported rs548181 (p=1.39×10(-7)). In addition, combined analysis of sporadic case-control association and a transmission disequilibrium test in familial samples from South Indian population identified three associations: rs1062613 (p=3.12×10(-3)), a functional promoter variant of HTR3A; rs6710782 (p=3.50×10(-3)), an intronic variant of ERBB4; and rs891903 (p=1.05×10(-2)), an intronic variant of EBF1. The results support the risk variants observed in the earlier published work and suggest a potential role of neurodevelopmental genes in the schizophrenia pathogenesis.

52: Jamir L, Kalaivani M, Nongkynrih B, Misra P, Gupta SK. Anthropometric characteristics and undernutrition among older persons in a rural area of northern India. Asia Pac J Public Health. 2015 Mar;27(2):NP2246-58. doi: 10.1177/1010539513490191. Epub 2013 May 30. PubMed PMID: 23728770.

This community-based cross-sectional study was conducted to assess anthropometric characteristics and estimate the prevalence of undernutrition among older persons in rural Ballabgarh, Haryana, India. A total of 948 participants aged 60 years and above were examined. Their weight, arm span, mid-upper-arm circumference, triceps skinfold thickness, and calf circumference were measured using standard techniques. The prevalence of undernutrition was estimated to be 53.7% (95% confidence interval [CI] = 50.5-56.9). Logistic regression analysis was done to identify factors independently associated with undernutrition. In the assessment of anthropometric characteristics, the strongest correlation was observed between body mass index and mid-upper-arm circumference ($r = 0.88$; $P < .0001$). Receiver operating characteristic analysis showed that mid-upper-arm circumference has a higher ability (area under curve = 0.93; 95% CI = 0.91-0.96) of detecting

undernutrition among older persons than triceps skinfold thickness and calf circumference. The high prevalence of undernutrition among older persons in rural India warrants major public health interventions.

53: Kapil U, Toteja GS, Bhadoria AS. Cobalamin and folate deficiencies among children in the age group of 12-59 months in India. Biomed J. 2015 Mar-Apr;38(2):162-6. doi: 10.4103/2319-4170.137768. PubMed PMID: 25179719.

BACKGROUND: Anemia is a major public health problem among children under 5 years of age in India. Cobalamin and folate deficiencies play an important role in the etiology of anemia. This study was done to assess the prevalence of cobalamin and folate deficiencies among children in the age group of 12-59 months.

METHODS: A community-based cross-sectional study was conducted. A total of 470 children were included. Non-fasting venous blood samples were collected from each child for the estimation of serum cobalamin and folate levels. Pattern of dietary consumption of the each child was assessed with the help of the food frequency questionnaire (FFQ) method.

RESULTS: The median levels (interquartile range) of serum cobalamin (n = 469) and folate (n = 416) were found to be 275 (202-427) pg/ml and 3.02 (2.02-4.94) ng/ml, respectively. The overall prevalence of cobalamin and folate deficiencies was found to be 180/469 [38.4%; 95% Confidence Interval (CI): 34.1-42.8%] and 263/416 (63.2%; 95% CI: 58.5-67.7%), respectively.
CONCLUSIONS: A high prevalence of cobalamin and folate deficiencies was found in children under 5 years of age.

54: Karthikeyan G. Routine genotyping of patients on clopidogrel: Why the resistance? Indian Heart J. 2015 Mar-Apr;67(2):93-4. doi: 10.1016/j.ihj.2015.04.008. Epub 2015 May 13. PubMed PMID: 26071284; PubMed Central PMCID: PMC4475837.

55: Karunanithi S, Roy SG, Sharma P, Yadav R, Bal C, Kumar R. Metastatic Neuroendocrine Tumour in a Renal Transplant Recipient: Dual-Tracer PET-CT with (18)F-FDG and (68)Ga-DOTANOC in This Rare Setting. Nucl Med Mol Imaging. 2015 Mar;49(1):57-60. doi: 10.1007/s13139-014-0297-x. Epub 2014 Oct 17. PubMed PMID: 25767623; PubMed Central PMCID: PMC4354792.

Recipients of renal transplant are at increased risk of developing various malignancies, especially post-transplant lymphoproliferative disorder (PTLD) and skin cancers. Neuroendocrine tumours (NET) of the gastrointestinal tract have not been reported in this setting. Here we describe the case of a 75-year-old male who had undergone renal transplant 8 years back and now presented with significant weight loss and backache, clinically suspected as PTLD. (18)F-Fluordeoxyglucose ((18)F-FDG) positron emission tomography-computed tomography (PET-CT) showed hypermetabolic lesions in the liver and rectum, raising the suspicion of PTLD. However, biopsy from the liver lesion showed poorly differentiated NET. (68)Ga-labelled [1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid]-1-NaI(3)-octreotide ((68)Ga-DOTANOC) PET-CT was then done, which confirmed the primary lesion in the rectum with liver metastases.

56: Karunanithi S, Kumar G, Sharma SK, Jain D, Gupta A, Kumar R. Staging and response of sternal histoplasmosis by 18F-FDG PET/CT. Clin Nucl Med. 2015 Mar;40(3):231-3. doi: 10.1097/RLU.0000000000000578. PubMed PMID: 25188644.

Histoplasmosis, a granulomatous mycosis caused by the fungus Histoplasma capsulatum, is known to primarily affect the lungs and the immune system, with involvement of skeletal system as a rare manifestation, in which case the disease

usually assumes multifocality. We present a singular case of a young man diagnosed to have an isolated skeletal histoplasmosis involving the body of sternum where 18F-FDG PET/CT played major role in both diagnosis and in response evaluation to antifungal therapy.

57: Katyal J, Kumar H, Gupta YK. Anticonvulsant activity of the cyclooxygenase-2 (COX-2) inhibitor etoricoxib in pentylenetetrazole-kindled rats is associated with memory impairment. Epilepsy Behav. 2015 Mar;44:98-103. doi: 10.1016/j.yebeh.2014.12.032. Epub 2015 Feb 4. PubMed PMID: 25660085.

PURPOSE: Various selective and nonselective cyclooxygenase (COX) inhibitors are known to have effects on development and progression of seizures. In the present study, the effect of the selective COX-2 inhibitor etoricoxib on seizures, oxidative stress, and learning and memory was studied.

METHOD: Male Wistar rats were kindled using subconvulsant dose of pentylenetetrazole (PTZ) (30mg/kg, i.p.), on alternating days until animals were fully kindled. After a one-week PTZ-free period, kindled rats were challenged with PTZ 30mg/kg, and the latency, duration, and severity of seizures were recorded. Etoricoxib was then administered intraperitoneally at 1mg/kg and 10mg/kg in kindled rats for nine days (days 6-14). On the ninth day of etoricoxib treatment, PTZ challenge (30mg/kg) was given, and seizure parameters were noted. On day 15, behavioral assessment was carried out. The Morris water maze (MWM) apparatus and the passive avoidance (PA) apparatus were used for studying cognitive impairment. The rats were then sacrificed, and malondialdehyde (MDA) and glutathione (GSH), markers of oxidative stress, were estimated in the brain samples.

RESULTS: Etoricoxib at lower dose (1mg/kg) had an anticonvulsant effect which was reduced or reversed at higher dose (10mg/kg). Etoricoxib also impaired the learning and memory in rats as tested by passive avoidance and Morris water maze tests.

CONCLUSION: The results of the present study suggest that use of etoricoxib, especially at low dose, in patients with epilepsy may not be detrimental with regard to seizure control. However, attention should be paid to cognitive parameters.

58: Kaur A, Shah N, Logani A, Mishra N. Biotoxicity of commonly used root canal sealers: A meta-analysis. J Conserv Dent. 2015 Mar-Apr;18(2):83-8. doi: 10.4103/0972-0707.153054. Review. PubMed PMID: 25829682; PubMed Central PMCID: PMC4379664.

INTRODUCTION: The main objective of a root canal sealer is to provide a fluid tight seal. The purpose of this systematic meta-analysis was to determine the relative toxicity of commonly used root canal sealers like zinc oxide eugenol, calcium hydroxide, and resin-based sealers.

MATERIALS AND METHODS: An online search was conducted in peer-reviewed journals listed in PubMed, Cochrane, EBSCO, and IndMed databases between 2000 and 2012). Statistical analysis was carried out by using analysis of variance (ANOVA) followed by post-hoc comparison by Bonferroni method. The comparison between toxicity at 24 h and between 3 and 7 days was done by using paired t-test for each sealer.

RESULTS: At 24 h, the relative biotoxicity of the three sealers reported was insignificant (P- value 0.29), but the difference in toxicity was found significant ($P < 0.001$) after 3 days.
CONCLUSION: Calcium hydroxide sealer and zinc oxide eugenol were found to be significantly biotoxic as compared to resin-based sealers after 3 days.

59: Kaur M, Saxena R, Singh D, Behari M, Sharma P, Menon V. Correlation Between Structural and Functional Retinal Changes in Parkinson Disease. J Neuroophthalmol. 2015 Mar 24. [Epub ahead of print] PubMed PMID: 25807477.

BACKGROUND: To evaluate structural changes in the retina and correlate those with visual function measurements in patients with Parkinson disease (PD).
METHODS: A cross-sectional comparative study of 20 patients with PD and 20 age-matched healthy controls was conducted. Visual acuity, color vision, contrast sensitivity, visual fields, pattern visual-evoked response (VER), and multifocal electroretinogram were recorded to determine functional change, whereas structural changes were evaluated with retinal nerve fiber layer (RNFL) thickness, macular thickness, macular volume, and ganglion cell-inner plexiform layer complex (GCL-IPL) thickness using spectral domain ocular coherence tomography (SD-OCT).

RESULTS: PD patients ranged from Stage 1-3, with median Stage 2 (Hoehn and Yahr Classification) with mean Unified Parkinson Disease Rating Scale III score of 19 ± 10.42, and average disease duration of 5.8 ± 2.78 years. Visual acuity, color vision, and visual fields were unaffected but contrast sensitivity was significantly worse than controls ($P < 0.001$). Multifocal electroretinogram values in the central 2° field revealed decreased foveal electrical activity, with increased pattern VER amplitude and latency. Significant RNFL thinning was observed in the average RNFL ($P = 0.033$), superior ($P = 0.018$), and temporal ($P = 0.036$) quadrants. Significant ganglion cell layer loss was captured on SD-OCT with average, minimum GCL-IPL, and all 6 sectors showing thinning ($P \leq 0.003$). The functional changes correlated significantly with structural changes, disease duration, and severity. There was no correlation between structural changes in the retina and disease duration or severity.

CONCLUSIONS: Subclinical visual dysfunction was observed in patients with PD with good structural-functional correlation. GCL-IPL thinning may be a more reliable parameter than RNFL thickness for structural alterations of the retina in patients with PD.

60: Kedia S, Sharma R, Nagi B, Mouli VP, Aananthakrishnan A, Dhingra R, Srivastava S, Kurrey L, Ahuja V. Computerized tomography-based predictive model for differentiation of Crohn's disease from intestinal tuberculosis. Indian J Gastroenterol. 2015 Mar;34(2):135-43. doi: 10.1007/s12664-015-0550-y. Epub 2015 May 14. PubMed PMID: 25966870.

BACKGROUND: Intestinal tuberculosis (ITB) and Crohn's disease (CD) have clinical, radiological, endoscopic, and histological resemblance. There is paucity of literature regarding differentiation of CD and ITB based on radiology using computed tomography (CT).
AIMS: The present study was designed to compare CT features of ITB and CD and develop a predictive model to differentiate ITB and CD.

METHODS: Patients with ITB and CD, who underwent CT enteroclysis/CT enterography/CT abdomen before starting treatment, were recruited. Specific findings were noted by a radiologist who was blinded to the diagnosis. A predictive model was developed based on the features which were significantly different in these diseases.

RESULTS: Fifty-four patients with CD and 50 patients with ITB were compared. On univariate analysis, left colonic involvement, ileocecal involvement, long-segment involvement, comb sign, presence of skip lesions, involvement of ≥3 segments and ≥1-cm sized lymph nodes were significantly different between CD and ITB. On multivariate analysis, ileocecal involvement, long-segment involvement and the presence of lymph node ≥1 cm were statistically significant. Based upon the latter three variables, a risk score (with values ranging from 0 to 3) was generated, with scores 0 and 1 having specificity of 100 % and 87 %,

respectively, and positive predictive values (PPV) of 100 % and 76 %, respectively, for ITB and scores 2 and 3 having specificity of 68 % and 90 %, respectively, and PPV of 63 % and 80 %, respectively, for CD.

CONCLUSIONS: A predictive model based on the presence of long-segment involvement, ileocecal involvement and lymph nodes sized ≥1 cm on CT could differentiate ITB and CD with good specificity and PPV.

61: Khan MS, Karnam HF, Verma M. Accidental spillage of breathing circuit condensate into airway leading to ventilator-associated pneumonia. J Crit Care. 2015 Jun;30(3):646-7. doi: 10.1016/j.jcrc.2015.02.018. Epub 2015 Mar 7. PubMed PMID: 25791767.

62: Khandelwal P, Sharma S, Bhardwaj S, Thergaonkar RW, Sinha A, Hari P, Lodha R, Bagga A. Experience with Continuous Renal Replacement Therapy. Indian J Pediatr. 2015 Mar 18. [Epub ahead of print] PubMed PMID: 25776002.

Information on provision of continuous renal replacement therapy (CRRT) in critically ill children from developing countries is limited. The authors describe their experience in 17 children with hypotension and acute kidney injury (AKI) with fluid overload or electrolyte imbalance managed by 20 sessions of CRRT. The median (range) age and weight were 6 y (0.75-18) and 20 kg (6.2-42), respectively. All patients were receiving inotropic agents; nine had fluid overload (19 %, range 11-34.1 %) and ten had severe AKI. Median clearance and filter-life were 2171.4 ml/1.73 m(2)/h (1730.6-4405.8) and 69.7 h (2.8-98.3), respectively. Complications were catheter flow related (n=1), filter clotting (n=3), hemorrhage (n=3), hypokalemia (n=16) and hypophosphatemia (n=11). Eight patients (47.1 %) survived; the median PRISM III score of survivors was significantly lower than non survivors (10.5 vs.17.0; P 0.02). Renal function recovered in the survivors emphasizing the role of this modality in managing critically ill patients.

63: Khandelwal P, Gupta A, Sinha A, Saini S, Hari P, Dragon Durey MA, Bagga A. Effect of plasma exchange and immunosuppressive medications on antibody titers and outcome in anti-complement factor H antibody-associated hemolytic uremic syndrome. Pediatr Nephrol. 2015 Mar;30(3):451-7. doi: 10.1007/s00467-014-2948-7. Epub 2014 Sep 13. PubMed PMID: 25217328.

BACKGROUND: Anti-complement factor H (anti-CFH) antibody-associated hemolytic uremic syndrome (HUS) is an important cause of acute kidney injury in Indian children. While management comprises plasma exchange and immunosuppression, information on the impact on serial antibody titers and outcomes is limited.
METHODS: This retrospective study included 45 patients with anti-CFH-associated HUS who were followed for ≥12 months. Following the initial plasma exchange sessions, patients received prednisolone and either intravenous (IV) cyclophosphamide (n=31) or IV rituximab (n=14), followed by maintenance immunosuppression.

RESULTS: The median anti-CFH antibody titers fell from 3,215.5 [interquartile range (IQR) 1,977.9-8,453.9 to 414.6 (IQR 251.6-1,368.2) AU/ml with plasma exchange therapy (P<0.0001), and the decline was similar with three, five, or seven plasma exchange sessions (P=0.08). Serial anti-CFH titers were similar in patients receiving IV cyclophosphamide- and rituximab-based regimens during the 12-month follow-up (P=0.63). Renal outcomes and relapse frequencies at the 15.4-month follow-up were comparable. Seven patients relapsed 6.5 (IQR 2.2-12.3) months from treatment onset. Patients with relapse had higher antibody titers during remission (P=0.017). Titers of ≥1,300 AU/ml at 6 months predicted subsequent relapses.

CONCLUSIONS: Our patients with anti-CFH antibody-associated HUS showed a significant fall in antibody titers following daily plasma exchange sessions.

Therapy with cyclophosphamide- or rituximab-based regimens was associated with similar outcomes and a comparable decline in antibody titers.

64: Khandpur S, Sahni K. Authors' reply. Indian J Dermatol. 2015 Mar-Apr;60(2):198-9. PubMed PMID: 25814715; PubMed Central PMCID: PMC4372919.

65: Khokhar S, Sharma R, Patil B, Aron N, Gogia SG. Response to: 'A different approach for manual foldable IOL injection for keeping wound size and integrity'. Eye (Lond). 2015 Mar;29(3):447. doi: 10.1038/eye.2014.301. Epub 2014 Dec 19. PubMed PMID: 25523203; PubMed Central PMCID: PMC4366467.

66: Khurana S, Pushker N, Naik SS, Changole MD, Ghonsikar V, Bajaj M. Periorbital necrotising fasciitis in infants: Presentation and management of six cases. Trop Doct. 2015 Jul;45(3):188-93. doi: 10.1177/0049475515575671. Epub 2015 Mar 17. PubMed PMID: 25786437.

PURPOSE: To present the clinical features and management of infants presenting with periorbital necrotising fasciitis (NF).
METHODS: Retrospective case series.
RESULTS: Six children were studied. The age at presentation was in the range of 5-11 months (median, 8 months). All children presented with acute onset eyelid inflammation and necrosis with fever, lethargy and poor oral intake. The management included intravenous antibiotics and repeated surgical debridement. The infection healed by 2-3 weeks in all cases, resulting in cicatricial ectropion and lagophthalmos. Full thickness skin grafting (with a Hughes tarso-conjunctival graft in one child) was performed in all patients at 3-5 weeks subsequently. Repeat surgery was required in three children. Adequate globe coverage and cosmesis was achieved in five children.
CONCLUSION: NF of eyelids is a potentially fatal infection that requires urgent and vigorous management and heals with sequelae that may need more than one surgical intervention over a period of time. Adequate cosmetic and functional outcomes can be achieved.

67: Kumar A, Pathak P, Purkait S, Faruq M, Jha P, Mallick S, Suri V, Sharma MC, Suri A, Sarkar C. Oncogenic KIAA1549-BRAF fusion with activation of the MAPK/ERK pathway in pediatric oligodendrogliomas. Cancer Genet. 2015 Mar;208(3):91-5. doi: 10.1016/j.cancergen.2015.01.009. Epub 2015 Feb 20. PubMed PMID: 25794445.

Pediatric oligodendrogliomas (pODGs) are rare central nervous system tumors, and comparatively little is known about their molecular pathogenesis. Co-deletion of 1p/19q; and IDH1, CIC, and FUBP1 mutations, which are molecular signatures of adult oligodendrogliomas, are extremely rare in pODGs. In this report, two pODGs, one each of grade II and grade III, were evaluated using clinical, radiological, histopathologic, and follow-up methods. IDH1, TP53, CIC, H3F3A, and BRAF-V600 E mutations were analyzed by Sanger sequencing and immunohistochemical methods, and 1p/19q co-deletion was analyzed by fluorescence in situ hybridization. PDGFRA amplification, BRAF gain, intragenic duplication of FGFR-TKD, and KIAA1549-BRAF fusion (validated by Sanger sequencing) were analyzed by real-time reverse transcription PCR. Notably, both cases showed the oncogenic KIAA1549_Ex15-BRAF_Ex9 fusion transcript. Further, immunohistochemical analysis showed activation of the MAPK/ERK pathway in both of these cases. However, neither 1p/19q co-deletion; IDH1, TP53, CIC, H3F3A, nor BRAF-V600 E mutation; PDGFRA amplification; BRAF gain; nor duplication of FGFR-TKD was identified. Overall, this study highlights that pODGs can harbor the KIAA1549-BRAF fusion with aberrant MAPK/ERK signaling, and there exists an option of targeting these pathways in such patients. These results indicate that pODGs with the KIAA1549-BRAF fusion may represent a subset of this rare tumor that shares molecular and genetic features of pilocytic astrocytomas. These findings will increase our understanding of pODGs and may have clinical implications.

68: Kumar A, Singh B, Kusuma YS. Counselling services in prevention of mother-to-child transmission (PMTCT) in Delhi, India: an assessment through a modified version of UNICEF-PPTCT tool. J Epidemiol Glob Health. 2015 Mar;5(1):3-13. doi: 10.1016/j.jegh.2014.12.001. Epub 2015 Jan 16. PubMed PMID: 25700918.

The study aims to assess the counselling services provided to prevent mother to child transmission of HIV (PMTCT) under the Indian programme of prevention of parent-to-child transmission of HIV (PPTCT). Five hospitals in Delhi providing PMTCT services were randomly selected. A total of 201 post-test counselled women were interviewed using a modified version of the UNICEF-PPTCT evaluation tool. Knowledge about HIV transmission from mother-to-child was low. Post-test counselling mainly helped in increasing the knowledge of HIV transmission; yet 20%-30% of the clients missed this opportunity. Discussion on window period, other sexually transmitted diseases and danger signs of pregnancy were grossly neglected. The PMTCT services during the antenatal period are feasible and agreeable to be provided; however, certain aspects, like lack of privacy, confidentiality of HIV status of the client, counsellor's 'hurried' attitude, communication skills and discriminant behaviour towards HIV-positive clients, and disinterest of clients in the counselling, remain as gaps. These issues may be addressed through refresher training to counsellors with an emphasis on social and behaviour change communication strategies. Addressing attitudinal aspects of the counsellors towards HIV positives is crucial to improve the quality of the services to prevent mother-to-child transmission of HIV.

69: Kumar L, Pramanik R, Kumar S, Bhatla N, Malik S. Neoadjuvant chemotherapy in gynaecological cancers - Implications for staging. Best Pract Res Clin Obstet Gynaecol. 2015 Mar 6. pii: S1521-6934(15)00032-2. doi: 10.1016/j.bpobgyn.2015.02.008. [Epub ahead of print] PubMed PMID: 25840650.

The management of advanced gynaecological cancers remains a therapeutic challenge. Neoadjuvant chemotherapy has been used to reduce tumour size, thus facilitating subsequent local treatment in the form of surgery or radiation. For advanced epithelial ovarian cancer, data from several non-randomized and one randomized studies indicate that neoadjuvant chemotherapy followed by interval debulking surgery is a reasonable approach in patients deemed inoperable. Such an approach results in optimum debulking (no visible tumour) in approximately 40% of the patients with reduced operative morbidity. Overall and progression free-survival is comparable to the group treated with primary debulking surgery followed by chemotherapy. Neoadjuvant chemotherapy followed by surgery is associated with improved survival for women with stage IB2-IIA cervix cancer. There is a resurgence of interest for using short-course neoadjuvant chemotherapy prior to concurrent chemo-radiation. Currently, this is being tested in randomized trials.

70: Kumar R, Prasad L. Paradoxical Enlargement of Giant Intracranial Tuberculoma Mimicking Glioma. Indian J Pediatr. 2015 Mar 6. [Epub ahead of print] PubMed PMID: 25740783.

71: Lohia LK, Meena S, Kanojia RK. Comparative study of complete subtalar release and Joshi's external stabilization system in the management of neglected and resistant idiopathic clubfoot. Foot Ankle Surg. 2015 Mar;21(1):16-21. doi: 10.1016/j.fas.2014.08.007. Epub 2014 Aug 27. PubMed PMID: 25682401.

BACKGROUND: Various procedures have been used for the management of neglected and

resistant clubfoot. The aim of our study was to assess the clinical and radiological correction by Joshi's external stabilization system (JESS fixator) and Simons subtalar release in resistant and neglected idiopathic congenital talipes equinovarus in children between the ages of 1 and 2 years.
METHODS: A total of 50 resistant and neglected clubfeet were randomly divided into two equal groups of 25 feet each. Group I was treated with JESS fixator and group II was treated with complete subtalar release as described by Simons. Assessment of correction achieved was done both clinically and radiologically. Functional outcome was assessed with Ponseti scale.

RESULTS: The change in clinical deformity and radiological correction of deformity were statistically significant within each group, but not significant when compared to each other. In group I excellent results were obtained in 17 (68%) and good in 8 (32%) of the feet. In group II, excellent results were found in 16 (64%) and good in 9 (36%) feet out of the 25 feet. Pin-site infections were seen in two cases in group I and serious skin problems occurred in two feet in group II.

CONCLUSION: We conclude that there were no statistical significant differences between the outcomes of the two techniques in this short-term follow-up of 2.4 years. Thus, functional distraction using JESS can be utilized as an alternative method in cases of neglected and resistant clubfoot.

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Alveolar echinococcosis is a parasitic disease primarily invading the liver. Due to its aggressive nature, it invades the adjacent structures and can even metastasize to distant organs. The appearance of hepatic involvement on computed tomographic scan is characteristic, but not specific, with areas of calcification seen within a hypoenhancing mass. Although magnetic resonance imaging may better define the extent of the disease, it often misleads the radiologist, especially if the lesion is devoid of cystic component(s) and if it occurs in nonendemic areas. Knowledge of the imaging appearance may prompt serological evaluation and aid in making an early diagnosis and planning appropriate treatment of this uncommon fatal disease, especially in nonendemic areas.

PMID: 25795033 [PubMed - in process]

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This study aimed to investigate the biochemical profile of blood plasma of patients with coronary artery disease (CAD) and angiographically normal subjects (controls) to determine biomarkers for their differentiation. In this double blind study, 5 mL venous blood was drawn before angiography from CAD patients (n=60) and controls (n=13) comprising angiography normal individuals. In vitro high-resolution NMR spectroscopy of these blood plasma samples was carried out at

400 MHz, and intensity data were analysed with partial least square discriminant analysis. Categorization of subjects as controls or CAD patients and the patients further as single vessel disease (SVD), double vessel disease (DVD) and triple vessel disease (TVD) was done at the end of the study based on their angiography reports. Raised levels of lipids, alanine (Ala) and isoleucine/leucine/valine (Ile/Leu/Val) were observed in CAD patients compared with controls. Partial least square discriminant analysis showed separation between controls vs CAD patients. TVD patients showed increased levels of Ile/Leu/Val and Ala compared with controls and SVD. Alanine, Ile/Leu/Val, and LDL/VLDL appear as possible biomarkers for distinguishing between controls and patients with SVD and TVD. A metabolic adaptation of myocardium may play a role in raising the Ala level.

PMID: 25740139 [PubMed - in process]

75: Malik MA. MDR1C3435T polymorphism and inflammatory bowel disease. Saudi J Gastroenterol. 2015 Mar-Apr;21(2):121-2. doi: 10.4103/1319-3767.153843. PubMed PMID: 25843201; PubMed Central PMCID: PMC4392574.

76: Mallick S, Roy S, Benson R, Das S, Julka PK, Rath GK. Rare sites of metastasis from gall bladder carcinoma. J Gastrointest Cancer. 2015 Mar;46(1):74-6. doi: 10.1007/s12029-014-9674-z. PubMed PMID: 25471488.

77: Mallick S, Benson R, Julka PK, Rath GK. Shifting paradigm in the management of anal canal carcinoma. J Gastrointest Cancer. 2015 Mar;46(1):1-4. doi: 10.1007/s12029-014-9673-0. PubMed PMID: 25432583.

BACKGROUND: Anal canal is the lower most part of the gastrointestinal tract harbouring 4 % of all gastrointestinal cancer. Most common treatment for anal canal carcinoma includes chemoradiotherapy.
METHODOLOGY: We reviewed the recent landmark trials to find a road map in the management of anal canal carcinoma.
RESULTS: Concurrent chemoradiotherapy appears to be the most effective treatment schedule. Induction, as well as maintenance chemotherapy, has no definite role. Moderate dose radiation 50.4-54 Gy with concurrent mitomycin C (MMC) and 5-fluorouracil (5-FU) remains the standard. Split course is detrimental. Intensity-modulated radiotherapy and targeted drugs are investigated.
CONCLUSION: Combined modality therapy is the standard for anal canal carcinoma.

78: Marwaha RK, Garg MK, Tandon N, Mahalle N. Comparison of body composition between professional sportswomen and apparently healthy age- and sex-matched controls. Indian J Endocrinol Metab. 2015 Mar-Apr;19(2):288-91. doi: 10.4103/2230-8210.149323. PubMed PMID: 25729694; PubMed Central PMCID: PMC4319272.

INTRODUCTION: In view of the relationship between physical activity and nutrition on body composition, we assessed lean and fat mass and BMC (total and regional) in professional Indian sportswomen and compared it with apparently healthy age- and sex-matched females.
MATERIALS AND METHODS: This cross-sectional study included 104 sportswomen and an equal number of age-matched normal healthy females (controls). They were evaluated for anthropometry and body composition (fat, lean mass, and bone mineral content (BMC) by DXA.
RESULTS: Mean age (19.1 ± 1.3 vs. 19.4 ± 1.5 years) and body mass index (21.34 ± 3.02 vs. 21.26 ± 4.05 kg/m(2)) were comparable in both groups. Sportswomen had higher intake of energy, macronutrients, calcium, phosphorus and magnesium. Total lean mass (33.67 ± 3.49 vs. 31.14 ± 3.52 kg, $P < 0.0001$), appendicular skeletal muscle index (5.84 ± 0.57 vs. 5.46 ± 0.63 kg/m(2); $P < 0.0001$) and BMC (2.27 ± 0.32 vs. 2.13 ± 0.34 kg, $P < 0.002$) was significantly higher and percentage fat mass was significantly lower (33.1 ± 7.5 vs. 37.0 ± 8.3; $P < 0.0001$) among sportswomen when compared to controls.

CONCLUSIONS: Indian sportswomen have a higher total and regional lean mass, BMC, and lower percentage fat mass when compared with healthy females. Physical activity, energy, protein and calcium intake were positively associated with lean mass and BMC.

79: Maulik SK, Mishra S. Hypertrophy to failure: what goes wrong with the fibers of the heart? Indian Heart J. 2015 Jan-Feb;67(1):66-9. doi: 10.1016/j.ihj.2015.02.012. Epub 2015 Mar 14. PubMed PMID: 25820056; PubMed Central PMCID: PMC4382541.

80: Meena NK, Ahuja V, Meena K, Paul J. Association of TLR5 gene polymorphisms in ulcerative colitis patients of north India and their role in cytokine homeostasis. PLoS One. 2015 Mar 19;10(3):e0120697. doi: 10.1371/journal.pone.0120697. eCollection 2015. PubMed PMID: 25789623; PubMed Central PMCID: PMC4366177.

BACKGROUND AND AIM: In health, TLR signaling protects the intestinal epithelial barrier and in disease, aberrant TLR signaling stimulates diverse inflammatory responses. Association of TLR polymorphisms is ethnicity dependent but how they impact the complex pathogenesis of IBD is not clearly defined. So we propose to study the status of polymorphisms in TLR family of genes and their effect on cytokines level in UC patients.

METHODS: The genotypes of the six loci TLR1-R80T, TLR2-R753Q, TLR3-S258G, TLR5-R392X, TLR5-N592S and TLR6-S249P were determined in 350 controls and 328 UC patients by PCR-RFLP and sequencing. Cytokine levels were measured by ELISA in blood plasma samples. Data were analyzed statistically by SPSS software. RESULTS: TLR5 variants R392X and N592S showed significant association ($p = 0.007$, 0.021) with UC patients but TLR 1, 2, 3, 6 variants did not show any association. Unlike other studies carried out in different ethnic groups, TLR 6 (S249P) SNP was universally present in our population irrespective of disease. Genotype-phenotype correlation analysis revealed that the patients having combination of multiple SNPs both in TLR5 and TLR4 gene suffered from severe disease condition and diagnosed at an early age. The level of TNFα ($p = 0.004$), IL-6 ($p = 0.0001$) and IFNγ ($p = 0.006$) significantly increased in patients as compared to controls having wild genotypes for the studied SNPs. However, there was decreased level of TNFα ($p = 0.014$), IL-6 ($p = 0.028$) and IFNγ ($p = 0.001$) in patients carrying TLR5-R392X variant as compared to wild type patients. Patients carrying two simultaneous SNPs D299G in TLR4 gene and N592S in TLR5 gene showed significant decrease in the levels of TNFα ($p = 0.011$) and IFNγ ($p = 0.016$).

CONCLUSION: Polymorphisms in TLR 5 genes were significantly associated with the UC in North Indian population. The cytokine level was significantly modulated in patients with different genotypes of TLR4 and TLR5 SNPs.

81: Mishra A, Agrawal D, Gupta D, Sinha S, Satyarthee GD, Singh PK. Traumatic spondyloptosis: a series of 20 patients. J Neurosurg Spine. 2015 Jun;22(6):647-52. doi: 10.3171/2014.10.SPINE1440. Epub 2015 Mar 13. PubMed PMID: 25768668.

OBJECT Spondyloptosis represents the most severe form of spondylolisthesis, which usually follows high-energy trauma. Few reports exist on this specific condition, and the largest series published to date consists of only 5 patients. In the present study the authors report the clinical observations and outcomes in a cohort of 20 patients admitted to a regional trauma center for severe injuries including spondyloptosis. METHODS The authors performed a retrospective chart review of patients admitted with spondyloptosis at their department over a 5-year period (March 2008-March 2013). Clinical, radiological, and operative details were reviewed for all patients. RESULTS In total, 20 patients with spondyloptosis were treated during the period reviewed. The mean age of the patients was 27 years (range 12-45 years), and 17 patients were male (2 boys and 15 men) and 3

were women. Fall from height (45%) and road traffic accidents (35%) were the most common causes of the spinal injuries. The grading of the American Spinal Injury Association (ASIA) was used to assess the severity of spinal cord injury, which for all patients was ASIA Grade A at the time of admission. In 11 patients (55%), the thoracolumbar junction (T10-L2) was involved in the injury, followed by the dorsal region (T1-9) in 7 patients (35%); 1 patient (5%) had lumbar and 1 patient (5%) sacral spondyloptosis. In 19 patients (95%), spondyloptosis was treated surgically, involving the posterior route in all cases. In 7 patients (37%), corpectomy was performed. None of the patients showed improvement in neurological deficits. The mean follow-up length was 37.5 months (range 3-60 months), and 5 patients died in the follow-up period from complications due to formation of bedsores (decubitus ulcers). CONCLUSIONS To the authors' best knowledge, this study was the largest of its kind on traumatic spondyloptosis. Its results illustrate the challenges of treating patients with this condition. Despite deformity correction of the spine and early mobilization of patients, traumatic spondyloptosis led to high morbidity and mortality rates because the patients lacked access to rehabilitation facilities postoperatively.

82: Mitra DK, Singh A, Mohan A, Dey AB. Reply to Stephen-Victor et al. J Infect Dis. 2015 Mar 15;211(6):1029-31. doi: 10.1093/infdis/jiu533. Epub 2014 Sep 25. PubMed PMID: 25258378.

83: Morey VM, Jalan D, Mittal R, Gamangatti S. Author's reply. Indian J Orthop. 2015 Mar-Apr;49(2):262. PubMed PMID: 26015621; PubMed Central PMCID: PMC4436498.

84: Mridha AR, Ranjan R, Kinra P, Ray R, Khan SA, Shivanand G. Angiomyomatous hamartoma of popliteal lymph node: an unusual entity. J Pathol Transl Med. 2015 Mar;49(2):156-8. doi: 10.4132/jptm.2013.08.08. Epub 2015 Mar 12. PubMed PMID: 25812737; PubMed Central PMCID: PMC4367112.

85: Mukherjee A, Karunanithi S, Singla S, Agarwal KK, Kumar A, Kumar R. ^{18}F-FDG PET/CT imaging in blow-out metastases of clavicle from carcinoma of urinary bladder. Rev Esp Med Nucl Imagen Mol. 2015 Mar-Apr;34(2):136-8. doi: 10.1016/j.remn.2014.03.003. Epub 2014 Nov 24. PubMed PMID: 25444393.

86: Mukherjee A, Velpandian T, Singla M, Kanhiya K, Kabra SK, Lodha R. Pharmacokinetics of isoniazid, rifampicin, pyrazinamide and ethambutol in Indian children. BMC Infect Dis. 2015 Mar 14;15:126. doi: 10.1186/s12879-015-0862-7. PubMed PMID: 25887748; PubMed Central PMCID: PMC4373095.

BACKGROUND: The available pharmacokinetic data on anti-tubercular drugs in children raises the concern of suboptimal plasma concentrations attained when doses extrapolated from adult studies are used. Also, there is lack of consensus regarding the effect of malnutrition on pharmacokinetics of anti-tubercular drugs in children. We conducted this study with the aims of determining the plasma concentrations of isoniazid, rifampicin, pyrazinamide and ethambutol achieved with different dosage of the anti-tubercular drugs so as to provide supportive evidence to the revised dosages and to evaluate the effects of malnutrition on the pharmacokinetics of these drugs in children. We also attempted to correlate the plasma concentrations of these drugs with clinical outcome of therapy.

METHOD: Prospective drug estimation study was conducted in two groups of children, age 6 months to 15 years, with tuberculosis, with or without severe malnutrition, receiving different dosage of daily anti- tubercular therapy. The dosage (range) of isoniazid was 5 (4-6) and 10 (7-15) mg/kg in the two groups, respectively, that of rifampicin-10 (8-12) and 15 (10-12) mg/kg, respectively, both the groups received same dose of pyrazinamide (30-35 mg/kg) and ethambutol (20-25 mg/kg). All four drugs were simultaneously estimated by liquid

chromatography-mass spectrometry (LC-MS/MS).

RESULTS AND CONCLUSION: The median (IQR) Cmax of isoniazid increased significantly from 0.6 (0.3,1.2) µg/mL to 3.4 (1.8, 5.0) µg/mL with increase in the dose. Plasma rifampicin concentrations increased only marginally on increasing the dose [median (IQR) Cmax: 10.4 (7.2, 13.9) µg/mL vs. 12.0 (6.1, 24.3) µg/mL, p=0.08]. For ethambutol, 55.9% of the children had inadequate 2-hour concentrations. Two-hour plasma concentrations of at least one drug were low in 59 (92.2%) and 54 (85.7%) children in the two dosing regimen, respectively. We did not observe any effect of malnutrition on pharmacokinetic parameters of the drugs studied. We did not observe an association between low plasma drug concentrations and poor outcome. We may have to be cautious while increasing the doses and strive to asses other factors influencing the drug concentrations and treatment outcomes in children.

87: Nagori SA, Jose A, Bhutia O, Roychoudhury A. A Case of Oro-antral Communication Closed by Autotransplantation of Third Molar. J Maxillofac Oral Surg. 2015 Mar;14(Suppl 1):448-51. doi: 10.1007/s12663-014-0671-3. Epub 2014 Aug 1. PubMed PMID: 25848156; PubMed Central PMCID: PMC4379303.

A number of surgical treatment modalities have been described in literature for closure of oro-antral communications. None of the methods however provide for immediate prosthetic rehabilitation of the communication site. We describe a case of oro-antral communication treated using autogenous third molar transplantation. At 18 months of follow-up, the transplanted tooth was functioning well with radiographic evidence of lamina dura and periodontal ligament. Its root-tip was still seen projecting into the maxillary sinus. This report suggests that when possible, autotransplantation of third molar can be a simple and excellent choice for closure of oro-antral communications.

88: Nagori SA, Jose A, Bhutia O, Roychoudhury A. Young male with rapidly swelling jaw. Ann Emerg Med. 2015 Mar;65(3):255-76. doi: 10.1016/j.annemergmed.2014.05.022. PubMed PMID: 25702180.

89: Naik N. How to perform transeptal puncture. Indian Heart J. 2015 Jan-Feb;67(1):70-6. doi: 10.1016/j.ihj.2015.02.024. Epub 2015 Mar 12. PubMed PMID: 25820057; PubMed Central PMCID: PMC4382550.

90: Nair A, Kandasamy D, Tripathi M, Jyotsna VP. Gall bladder agenesis in Prader Willi syndrome. Indian J Endocrinol Metab. 2015 Mar-Apr;19(2):305. doi: 10.4103/2230-8210.149329. PubMed PMID: 25729700; PubMed Central PMCID: PMC4319278.

91: Nambirajan A, Bhowmik D, Singh G, Agarwal SK, Dinda AK. Monoclonal gammopathy of renal significance with light-chain deposition disease diagnosed postrenal transplant: a diagnostic and therapeutic challenge. Transpl Int. 2015 Mar;28(3):375-9. doi: 10.1111/tri.12497. Epub 2014 Dec 16. PubMed PMID: 25441103.

Patients with light-chain deposition disease (LCDD) frequently do not meet criteria for myeloma. In such cases, despite low tumor burden, the circulating monoclonal immunoglobulins cause renal damage, are responsible for post-transplant recurrence, and are rightly categorized as monoclonal gammopathy of renal significance (MGRS) requiring chemotherapy. A 65-year male with uncharacterized nodular glomerulopathy presented with proteinuria 3 years postrenal transplant. His allograft biopsies were diagnostic of light-chain deposition disease (likely recurrent), and in the absence of myeloma, he was labeled as MGRS. Based on the limited literature available, he was treated with bortezomib which resulted in normalization of serum-free light-chain ratios and resolution of proteinuria. He, however, later succumbed to complications of

chemotherapy. This case highlights the diagnostic difficulties in LCDD, the importance of an accurate pretransplant diagnosis, and treatment of the malignant clone, in the absence of which post-transplant management of recurrence is challenging with poor outcomes.

92: Nattusamy L, Madan K, Mohan A, Hadda V, Jain D, Madan NK, Arava S, Khilnani GC, Guleria R. Utility of semi-rigid thoracoscopy in undiagnosed exudative pleural effusion. Lung India. 2015 Mar-Apr;32(2):119-26. doi: 10.4103/0970-2113.152618. PubMed PMID: 25814795; PubMed Central PMCID: PMC4372864.

BACKGROUND: Semi-rigid thoracoscopy is a safe and efficacious procedure in patients with undiagnosed pleural effusion. Literature on its utility from developing countries is limited. We herein describe our initial experience on the utility of semi-rigid thoracoscopy from a tertiary care teaching and referral center in north India. We also perform a systematic review of studies reporting the utility of semi-rigid thoracoscopy from India.

PATIENTS AND METHODS: The primary objective was to evaluate the diagnostic utility of semi-rigid thoracoscopy in patients with undiagnosed exudative pleural effusion. Semi-rigid thoracoscopy was performed under local anesthesia and conscious sedation in the bronchoscopy suite.

RESULTS: A total of 48 patients underwent semi-rigid thoracoscopy between August 2012 and December 2013 for undiagnosed pleural effusion. Mean age was 50.9 ± 14.1 years (range: 17-78 years). Pre-procedure clinico-radiological diagnoses were malignant pleural effusion [36 patients (75%)], tuberculosis (TB) [10 (20.83%) patients], and empyema [2 patients (4.17%)]. Patients with empyema underwent the procedure for pleural biopsy, optimal placement of intercostal tube and adhesiolysis. Thoracoscopic pleural biopsy diagnosed pleural malignancy in 30 (62.5%) patients and TB in 2 (4.17%) patients. Fourteen (29.17%) patients were diagnosed with non-specific pleuritis and normal pleura was diagnosed on a pleural biopsy in 2 (4.17%) patients. Overall, a definitive diagnosis of either pleural malignancy or TB was obtained in 32 (66.7%) patients. Combined overall sensitivity, specificity, positive predictive value and negative predictive value of thoracoscopic pleural biopsy for malignant pleural effusion were 96.77%, 100%, 100% and 66.67%, respectively. There was no procedure-related mortality. On performing a systematic review of literature, four studies on semi-rigid thoracoscopy from India were identified.

CONCLUSION: Semi-rigid thoracoscopy is a safe and efficacious procedure in patients with undiagnosed exudative pleural effusions.

93: Neogi DS, Trikha V, Mishra KK, Bandekar SM, Yadav CS. Comparative study of single lateral locked plating versus double plating in type C bicondylar tibial plateau fractures. Indian J Orthop. 2015 Mar-Apr;49(2):193-8. doi: 10.4103/0019-5413.152478. PubMed PMID: 26015609; PubMed Central PMCID: PMC4436486.

BACKGROUND: Bicondylar tibial plateau fractures are complex injuries and treatment is challenging. Ideal method is still controversial with risk of unsatisfactory results if not treated properly. Many different techniques of internal and external fixation are used. This study compares the clinical results in single locked plating versus dual plating (DP) using two incision approaches. Our hypothesis was that DP leads to less collapse and change in alignment at final followup compared with single plating.

MATERIALS AND METHODS: 61 cases of Type C tibial plateau fractures operated between January 2007 and June 2011 were included in this prospective study. All cases were operated either by single lateral locked plate by anterolateral

approach or double plating through double incision. All cases were followed for a minimum of 24 months radiologically and clinically. The statistical analysis was performed using software SPSS 10.0 to analyze the data.

RESULTS: Twenty nine patients in a single lateral locked plate and 32 patients in a double plating group were followed for minimum 2 years. All fractures healed, however there was a significant incidence of malalignment in the single lateral plating group. Though there was a significant increase in soft tissue issues with the double plating group; however, there was only 3.12% incidence of deep infection. There was no significant difference in Hospital for special surgery score at 2 years followup.

CONCLUSION: Double plating through two incisions resulted in a better limb alignment and joint reduction with an acceptable soft tissue complication rate.

94: Pahwa S, Sharma S, Das CJ, Dhamija E, Agrawal S. Intraorbital Cystic Lesions: An Imaging Spectrum. Curr Probl Diagn Radiol. 2015 Mar 17. pii: S0363-0188(15)00040-7. doi: 10.1067/j.cpradiol.2015.03.003. [Epub ahead of print] Review. PubMed PMID: 25908230.

Presence of a cyst or a cystic component in an intraorbital mass often narrows the list of differential diagnoses to specific entities. Such a lesion in the orbit may arise from structures within the orbit, globe, and lacrimal system or from neighboring paranasal sinuses or meninges. Common congenital and developmental lesions encountered within the orbit include dermoids and epidermoids, and infrequently coloboma. Parasitic cysts (cysticercus), orbital abscess, mucocele, and vascular lesions are the most common acquired pathologies giving rise to fluid-containing lesions within the orbit. The role of a radiologist is crucial in expediting the diagnosis of orbital lesions with the help of characteristic imaging features on ultrasound, computed tomography, or magnetic resonance imaging. It also helps in identifying complications in others where formulation of an early and effective management strategy is vital for preserving vision.

95: Panda A, Bhalla AS, Sharma R, Arora A, Gupta AK. "Straddling across boundaries"-thoracoabdominal lesions: spectrum and pattern approach. Curr Probl Diagn Radiol. 2015 Mar-Apr;44(2):122-43. doi: 10.1067/j.cpradiol.2014.11.005. Epub 2014 Nov 20. Review. PubMed PMID: 25795032.

The thoracoabdominal region consists of the inferior thorax and superior abdomen and is separated by the diaphragm. Although the diaphragm appears to act as a barrier in this region, various lesions can straddle across the diaphragm and lie contiguously in both the thorax and the abdomen. Thoracoabdominal lesions can extend across the diaphragm either through its various natural openings or through abnormal defects. The natural openings lie in the midline and include the hiatuses for the inferior vena cava, the esophagus, and the retrocrural space, which includes the aortic hiatus and the prevertebral and paravertebral spaces. Abnormal defects include congenital defects in fusion, that is, foramina of Morgagni and Bochdalek and acquired diaphragmatic rupture. Very large lesions can also displace the diaphragm, either inferiorly or superiorly, and thus appear to pseudoextend across this region. Using a pattern approach based on the location and route of extension, thoracoabdominal lesions can be classified as central and lateral lesions. Central lesions form a large group, and based on their location, they can be further classified as central anterior, central tendon, inferior vena cava, esophageal, and retrocrural pathologies. Both central and lateral thoracoabdominal lesions form a diverse spectrum and can be congenital, neoplastic, inflammatory, iatrogenic, or traumatic in etiology. Morphologically, these can consist of solid masses, cystic lesions, and ill-defined collections extending across the diaphragm. This article depicts the imaging appearance of the wide spectrum of lesions straddling across the diaphragm. Familiarity with

these pathologies can help in better understanding the continuum formed by the thoracoabdominal region and the various routes of transdiaphragmatic extension.

96: Panda A, Kumar A, Gamanagatti S, Mishra B. Virtopsy Computed Tomography in Trauma: Normal Postmortem Changes and Pathologic Spectrum of Findings. Curr Probl Diagn Radiol. 2015 Mar 26. pii: S0363-0188(15)00042-0. doi: 10.1067/j.cpradiol.2015.03.005. [Epub ahead of print] Review. PubMed PMID: 25956952.

Virtopsy or virtual autopsy is an emerging technique, developed to supplement traditional forensic autopsy. Virtopsy can be done by using imaging techniques such as computed tomography (CT) and magnetic resonance imaging. Virtopsy CT comprises a pan-body noncontrast CT scan obtained after death. Virtopsy CT is useful in trauma cases as it can provide an overview of injuries sustained by the victim; detect craniofacial, cerebral, thoracic, and osseous injuries; and suggest putative causes of death. This can reduce the time taken for forensic autopsy and sometimes obviate the need for a forensic autopsy. However, virtopsy CT reporting is not exactly synonymous with interpreting antemortem contrast-enhanced CT images as postmortem decompositional changes also occur. Awareness of imaging appearances of both postmortem putrefactive changes and pathologic findings is essential to avoid errors in interpretation and enable estimation of cause of death in patients with trauma.

97: Pandey S, Roychoudhury A, Bhutia O, Singhal M, Sagar S, Pandey RM. Study of the pattern of maxillofacial fractures seen at a tertiary care hospital in north India. J Maxillofac Oral Surg. 2015 Mar;14(1):32-9. doi: 10.1007/s12663-013-0578-4. Epub 2013 Sep 4. PubMed PMID: 25729224; PubMed Central PMCID: PMC4339334.

AIM: The present study was planned to investigate the etiology of maxillofacial injuries and to analyze the pattern of maxillofacial factures as well as the various factors influencing their distribution.
STUDY DESIGN: A one year cross-sectional study was done and 1,108 patients with maxillofacial fractures were analyzed consecutively from April 2010 to March 2011 who reported to the department of Oral and Maxillofacial Surgery in the Centre for Dental Education & Research and Jai Prakash Narayan Apex Trauma Centre, AIIMS, New Delhi. A performa was designed to collect the data that included age and sex distribution, etiology, influence of alcohol, type of fractures, use of restraints devices, associated injuries and treatment delivered.

RESULTS: Out of 1,108 patients, 89.62 % were males with a male:female ratio of 8.63:1. The 21-30 year age group was found to be maximum (39.98 %). Road traffic accidents accounted for 49.01 %, followed by assault (22.38 %) and fall from height (21.66 %). Two wheelers were the most commonly involved vehicle. Out of 437 road traffic accident patients (excluding pedestrian, n = 106), only 52.40 % were found to be using restraints devices at the time of accident. Totally 25.45 % patients were under the influence of alcohol at the time of injury. According to anatomical distribution of fractures, mandibular fractures (33.57 %) were most prevalent, followed by maxilla (31.13 %), nasal (28.33 %) and zygoma (24.36 %). Head injuries (18.32 %) were found to be the most common associated injuries followed by lower limb fractures.

CONCLUSION: The motive behind executing this article is to analyze the various trends of facial fractures and all those factors that affect their distribution. A perfect understanding of pattern of maxillofacial fracture will assist the executors of health care in the treatment planning and management of facial injuries. Knowledge gained from the present study would influence in assessing the effectiveness of existing preventive measures and elaboration of future preventive measures and conducting new research.

98: Parakh N, Mehrotra S, Seth S, Ramakrishnan S, Kothari SS, Bhargava B, Bahl VK. NT pro B type natriuretic peptide levels in constrictive pericarditis and restrictive cardiomyopathy. Indian Heart J. 2015 Jan-Feb;67(1):40-4. doi: 10.1016/j.ihj.2015.02.008. Epub 2015 Mar 13. PubMed PMID: 25820049; PubMed Central PMCID: PMC4382553.

BACKGROUND: The differentiation of constrictive pericarditis (CP) from restrictive cardiomyopathy (RCM) may be clinically difficult and may require multiple investigations. Even though brain natriuretic peptide (BNP) is shown to be higher in patients with RCM as compared to CP, the clinical utility is not fully established especially in Indian patients known to have advanced CP and myocardial involvement.

METHODS AND RESULTS: We measured NT-pro-BNP levels in 49 patients suspected of having either CP or RCM, diagnosed on the basis of echocardiography, computed tomography, magnetic resonance imaging, endomyocardial biopsy and cardiac catheterization data as needed. Twenty nine patients (Mean age - 26 yrs, 24 males) had CP and 20 patients (Mean age - 39 yrs, 14 males) had RCM. The median plasma NT-pro-BNP levels were significantly higher in RCM as compared to CP [1775 (208-7500) pg/ml vs 124 (68-718) pg/ml, respectively; p = 0.001]. A cut off value of 459 pg/ml had sensitivity, specificity and overall accuracy of 90%, 86% and 88% respectively, for differentiating CP from RCM.

CONCLUSIONS: The NT-pro-BNP levels are significantly elevated in RCM as compared to CP.

99: Paswan SS, Kataria K, Parshad R, Srivastava A, Seenu V, Mishra B. Feasibility of fast track discharge in breast cancer patients undergoing definitive surgery and impact on quality of life: a prospective study from tertiary care center in India. J Surg Oncol. 2015 Mar;111(3):265-9. doi: 10.1002/jso.23817. Epub 2014 Nov 12. PubMed PMID: 25393854.

OBJECTIVE: To evaluate the feasibility and impact of fast track discharge in patients undergoing definitive breast cancer surgery.

METHODS: One hundred six breast cancer patients older than 20 years of age were assigned to undergo definitive breast cancer surgery. It was ensured that enrolled patients had a ready access to hospital, reasonable home circumstances. They were assessed by using post-anesthesia discharge scoring system (PADSS) for fast track discharge. Quality of life both in preoperative and postoperative period was assessed by Functional Assessment of Cancer Therapy-Breast cancer version 4 (FACT-B4) questionnaires.

RESULT: Overall 90 patients (84.9%) were fit for fast track discharge. Eighty-nine patients (83.96%) were successfully discharged within 48 hr. One patient (0.94%) could not be discharged despite being fit as she was of concern that it would put too much responsibility on the family. Mean duration of postoperative hospital stay in patients fit for fast track surgery was 42.27 ± 5.73 hr with a median of 44 hr. All patients undergoing breast conservation could be discharged on fast track basis with a mean postoperative hospital stay of 32.12 hr.

CONCLUSION: Fast track discharges in breast cancer patients after definitive surgery are feasible in Indian setting.

100: Paul SB, Shalimar, Sreenivas V, Gamanagatti SR, Sharma H, Dhamija E, Acharya

SK. Incidence and risk factors of hepatocellular carcinoma in patients with hepatic venous outflow tract obstruction. Aliment Pharmacol Ther. 2015 May;41(10):961-71. doi: 10.1111/apt.13173. Epub 2015 Mar 23. PubMed PMID: 25809735.

BACKGROUND: Frequency of hepatocellular carcinoma (HCC) in hepatic venous outflow tract obstruction (HVOTO) is unclear and risk factors in HVOTO associated with HCC are unknown.
AIM: To assess the incidence of HCC and to identify risk factors for HCC in primary HVOTO.

METHODS: In the consecutive primary HVOTO patients evaluated between 1989 to 2013, the incidence of HCC among HVOTO was assessed in a retrospective cohort study and identification of the risk factors for HCC in HVOTO patients done by a case-control study.

RESULTS: Of the 421 HVOTO patients, 8 had HCC at presentation (prevalence 1.9%). Another 8 of the remaining 413 developed HCC during 2076.2 person-years follow-up (mean 5.03 + 4.65 years, range 0.08-20 years). The cumulative incidence of HCC was 3.5% (95% CI 1.28-9.2%) at 10 years. The case-control study included 16 HCC as cases and remaining 405 as controls. Controls were predominantly males (M:F - 230:175), mean age 29 ± 10.3 years. Cases were predominantly females with an older age of 36.2 ± 11.4 years ($P < 0.01$, OR = 1.06, CI 1.0-1.10%). Presence of cirrhosis ($P < 0.001$), combined inferior vena cava (IVC) and hepatic vein (HV) block ($P < 0.03$, OR = 5.58, CI 1.43-25.30%) and long-segment IVC block ($P < 0.02$, OR = 6.50, CI 1.32-32.0%) were significantly higher among cases than controls.

CONCLUSIONS: Hepatic venous outflow tract obstruction is a risk factor for HCC. The cumulative incidence of HCC in HVOTO is low and progressively increases over time. Those with liver cirrhosis, combined IVC and HV block and long-segment IVC block are at risk to develop HCC and need active surveillance.

101: Peshin SS, Halder N, Jathikarta C, Gupta YK. Use of mercury-based medical equipment and mercury content in effluents of tertiary care hospitals in India. Environ Monit Assess. 2015 Mar;187(3):145. doi: 10.1007/s10661-015-4311-2. Epub 2015 Feb 26. PubMed PMID: 25716525.

Environmental pollution due to mercury has raised serious concern over the last few decades. Various anthropogenic sources including the health sector play a vital role in increasing the mercury load on the environment. Mercury poses an important health issue because of its indiscriminate disposal into the environment. There are numerous mercury-containing devices being used in the health-care setup. The objective of the study was to obtain information on the procurement and consumption of mercury-containing items in the current year, the methods adopted for disposal and the contamination of the hospital effluents with mercury. A questionnaire-based study was conducted in government and corporate hospitals from different states of India, for the quantitative assessment of use of mercury-based items in tertiary care hospitals in India (n = 113). The results showed that mercury-containing items are still being used in India. The most common method adopted for disposal was collection in plastic bags and labeling them as hazardous waste. The hospital effluents contained mercury below the permissible limits. In view of the environmental pollution due to mercury and its adverse impact on health, efforts by the government are on for phasing out mercury-containing equipment from the health-care setup in India.

102: Prabhakar H, Rath S, Kalaivani M, Bhanderi N. Adrenaline with lidocaine for digital nerve blocks. Cochrane Database Syst Rev. 2015 Mar 19;3:CD010645. doi: 10.1002/14651858.CD010645.pub2. PubMed PMID: 25790261.

BACKGROUND: Surgery on fingers is a common procedure in emergency and day care surgery. Adrenaline combined with lidocaine can prolong digital nerve block and

provide a bloodless operating field. Extended postoperative pain relief can reduce the need for analgesics and can facilitate hand rehabilitation. Conventionally, adrenaline is avoided at anatomical sites with end arteries such as digits, penis and pinna because of concerns about arterial spasm, ischaemia and gangrene distal to the site of drug infiltration.
OBJECTIVES: To assess the safety and efficacy of use of adrenaline (any dilution) combined with lidocaine (any dilution) for digital nerve blocks (fingers and toes).

SEARCH METHODS: We searched the Cochrane Central Register of Controlled Trials (CENTRAL, Issue 11, 2014), MEDLINE via Ovid SP (1966 to 18 November 2014) and EMBASE via Ovid SP (1980 to 18 November 2014). We also searched specific websites, such as www.indmed.nic.in; www.cochrane-sadcct.org; and www.Clinicaltrials.gov.
SELECTION CRITERIA: We included randomized controlled trials (RCTs) that compared the use of adrenaline with lidocaine and plain lidocaine in patients undergoing surgery on digits (fingers and toes). Our primary outcomes were duration of anaesthesia, adverse outcomes such as ischaemia distal to the injection site and cost analysis. Our secondary outcomes were duration of postoperative pain relief and reduced bleeding during surgery.

DATA COLLECTION AND ANALYSIS: We used standard methodological procedures expected by The Cochrane Collaboration. Two review authors independently extracted details of trial methodology and outcome data from reports of all trials considered eligible for inclusion. We performed all analyses on an intention-to-treat basis. We used a fixed-effect model when no evidence of significant heterogeneity between studies was found and a random-effects model when heterogeneity was likely.

MAIN RESULTS: We included four RCTs with 167 participants. Risk of bias of the included studies was high, as none of them reported method of randomization, allocation concealment or blinding. Only one trial mentioned our primary outcome of duration of anaesthesia. The mean difference in duration of anaesthesia with use of adrenaline with lidocaine was 3.20 hours (95% confidence interval (CI) 2.48 to 3.92 hours; one RCT, 20 participants; low-quality evidence). No trial reported adverse events such as ischaemia distal to the injection site, and no trial reported cost analysis. One trial mentioned the secondary outcome of duration of postoperative pain relief, but available data were insufficient for analysis of the findings. Two trials reported the secondary outcome of reduced bleeding during surgery.Bleeding during surgery was observed in nine out of 52 participants as compared with 25 out of 51 participants in the adrenaline with lidocaine and plain lidocaine groups, respectively. The risk ratio for bleeding in the adrenaline with lidocaine group was 0.35 (95% CI 0.19 to 0.65; two RCTs, 103 participants; low-quality evidence).

AUTHORS' CONCLUSIONS: From the limited data available, evidence is insufficient to recommend use or avoidance of adrenaline in digital nerve blocks. The evidence provided in this review indicates that addition of adrenaline to lidocaine may prolong the duration of anaesthesia and reduce the risk of bleeding during surgery, although the quality of the evidence is low. We have identified the need for researchers to conduct large trials that focus on other important outcomes such as adverse events, cost analysis and duration of postoperative pain relief.

103: Prasad TV, Madhusudhan KS, Srivastava DN, Dash NR, Gupta AK. Transarterial chemoembolization for liver metastases from solid pseudopapillary epithelial neoplasm of pancreas: A case report. World J Radiol. 2015 Mar 28;7(3):61-5. doi: 10.4329/wjr.v7.i3.61. PubMed PMID: 25825635; PubMed Central PMCID: PMC4374090.

Solid pseudo-papillary epithelial neoplasm (SPEN) is a rare epithelial tumor of pancreas with a low malignant potential occurs most commonly in young females. We report a case of 40 years old woman presented with extensive liver metastasis from SPEN of pancreatic body for which she was operated four years ago. Due to

the extensive nature of metastatic disease she was offered Transarterial chemoembolisation (TACE) using gemcitabine as chemotherapeutic agent. Short term follow up after a month of TACE with multiphase computed tomography showed > 90% resolution in the viable tumor with significant clinical improvement. TACE ensures targeted delivery of chemotherapeutic drugs in higher doses with least systemic toxicity and is more effective and safe than systemic chemotherapy. TACE with gemcitabine was found to be very effective in our patient with numerous liver metastasis.

104: Purohit A, Aggarwal M, Kumar S, Seth T, Mishra P, Mahapatra M, Saxena R, Sharma R, Singh PK, Venkateshan S. Spontaneous remission of adult acute lymphoblastic leukemia: a very rare event. Indian J Hematol Blood Transfus. 2015 Mar;31(1):159-60. doi: 10.1007/s12288-014-0351-y. Epub 2014 Feb 18. PubMed PMID: 25548467; PubMed Central PMCID: PMC4275536.

A middle aged male presented to us with an unusual problem when his acute lymphoblastic leukemia (ALL) disappeared without any chemotherapy. We faced a dilemma whether to go ahead and treat his initial diagnosis or wait. Eventually he did relapse and was treated, albeit with a fatal outcome. Such spontaneous remission in acute leukemia are a very rare event, more common in acute myeloid leukemia and in children. Spontaneous remission in adult ALL is rarely described in literature.

105: Quadri M, Kamate M, Sharma S, Olgiati S, Graafland J, Breedveld GJ, Kori I, Hattiholi V, Jain P, Aneja S, Kumar A, Gulati P, Goel M, Talukdar B, Bonifati V. Manganese transport disorder: Novel SLC30A10 mutations and early phenotypes. Mov Disord. 2015 Jun;30(7):996-1001. doi: 10.1002/mds.26202. Epub 2015 Mar 17. PubMed PMID: 25778823.

BACKGROUND: SLC30A10 mutations cause an autosomal recessive disorder, characterized by hypermanganesaemia, polycythemia, early-onset dystonia, paraparesis, or late-onset parkinsonism, and chronic liver disease. This is the first identified inborn error of Mn metabolism in humans, reported in 10 families thus far.
METHODS: Methods for this study consisted of clinical examination, neuroimaging studies (MRI), serum dosages, and SLC30A10 genetic analysis.
RESULTS: We describe early disease manifestations (including videos) in 5 previously unreported Indian children, carrying novel homozygous SLC30A10 mutations. Gait and speech disturbances, falls, dystonias, and central hypotonia were the presenting neurological features, starting within the first 5 years of life. All children also had severe hypermanganesemia, polycythemia, variable degree of liver disease, and marked brain MRI T1 hyperintensities.
CONCLUSIONS: Our findings expand the mutational and clinical spectra of this recently recognized disorder. An early diagnosis is warranted, because treatment with manganese-chelating agents, iron supplementation, or their combination might improve symptoms and prevent progression of this otherwise potentially fatal disease. © 2015 International Parkinson and Movement Disorder Society.

106: Raheja A, Sinha S, Sable MN, Sharma MC, Sharma BS. A case of giant intracranial tuberculoma in an infant: clinical and radiologic pitfalls. J Child Neurol. 2015 Mar;30(3):364-7. doi: 10.1177/0883073814535487. Epub 2014 May 14. PubMed PMID: 24832400.

Intracranial tuberculoma in infants are a rare occurrence. We report a 7-month-old male infant presenting to our tertiary care referral center with complaints of global developmental delay and right hemiparesis for 3 months. Radiologic imaging was suggestive of large left frontoinsular space-occupying lesion with initial differential of primitive neuroectodermal tumor or desmoplastic infantile ganglioglioma. Considering the clinicoradiologic findings and no history suggestive of immunodeficiency or contact with tuberculosis,

surgical decompression was done. Final histopathology revealed multiple epithelioid granulomas suggestive of tubercular etiology or intracranial Langerhans cell histiocytosis. He was started on antitubercular therapy after ruling out Langerhans cell histiocytosis using CD1a and Langerin immunohistochemistry staining. Interpretation of tuberculous etiology in infants can be challenging for clinicians, radiologists, and pathologists. A high index of suspicion is necessary to diagnose such lesions, predominantly in endemic regions.

107: Ramam M. IJDVL International Awards. Indian J Dermatol Venereol Leprol. 2015 Mar-Apr;81(2):113-4. doi: 10.4103/0378-6323.152167. PubMed PMID: 25751325.

108: Raman VS, Agarwala S, Bhatnagar V, Panda SS, Gupta AK. Congenital cystic lesions of the lungs: The perils of misdiagnosis - A single-center experience. Lung India. 2015 Mar-Apr;32(2):116-8. doi: 10.4103/0970-2113.152616. PubMed PMID: 25814794; PubMed Central PMCID: PMC4372863.

BACKGROUND: A majority of cystic lesions in the western world are detected antenatally, whereas, the diagnosis in our setup occurs once the child becomes symptomatic. Surgical management is primarily dictated by the presence of symptoms, recurrent infection, and rarely by the potential risk of malignant transformation.

MATERIALS AND METHODS: A retrospective analysis was carried out on all consecutive patients with cystic lung lesions managed at our center from January 2000 through June 2011 for antenatal diagnosis, presentation, diagnostic modalities, treatment, and complications.

RESULTS: Forty cystic lung lesions were identified. Only 8% were antenatally detected. Out of 40, the final diagnosis was congenital cystic adenomatoid malformation in 19, congenital lobar emphysema in 11, and bronchogenic cysts and pulmonary sequestration in five each. Of these, 20% had received a course of prior antitubercular therapy and 30% had an intercostal drain inserted prior to referral to our center. Postoperative morbidity in the form of bronchopleural fistula, pneumothorax, and non-expansion of the residual lung was noted in 10% of the patients.

CONCLUSION: Antenatal diagnosis of these lesions is still uncommon in third world countries. Prior to referral to a pediatric surgical center a large number of patients received antitubercular drugs and an intercostal drain insertion, due to incorrect diagnosis.

109: Rani N, Bharti S, Bhatia J, Tomar A, Nag TC, Ray R, Arya DS. Inhibition of TGF-β by a novel PPAR-γ agonist, chrysin, salvages β-receptor stimulated myocardial injury in rats through MAPKs-dependent mechanism. Nutr Metab (Lond). 2015 Mar 9;12:11. doi: 10.1186/s12986-015-0004-7. eCollection 2015. PubMed PMID: 25774203; PubMed Central PMCID: PMC4359541.

BACKGROUND: Pharmacological stimulation of peroxisome proliferator-activated receptor-gamma (PPAR-γ) has been recognized as a molecular switch in alleviating myocardial injury through modulating oxidative, inflammatory and apoptotic signaling pathways. This study was designed to elucidate the effect of chrysin, a novel PPAR-γ agonist and its functional interaction with TGF-β/MAPKs in isoproterenol-challenged myocardial injury in rats.
METHODS: Male Wistar Albino rats were either subjected to vehicle (1.5 mL/kg, p.o.) or chrysin (15-60 mg/kg, p.o.) for 28 days. Isoproterenol (85 mg/kg, s.c.) was administered to rats on 27(th) and 28(th) day to induce myocardial injury.

RESULTS: Chrysin dose dependently improved ventricular (±LVdP/dtmax and LVEDP) and hemodynamic (SAP, MAP and DAP) dysfunction in isoproterenol-insulted rats.

This beneficial effect of chrysin was well supported with increased expression of PPAR-γ and decreased expression of TGF-β as evidenced by western blotting and immunohistochemistry analysis. Moreover, downstream signaling pathway of TGF-β viz. P-ERK½/ERK½ activation and P-JNK/JNK, P-p38/p38 and MMP-2 inhibition were also observed. Chrysin also attenuated NF-κBp65 and IKK-β expressions, TNF-α level and TUNEL positivity thereby validating its anti-inflammatory and anti-apoptotic properties. Additionally, chrysin in a dose dependent fashion improved NO level, redox status of the myocardium (GSH and MDA levels and SOD, GSHPx and CAT activities), cardiac injury markers (CK-MB and LDH levels) and oxidative DNA damage marker (8-OHdG level) and displayed preservation of subcellular and ultrastructural components.

CONCLUSION: We established that activation of PPAR-γ and inhibition of TGF-β via MAPKs dependent mechanism is critical for cardioprotective effect of chrysin.

110: Ranjan P, Kumari A, Chakrawarty A. How can Doctors Improve their Communication Skills? J Clin Diagn Res. 2015 Mar;9(3):JE01-4. doi: 10.7860/JCDR/2015/12072.5712. Epub 2015 Mar 1. Review. PubMed PMID: 25954636; PubMed Central PMCID: PMC4413084.

The process of curing a patient requires a holistic approach which involves considerations beyond treating a disease. It warrants several skills in a doctor along with technical expertise. Studies have shown that good communication skill in a doctor improve patient's compliance and overall satisfaction. There are certain basic principles of practicing good communication. Patient listening, empathy, and paying attention to the paraverbal and non verbal components of the communication are the important ones that are frequently neglected. Proper information about the nature, course and prognosis of the disease is important. Besides, patients and attendants should always be explained about the necessity and yield of expensive investigations and risks/benefits involved in invasive procedures. One should be extremely cautious while managing difficult encounters and breaking bad news. Formal training of the doctors in improving communication skills is necessary and has proven to improve overall outcome. The authors recommend inclusion of formal training in communication skills in medical curriculum and training of practising doctors in the form of CMEs and CPEs.

111: Ranjan P, Soneja M, Subramonian NK, Kumar V, Ganguly S, Kumar T, Singh G. Fever of unknown origin: an unusual presentation of kikuchi-fujimoto disease. Case Reports Immunol. 2015;2015:314217. doi: 10.1155/2015/314217. Epub 2015 Mar 22. PubMed PMID: 25874141; PubMed Central PMCID: PMC4385645.

Kikuchi-Fujimoto disease is a rare, benign, and self-limiting condition that mostly affects young females. Cervical lymphadenopathy with fever is the most common presentation of the disease. It may have unusual presentations that can lead to diagnostic dilemma and delay in diagnosis. We report a case of a 25-year-old female who presented with relapsing fever and cervical lymphadenopathy. Because of atypical presentation, there was a delay in diagnosis and increase in morbidity. High index of suspicion with collaboration between clinicians and pathologists is essential for early and accurate diagnosis of the disease.

112: Roy A, Lakshmy R, Tarik M, Tandon N, Reddy KS, Prabhakaran D. Independent association of severe vitamin D deficiency as a risk of acute myocardial infarction in Indians. Indian Heart J. 2015 Jan-Feb;67(1):27-32. doi: 10.1016/j.ihj.2015.02.002. Epub 2015 Mar 11. PubMed PMID: 25820047; PubMed Central PMCID: PMC4382524.

BACKGROUND: Association of vitamin D deficiency with coronary heart disease (CHD) has been widely reported. Emerging data has shown high prevalence of vitamin D deficiency among Indians. However, this association has not been studied in Indians.

METHODS: A case-control study with 120 consecutive cases of first incident acute myocardial infarction (MI) and 120 age and gender matched healthy controls was conducted at All India Institute of Medical Sciences, New Delhi. The standard clinical and biochemical risk factors for MI were assessed for both cases and controls. Serum 25 (OH) vitamin D assay was performed from stored samples for cases and controls using radioimmunoassay.

RESULTS: Vitamin D deficiency [25(OH) D < 30 ng/ml] was highly prevalent in cases and controls (98.3% and 95.8% respectively) with median levels lower in cases (6 ng/ml and 11.1 ng/ml respectively; p < 0.001). The cases were more likely to have diabetes, hypertension and consume tobacco and alcohol. They had higher waist hip ratio, total and LDL cholesterol. Multivariate logistic regression analysis revealed severe vitamin D deficiency [25(OH) vitamin D < 10 ng/ml] was associated with a risk of MI with an odds ratio of 4.5 (95% CI 2.2-9.2).

CONCLUSIONS: This study reveals high prevalence of vitamin D deficiency among cases of acute MI and controls from India, with levels of 25 (OH)D being significantly lower among cases. Despite rampant hypovitaminosis, severe vitamin D deficiency was associated with acute MI after adjusting for conventional risk factors. This association needs to be tested in larger studies in different regions of the country.

113: Sareen N, Pradhan R. Need for neonatal screening program in India: A national priority. Indian J Endocrinol Metab. 2015 Mar-Apr;19(2):204-20. doi: 10.4103/2230-8210.149315. Review. PubMed PMID: 25729682; PubMed Central PMCID: PMC4319260.

In India, out of 342 districts surveyed, 286 have been identified as endemic to iodine deficiency (ID). Research studies conducted in school age children (SAC), Adolescent girls, Pregnant Mothers (PMs) and Neonates have documented poor iodine nutritional status. As observed by total goiter rate of more than 5% and median urinary iodine concentration level of <100 µg/l in SAC and <150 µg/l in PMs as prescribed cutoff of World Health Organization. And higher thyroid stimulating hormone levels among neonates. ID leads to compromised mental development and hence which remain hidden and not visible to family, program managers and administrator. The present review describes the current status of ID in different parts of the country. With a view to strongly recommend the implementation of Neonatal screening program for ID so that the optimal mental development of children can be achieved.

114: Sarkar C, Shankar SK. Professor Subimal Roy (1933-2015): Our teacher in neuropathology. Neurol India. 2015 Mar-Apr;63(2):295-6. PubMed PMID: 25948017.

115: Shalimar, Acharya SK. Management in acute liver failure. J Clin Exp Hepatol. 2015 Mar;5(Suppl 1):S104-15. doi: 10.1016/j.jceh.2014.11.005. Epub 2014 Dec 3. Review. PubMed PMID: 26041950; PubMed Central PMCID: PMC4442864.

Acute liver failure (ALF) is a rare, potentially fatal complication of severe hepatic illness resulting from various causes. In a clinical setting, severe hepatic injury is usually recognised by the appearance of jaundice, encephalopathy and coagulopathy. The central and most important clinical event in ALF is occurrence of hepatic encephalopathy (HE) and cerebral edema which is responsible for most of the fatalities in this serious clinical syndrome. The pathogenesis of encephalopathy and cerebral edema in ALF is unique and multifactorial. Ammonia plays a central role in the pathogenesis. The role of newer ammonia lowering agents is still evolving. Liver transplant is the only effective therapy that has been identified to be of promise in those with poor prognostic factors, whereas in the others, aggressive intensive medical management has been documented to salvage a substantial proportion of patients. A

small fraction of patients undergo liver transplant and the remaining are usually treated with medical therapy. Therefore, identification of the complications and causes of death in such patients, and use of appropriate prognostic models to identify those who need liver transplant and those who can be managed with medical treatment is a vital component of therapeutic strategy. In this review, we discuss the various pathogenetic mechanisms and treatment options available.

116: Shalimar. Antibiotics in Acute Liver Failure (ALF). J Clin Exp Hepatol. 2015 Mar;5(1):95-7. doi: 10.1016/j.jceh.2015.01.004. Epub 2015 Feb 10. PubMed PMID: 25941439; PubMed Central PMCID: PMC4415187.

117: Sharma JB, Sharma S, Usha BR, Gupta A, Kumar S, Mukhopadhyay AK. A cross-sectional study of tumor markers during normal and high-risk pregnancies. Int J Gynaecol Obstet. 2015 Jun;129(3):203-6. doi: 10.1016/j.ijgo.2014.12.014. Epub 2015 Mar 13. PubMed PMID: 25823606.

OBJECTIVE: To determine tumor marker concentrations during normal and high-risk pregnancies.
METHODS: The present cross-sectional study included women attending the gynecology outpatient department at All India Institute of Medical Sciences, New Delhi, India, between November 1, 2012 and March 31, 2013. Their serum was assayed for carcinoembryonic antigen (CEA), cancer antigen 19-9 (CA19-9), and cancer antigen 15-3 (CA15-3).
RESULTS: A total of 251 pregnant women and 31 nonpregnant women were included. Median CEA value was lower among pregnant women than among nonpregnant women (1.2μg/L vs 1.4μg/L; P=0.006), whereas that of CA15-3 was higher (16.7U/mL vs 12.3U/mL; P=0.03). CA19-9 concentration was higher among pregnant women aged 25-29years (7.0U/mL) or 30-34years (7.2U/mL) than among those aged 20-24years (4.2U/mL; P=0.01 for both). The CA15-3 level was increased during the second (13.0U/mL) and third (60.5U/mL) trimesters compared with the first trimester (9.5U/mL) (P≤0.01 for both comparisons). It was also raised in high-risk pregnancies (33.7U/mL), specifically pregnancies complicated by gestational diabetes mellitus (39.7U/mL), intrahepatic cholestasis of pregnancy (64.3U/mL), or heart disease (54.0U/mL) (P<0.05 for all).
CONCLUSION: CA15-3 concentrations rise during pregnancy, but whether this increase can be attributed to physiological changes in breast tissue needs to be investigated further.

118: Sharma P, Meena S, Gangary S, Chowdhury B. An alternative instrument for making entry point for elastic intramedullary nail. Ann Med Health Sci Res. 2015 Mar-Apr;5(2):134-5. doi: 10.4103/2141-9248.153624. PubMed PMID: 25861534; PubMed Central PMCID: PMC4389329.

Femoral shaft fractures are common in children and are increasingly being treated with elastic intramedullary nail. We outline an instrument we have used successfully to make an entry point for placement of elastic nail.

119: Sharma P, Tomer R, Menon V, Saxena R, Sharma A. Respond to: Management of exotropic Duane retraction syndrome. Indian J Ophthalmol. 2015 Mar;63(3):291-2. doi: 10.4103/0301-4738.156970. PubMed PMID: 25971189; PubMed Central PMCID: PMC4448259.

120: Sharma VK. Hypochromic vitiligo: a perspective. Br J Dermatol. 2015 Mar;172(3):561-2. doi: 10.1111/bjd.13658. PubMed PMID: 25776241.

121: Singh K, Chandra Sekaran AM, Bhaumik S, Aisola M, Chattopadhyay K, Gamage AU, de Silva P, Selvaraj S, Roy A, Prabhakaran D, Tandon N. Cost-effectiveness of interventions to control cardiovascular diseases and type 2 diabetes mellitus in South Asia: protocol for a systematic review. BMJ Open. 2015 Mar 10;5(3):e007205. doi: 10.1136/bmjopen-2014-007205. PubMed PMID: 25757948; PubMed Central PMCID: PMC4360723.

INTRODUCTION: While a number of strategies are being implemented to control cardiovascular diseases (CVDs) and type 2 diabetes mellitus (T2DM), the cost-effectiveness of these in the South Asian context has not been systematically evaluated. We aim to systematically review the economic (cost-effectiveness) evidence available on the individual-, group- and population-level interventions for control of CVD and T2DM in South Asia.

METHODS AND ANALYSIS: This review will consider all relevant economic evaluations, either conducted alongside randomised controlled trials or based on decision modelling estimates. These studies must include participants at risk of developing CVD/T2DM or with established disease in one or more of the South Asian countries (India, Bangladesh, Pakistan, Sri Lanka, Nepal, Maldives, Bhutan and Afghanistan). We will identify relevant papers by systematically searching all major databases and registries. Selected articles will be screened by two independent researchers. Methodological quality of the studies will be assessed using a modified Drummond and a Phillips checklist. Cochrane guidelines will be followed for bias assessment in the effectiveness studies.

RESULTS: Results will be presented in line with the PRISMA (Preferred Reporting Items for Systematic review and Meta-analysis) checklist, and overall quality of evidence will be presented as per the GRADE (Grades of Recommendation, Assessment, Development and Evaluation) approach.

ETHICS AND DISSEMINATION: The study has received ethics approval from the All India Institute of Medical Sciences, New Delhi, India. The results of this review will provide policy-relevant recommendations for the uptake of cost-effectiveness evidence in prioritising decisions on essential chronic disease care packages for South Asia.
STUDY REGISTRATION NUMBER: PROSPERO CRD42013006479.

122: Singh L, Pushker N, Sen S, Singh MK, Chauhan FA, Kashyap S. Prognostic significance of polo-like kinases in retinoblastoma: correlation with patient outcome, clinical and histopathological parameters. Clin Experiment Ophthalmol. 2015 Mar 5. doi: 10.1111/ceo.12517. [Epub ahead of print] PubMed PMID: 25754767.

BACKGROUND: Retinoblastoma is evolving, but it is still a therapeutic challenge for pediatric oncologists. Polo-like kinases (PLKs) plays an important role in cell cycle events. They play a crucial role in cell proliferation which may lead to tumour formation. The objective of this study is to investigate the role of PLK1 and PLK3 proteins in human retinoblastoma tissues.
DESIGN: Non-randomized, prospective study was performed in the Dr R. P. Centre for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi, India.

PARTICIPANTS: This study included 74 primary enucleated retinoblastoma tissues.
METHODS: Expression of PLK1 and PLK3 protein were assessed in primary enucleated retinoblastoma tissues by immunohistochemistry and western blotting.
MAIN OUTCOME MEASURES: Expression of PLK1 and PLK3 protein were correlated with clinical and histopathological parameters, tumour staging and overall survival of patients.

RESULTS: Immunohistochemical results revealed expression of PLK1 in 47/74 (63.51%) cases and PLK3 in 31/74 (41.89%) cases. Western blotting confirmed the immunoreactivity results. Expression of PLK1 showed correlation with poor differentiation and tumour invasion. In addition, PLK1 was statistically

significant with massive choroidal invasion, whereas PLK3 did not correlate with any of the clinical or histopathological parameters. There was no statistical correlation in the overall survival of patients with PLK1 and PLK3 expression. CONCLUSIONS: PLK1 expression was associated with poor tumour differentiation and histopathological high-risk factors. These proteins may be involved in tumorigenesis and progression of disease. These results suggest that PLK1 may act as a potential therapeutic target and a promising marker for developing potent small molecule inhibitors of PLK isoforms in retinoblastoma.

123: Singh N, Sharma A, Sazawal S, Ahuja A, Upadhyay A, Mahapatra M, Saxena R. Prevalence of JAK2V617F mutation in deep venous thrombosis patients and its clinical significance as a thrombophilic risk factor: Indian perspective. Clin Appl Thromb Hemost. 2015 Mar 23. pii: 1076029615578166. [Epub ahead of print] PubMed PMID: 25804613.

Venous thromboembolism is known to be a complex interaction of genetic and acquired factors leading to thrombosis. JAK2V617F mutation is believed to contribute to a thrombophilic phenotype, possibly through enhanced leukocyte-platelet interactions in myeloproliferative neoplasms (MPNs). Several studies have focused on the importance of screening for JAK2V617F mutation in patients with splanchnic venous thrombosis (VT) for the detection of nonovert MPNs. The role of JAK2V617F mutation in VT outside the splanchnic region is still widely unsettled. The primary aim of this study was to find out the prevalence of JAK2V617F mutation in patients with deep venous thrombosis (DVT), its clinical significance as a prothrombotic risk factor, and its possible interactions with other genetic thrombophilic risk factors. A total of 148 patients with idiopathic, symptomatic DVT were evaluated. Median age of presentation was 32 years (range 15-71 years) with a sex ratio of 1.3:1. Overall, the most common genetic prothrombotic factor was factor V Leiden mutation, found in 10.8% (16 of 148) of patients who also showed strong association with increased risk of thrombosis (odds ratio 5.94, confidence interval 1.33-26.4, P = .019). Deficiencies in protein C, protein S, and antithrombin were seen in 8 (5.4%), 10 (6.7%), and 8 (5.4%) patients, respectively. It was observed that the frequency of JAK2V617F mutation was lower in Indian patients, and it also showed weaker association with risk of thrombosis, at least in cases of venous thrombosis outside the splanchnic region.

124: Singh P, Kurray L, Agnihotri A, Das P, Verma AK, Sreenivas V, Dattagupta S, Makharia GK. Titers of anti-tissue transglutaminase antibody correlate well with severity of villous abnormalities in celiac disease. J Clin Gastroenterol. 2015 Mar;49(3):212-7. doi: 10.1097/MCG.0000000000000105. PubMed PMID: 24583754.

GOALS: We reviewed our celiac disease (CeD) database to study if anti-tissue transglutaminase (tTG) antibody (ab) titers correlate with severity of villous abnormalities in Indian patients and to find out a cutoff value of anti-tTG ab fold-rise, which could best predict CeD.

BACKGROUND: Guidelines for diagnosing CeD suggest that biopsy could be avoided in some patients with high anti-tTG ab titer.
STUDY: We reviewed a cohort of 366 anti-tTG ab-positive individuals in whom duodenal biopsies were performed. Anti-tTG ab was obtained before initiation of gluten-free diet. Anti-tTG ab results were expressed in terms of fold-rise by calculating ratio of observed values with cutoff value. CeD was diagnosed if in addition to positive serology, patients had villous atrophy (>Marsh grade 2) and unequivocal response to gluten-free diet.

RESULTS: The mean anti-tTG fold-rise in groups with Marsh grade ≤2 was 2.6 (±2.5), grade 3a was 4.0 (±3.9), 3b was 5.7 (±5.1), and 3c was 11.8 (±8.0). The positive likelihood ratio for diagnosing CeD was 15.4 and 27.4 at 12- and 14-fold-rise of anti-tTG ab titer, respectively. The positive predictive value of diagnosis of CeD was 100% when anti-tTG ab titer was 14-fold higher over the cutoff value. Fifty-seven (43.9%) individuals with anti-tTG titer rise <2-fold high also had CeD.

CONCLUSIONS: As severity of villous abnormality increases, titer of anti-tTG also rises. Presence of villous atrophy can be predicted at very high anti-tTG ab titer. In contrast to emerging belief, mucosal biopsies should be performed even if anti-tTG ab titer is <2 times, because many patients with CeD have low titers.

125: Singh RP, Singh A, Kushwaha GS, Singh AK, Kaur P, Sharma S, Singh TP. Mode of binding of the antithyroid drug propylthiouracil to mammalian haem peroxidases. Acta Crystallogr F Struct Biol Commun. 2015 Mar;71(Pt 3):304-10. doi: 10.1107/S2053230X15001806. Epub 2015 Feb 19. PubMed PMID: 25760705.

The mammalian haem peroxidase superfamily consists of myeloperoxidase (MPO), lactoperoxidase (LPO), eosinophil peroxidase (EPO) and thyroid peroxidase (TPO). These enzymes catalyze a number of oxidative reactions of inorganic substrates such as Cl(-), Br(-), I(-) and SCN(-) as well as of various organic aromatic compounds. To date, only structures of MPO and LPO are known. The substrate-binding sites in these enzymes are located on the distal haem side. Propylthiouracil (PTU) is a potent antithyroid drug that acts by inhibiting the function of TPO. It has also been shown to inhibit the action of LPO. However, its mode of binding to mammalian haem peroxidases is not yet known. In order to determine the mode of its binding to peroxidases, the structure of the complex of LPO with PTU has been determined. It showed that PTU binds to LPO in the substrate-binding site on the distal haem side. The IC50 values for the inhibition of LPO and TPO by PTU are 47 and 30 µM, respectively. A comparision of the residues surrounding the substrate-binding site on the distal haem side in LPO with those in TPO showed that all of the residues were identical except for Ala114 (LPO numbering scheme), which is replaced by Thr205 (TPO numbering scheme) in TPO. A threonine residue in place of alanine in the substrate-binding site may affect the affinity of PTU for peroxidases.

126: Singhal A, Bhatia R, Srivastava MV, Prasad K, Singh MB. Multiple sclerosis in India: An institutional study. Mult Scler Relat Disord. 2015 May;4(3):250-7. doi: 10.1016/j.msard.2015.03.002. Epub 2015 Mar 17. PubMed PMID: 26008942.

BACKGROUND: Few population based studies on multiple sclerosis have been published from India. There is an increasing demand to establish a nationwide MS registry in India especially in view of the percieved increased incidence and prevalence.

OBJECTIVES: To create a registry data base for all MS patients presenting at our institute and understand the disease characteristics in our population and compare them with the published reports from the west.

METHODS: MS was diagnosed on the basis of clinical and imaging features (Revised McDonald's criteria 2010). Demographics, clinical data, treatment details and disease behavior were recorded over a follow up of one year. Descriptive analyses was performed.

RESULTS: 101patients (61 females) were recruited in the study period from June 2011 to December 2012. Mean age of the patients at the time of presentation was 33.3±9.2 years and mean duration of illness was 5.98±4.95. 68.4% patients had RRMS, 16.8% had SPMS whereas 14.8% patients had PPMS. Site(s) involved in first relapse was spinal cord in 43.7% patients followed by brainstem 25.3% and optic nerve in 24.1% patients. Mean number of relapses were 3.26±2.026. Mean EDSS at the time of presentation was 3.20±2.11. Overall, 55.44% patients took DMT at some

point during their course of disease. No significant differences were observed between our patient characteristics when compared to publications from west.

CONCLUSION: Demographic data in the present study are comparable to those reported in population-based epidemiological studies from west. A nationwide registry network will help establish stronger data on incidence, prevalence and disease profile of MS in India.

127: Sinha S, Raheja A, Garg M, Moorthy S, Agrawal D, Gupta DK, Satyarthee GD, Singh PK, Borkar SA, Gurjar H, Tandon V, Pandey RM, Sharma BS. Decompressive craniectomy in traumatic brain injury: A single-center, multivariate analysis of 1,236 patients at a tertiary care hospital in India. Neurol India. 2015 Mar-Apr;63(2):175-83. doi: 10.4103/0028-3886.156277. PubMed PMID: 25947980.

OBJECT: To evaluate the outcome of patients undergoing a decompressive craniectomy (DC) in traumatic brain injury (TBI) and the factors predicting outcome.

MATERIALS AND METHODS: A total of 1,236 patients with TBI operated with a DC from January 2008 to December 2013 at a tertiary care hospital were included in the study. The data from the hospital computerized database was retrospectively analyzed and 324 (45%) patients were followed-up for a mean duration of 25.3 months (range 3-42 months) among the cohort of 720 alive patients. The institute's ethical committee clearance was obtained before the start of the study.

RESULTS: There were 81% males with a median age [interquartile range (IQR)] of 32 (23-45) years. The mortality rate and median (IQR) Glasgow outcome score (GOS) at discharge in patients presenting with minor, moderate, and severe head injury were 18%, 5 (4-5); 28%, 4 (1-5); and 47.4%, 2 (1-4), respectively. An overall favorable outcome (GOS 4 and 5) at discharge was observed in 46.5% patients and in 39% patients who presented with severe TBI. Only 7.5% patients were in a persistent vegetative state (PVS), while 78% had an overall favorable outcome at the last follow-up of surviving patients ($P < 0.001$). On multivariate analysis, the factors predictive of a favorable GOS at discharge were: a younger age (odds ratio (OR) 1.03, confidence interval (CI) = 1.02-1.04; $P < 0.001$), no pupillary abnormalities at admission (OR 2.28, CI = 1.72-3.02; $P < 0.001$), absence of preoperative hypotension (OR 1.91, CI = 1.08-3.38; $P = 0.02$), an isolated TBI (OR 1.42, CI = 1.08-1.86; $P = 0.01$), absence of a preoperative infarct (OR 3.68, CI = 1.74-7.81; $P = 0.001$), presence of a minor head injury (OR 6.33, CI = 4.07-9.86; $P < 0.001$), performing a duraplasty (OR 1.86, CI = 1.20-2.87; $P = 0.005$) rather than a slit durotomy (OR 3.95, CI = 1.67-9.35; $P = 0.002$), and, avoidance of a contralateral DC (OR 3.58, CI = 1.90-6.73; $P < 0.001$).

CONCLUSIONS: The severity of head injury, performing a duraplasty rather than a slit durotomy, avoidance of a contralateral DC, and the presence of preoperative hypotension, infarct, and/or pupillary asymmetry have the highest odds of predicting the short term GOS at the time of discharge, after a DC in patients with TBI. Although DC carries a high risk of mortality, the probability of the survivors having a favorable outcome is significantly more as compared to those who remain in a PVS.

128: Talukdar A, Sharma KA, Rai R, Deka D, Rao DN. Effect of Coenzyme Q(10) on Th1/Th2 Paradigm in Females with Idiopathic Recurrent Pregnancy Loss. Am J Reprod Immunol. 2015 Mar 20. doi: 10.1111/aji.12376. [Epub ahead of print] PubMed PMID: 25800618.

PROBLEM: Recurrent pregnancy loss is characterized by predominant Th1-type immunity and increased reactive oxygen species. Low levels of Coenzyme Q10 are found in the plasma of RPL as compared to healthy pregnant females. Our aim was

to investigate whether in vitro supplementation of PBMCs from such females with CoQ10 could change the observed Th1 bias.

METHOD OF STUDY: PBMCs were isolated from 20 RPL pregnant and non-pregnant females and 16 healthy pregnant females and incubated with CoQ10 in in vitro conditions. Phenotyping of Th1, Th2, and Th17 cells was performed by flow cytometry. Cytokine levels were determined by ELISA.
RESULTS: PBMCs treated with CoQ10 showed significantly decreased percentage of Th1 cells ($P < 0.005$) in pregnant females with history of RPL than in the untreated ones. Also, levels of IFN-γ and TNF-α were significantly decreased in the culture supernatant of treated PBMCs from RPL. DCFDA staining showed significantly reduced production of ROS in the treated PBMCs in RPL females.

CONCLUSION: CoQ10 was effective in maintaining the immune homeostasis by reducing the proportion of IFN-γ-producing T cells and proinflammatory cytokine levels in the RPL pregnant females. This property could be attributed to the capability of CoQ10 in reducing oxidative stress by decreasing ROS production.

129: Temkar S, Gupta S, Sihota R, Sharma R, Angmo D, Pujari A, Dada T. Illuminated microcatheter circumferential trabeculotomy versus combined trabeculotomy-trabeculectomy for primary congenital glaucoma: a randomized controlled trial. Am J Ophthalmol. 2015 Mar;159(3):490-7.e2. doi: 10.1016/j.ajo.2014.12.001. Epub 2014 Dec 6. PubMed PMID: 25486542.

PURPOSE: To compare outcomes of illuminated microcatheter-assisted circumferential trabeculotomy vs combined mitomycin C-augmented trabeculotomy-trabeculectomy for primary congenital glaucoma.
DESIGN: Prospective, randomized trial.

METHODS: Of the 30 patients (60 eyes) analyzed with bilateral primary congenital glaucoma aged ≤2 years, 1 eye of each patient was randomized to: illuminated microcatheter-assisted trabeculotomy (Group I) or combined trabeculotomy with trabeculectomy augmented with mitomycin C (Group II). Primary outcome measure was intraocular pressure (IOP) reduction. Categorization into absolute success (IOP ≤15 mm Hg without medication) and qualified success (IOP ≤15 mm Hg with medication) was done. Secondary outcomes included change in corneal diameter and clarity, optic disc status, refraction, need for anti-glaucoma therapy, and occurrence of complications.

RESULTS: Mean age of patients was 6.63 ± 5.74 months. IOP fell by 49.3% (22.25 ± 10.88 to 11.56 ± 3.33 mm Hg) in Group I and 46.6% in Group II (21.73 ± 8.89 to 11.60 ± 3.03 mm Hg) ($P < .001$ in both). At 1 year, absolute success was achieved in 86.7% (26/30) and 90.0% (27/30) in Groups I and II, respectively ($P > .99$) and qualified success in 93.3% (28/30) in both groups ($P = 1$). There was significant improvement in corneal clarity ($P < .001$) and cup-to-disc ratio ($P ≤ .01$) in both groups at 1 year. Though incidence of hyphema was significantly more in Group I ($P = .0001$), no vision-threatening complications occurred in either group.

CONCLUSIONS: Illuminated microcatheter-assisted circumferential trabeculotomy achieved comparable surgical outcomes to mitomycin C-augmented combined trabeculotomy-trabeculectomy and may be recommended as the initial surgical procedure for primary congenital glaucoma.

130: Trikha V, Singh V, Kumar VS. Anterior fracture dislocation of sacroiliac joint: A rare type of crescent fracture. Indian J Orthop. 2015 Mar-Apr;49(2):255-9. doi: 10.4103/0019-5413.152527. PubMed PMID: 26015619; PubMed Central PMCID: PMC4436496.

Crescent fractures of the pelvis are usually described as posterior sacro iliac fracture dislocations. Rarely anterior displacement of the fractured iliac fragment along with dislocation has been reported in crescent fractures. Four cases of anterior fracture dislocation of the sacro iliac joint managed in the last two years by a single surgeon are presented. The injury mechanism, radiological diagnosis, management protocol along with functional outcomes of all the four patients have been discussed. CT scan is essential in the diagnosis and preoperative planning of this injury pattern. Early fixation along with proper reduction leads to excellent functional outcome in this subset of lateral compression injuries of the pelvis.

131: Tripathi M, Deo RC, Damodaran N, Suri A, Srivastav V, Baby B, Singh R, Kumar S, Kalra P, Banerjee S, Prasad S, Paul K, Roy TS, Lalwani S, Sharma BS. Quantitative analysis of variable extent of anterior clinoidectomy with intradural and extradural approaches: 3-dimensional analysis and cadaver dissection. Neurosurgery. 2015 Mar;11 Suppl 2:147-60; discussion 160-1. doi: 10.1227/NEU.0000000000000599. PubMed PMID: 25584957.

BACKGROUND: Drilling of the anterior clinoid process (ACP) is an integral component of surgical approaches for central and paracentral skull base lesions. The technique to drill ACP has evolved from pure intradural to extradural and combined techniques.

OBJECTIVE: To describe the computerized morphometric evaluation of exposure of optic nerve and internal carotid artery with proposed tailored intradural (IDAC) and complete extradural (EDAC) anterior clinoidectomy.
METHODS: We describe a morphometric subdivision of ACP into 4 quadrangles and 1 triangle on the basis of fixed bony landmarks. Computerized volumetric analysis with 3-dimensional laser scanning of dry-drilled bones for respective tailored IDAC and EDAC was performed. Both approaches were compared for the area and length of the optic nerve and internal carotid artery. Five cadaver heads were dissected on alternate sides with intradural and extradural techniques to evaluate exposure, surgical freedom, and angulation of approach.

RESULTS: Complete anterior clinoidectomy provides a 2.5-times larger area and 2.7-times larger volume of ACP. Complete clinoidectomy deroofed the optic nerve to an equal extent as by proposed the partial tailored clinoidectomy approach. Tailored IDAC exposes only the distal dural ring, whereas complete EDAC exposes both the proximal and distal dural rings with complete exposure of the carotid cave.

CONCLUSION: Quantitative comparative evaluation provides details of exposure and surgical ease with both techniques. We promote hybrid/EDAC technique for vascular pathologies because of better anatomic orientation. Extradural clinoidectomy is the preferred technique for midline cranial neoplasia. An awareness of different variations of clinoidectomy can prevent dependency on any particular approach and facilitate flexibility.

132: Vajpayee RB, Shafi SN, Maharana PK, Sharma N, Jhanji V. Evaluation of corneal collagen cross-linking as an additional therapy in mycotic keratitis. Clin Experiment Ophthalmol. 2015 Mar;43(2):103-7. doi: 10.1111/ceo.12399. Epub 2014 Sep 27. PubMed PMID: 25070527.

BACKGROUND: To report the treatment outcomes of mycotic keratitis with collagen cross-linking.
DESIGN: Retrospective study.

PARTICIPANTS: Patients with smear-positive moderate mycotic keratitis.
METHODS: A retrospective case-file analysis was performed to identify cases of moderate mycotic keratitis treated with and without additional collagen cross-linking, in addition to intensive topical antifungal therapy. Patients in which collagen cross-linking was performed on the day of presentation (group 1)

were compared with patients who received medical treatment alone in the form of 5% natamycin eye drops (group 2).
MAIN OUTCOME MEASURES: The primary outcome measure was the time taken for resolution of infection.

RESULTS: Overall, 41 cases were included for analysis (group 1, 20 cases; group 2, 21 cases). Mean age of the patients was comparable in both groups (46.5±17.01 vs. 41.2±20.7 years; P=0.36). Average infiltrate size was 16.35±6.8mm(2) in group 1 and 17.09±7.4mm(2) in group 2 (P=0.83). Overall, Aspergillus was the most commonly isolated organism (n=4 group 1; n=6 group 2). Resolution of infection was observed in 18 cases (90%) in group 1 and 18 (85.71%) cases in group 2. The average healing time was 30.85±26.6 days in group 1, while it was 31.28±19.97 days in group 2 (P=0.94). Final best-corrected visual acuity in group 1 was 1.13±0.55 and 1.25±0.46 in group 2 (P=0.46). A tectonic keratoplasty was performed in two cases in group 1 and three cases in group 2 (P=1.00).

CONCLUSIONS: In our study, additional collagen cross-linking treatment did not have any advantage over medical management in cases with moderate mycotic keratitis.

133: Vasudevan B, Dehran M, Chandran R, Maitra S, Mathews V. Successful use of size 0.5 air-Q in a low birth weight neonate. J Clin Anesth. 2015 Jun;27(4):366-7. doi: 10.1016/j.jclinane.2015.03.008. Epub 2015 Mar 22. PubMed PMID: 25805634.

134: Vijay M, Mridha AR, Ray R, Kinra P, Mishra B, Chandrashekhar HS. Focal hematopoietic hyperplasia of rib: a rare pseudotumor and review of literature. J Pathol Transl Med. 2015 Mar;49(2):159-62. doi: 10.4132/jptm.2013.10.02. Epub 2015 Mar 12. PubMed PMID: 25812738; PubMed Central PMCID: PMC4367113.

135: Walia R, Madan K, Mohan A, Jain D, Hadda V, Khilnani GC, Guleria R. Diagnostic utility of conventional transbronchial needle aspiration without rapid on-site evaluation in patients with lung cancer. Lung India. 2015 Mar-Apr;32(2):198-9. doi: 10.4103/0970-2113.152670. PubMed PMID: 25814817; PubMed Central PMCID: PMC4372886.

136: Yadav AK, Sharma R, Kandasamy D, Bhalla AS, Gamanagatti S, Srivastava DN, Upadhyay AD, Garg PK. Perfusion CT: can it predict the development of pancreatic necrosis in early stage of severe acute pancreatitis? Abdom Imaging. 2015 Mar;40(3):488-99. doi: 10.1007/s00261-014-0226-6. PubMed PMID: 25173791.

PURPOSE: Pancreatic necrosis is an important determinant of patient outcome in severe acute pancreatitis (SAP). This prospective study was conducted to evaluate if perfusion CT (PCT) can predict the development of necrosis at an early stage in SAP.

METHODS: PCT was performed within 72 h of abdominal pain in 57 consecutive admitted patients of acute pancreatitis, out of which four patients were excluded. Thirty-two patients were classified as SAP and 21 as mild acute pancreatitis (MAP) on the basis of APACHE II or SIRS criteria or presence of organ failure. All patients underwent a follow-up CECT at 3 weeks to look for pancreatic necrosis.

RESULTS: Out of 32 patients of SAP, 14 patients showed perfusion defects. The mean blood flow (BF) in these areas was 11.47 ± 5.56 mL/100 mL/min and median blood volume (BV) was 3.92 mL/100 mL (0.5-8.49 mL/100 mL). All these patients developed necrosis on follow-up scan. Two patients who did not show perfusion defects also developed necrosis. Remaining 37 patients (16 SAP and 21 MAP) did not show perfusion defect and did not develop necrosis on follow-up. All regions showing BF less than ≤23.45 mL/100 mL/min and BV ≤8.49 mL/100 mL developed pancreatic necrosis. The values of perfusion parameters may vary with the scanner, mathematical model and protocol used. The sensitivity and specificity of PCT for predicting pancreatic necrosis were 87.5% and 100%, respectively. The cut off values of BF and BV for predicting the development of pancreatic necrosis were 27.29 mL/100 mL/min and 8.96 mL/100 mL, respectively, based on ROC curve. PCT is a reliable tool for early prediction of pancreatic necrosis, which may open new avenues to prevent this ominous complication.

137: Yadav J, Satapathy AK, Jain V. Addisonian Crisis Due to Antitubercular Therapy. Indian J Pediatr. 2015 Mar 14. [Epub ahead of print] PubMed PMID: 25772943.

138: Yadav RK, Sarvottam K, Magan D, Yadav R. A two-year follow-up case of chronic fatigue syndrome: substantial improvement in personality following a yoga-based lifestyle intervention. J Altern Complement Med. 2015 Apr;21(4):246-9. doi: 10.1089/acm.2014.0055. Epub 2015 Mar 31. PubMed PMID: 25825998.

BACKGROUND AND OBJECTIVE: Chronic Fatigue Syndrome (CFS) is characterized by excessive fatigue after minimal physical or mental exertion, muscle and joint pain, poor concentration, dizziness, and sleep disturbances. We report here the effect of a yoga-based lifestyle intervention in a 30-year old male patient with a documented diagnosis of CFS with compromised quality of life (QoL) and altered personality.

METHODS: The patient initially attended a short-term yoga-based lifestyle intervention program that consisted of yoga-postures, breathing exercises (pranayama), meditation, group discussions, and individualized advice on stress management, diet and physical activity besides group support. Thereafter, patient attended 5 more such programs.

RESULTS: There was a notable and consistent improvement in his clinical profile, positive aspects of personality and subjective well-being, and reduction in anxiety following this yoga-based lifestyle intervention.
CONCLUSION: Overall, the results suggest that lifestyle intervention may improve clinical condition and personality in patients with CFS.

139: Yadav VK, Mandal RS, Puniya BL, Kumar R, Dey S, Singh S, Yadav S. Structural and binding studies of SAP-1 protein with heparin. Chem Biol Drug Des. 2015 Mar;85(3):404-10. doi: 10.1111/cbdd.12420. Epub 2014 Sep 22. PubMed PMID: 25147059.

SAP-1 is a low molecular weight cysteine protease inhibitor (CPI) which belongs to type-2 cystatins family. SAP-1 protein purified from human seminal plasma (HuSP) has been shown to inhibit cysteine and serine proteases and exhibit interesting biological properties, including high temperature and pH stability. Heparin is a naturally occurring glycosaminoglycan (with varied chain length) which interacts with a number of proteins and regulates multiple steps in different biological processes. As an anticoagulant, heparin enhances inhibition of thrombin by the serpin antithrombin III. Therefore, we have employed surface plasmon resonance (SPR) to improve our understanding of the binding interaction between heparin and SAP-1 (protease inhibitor). SPR data suggest that SAP-1 binds to heparin with a significant affinity (KD = 158 nm). SPR solution competition studies using heparin oligosaccharides showed that the binding of SAP-1 to heparin is dependent on chain length. Large oligosaccharides show strong binding affinity for SAP-1. Further to get insight into the structural aspect of

interactions between SAP-1 and heparin, we used modelled structure of the SAP-1 and docked with heparin and heparin-derived polysaccharides. The results suggest that a positively charged residue lysine plays important role in these interactions. Such information should improve our understanding of how heparin, present in the reproductive tract, regulates cystatins activity.

140: Zeeshan M, Tyagi K, Sharma YD. CD4+ T cell response correlates with naturally acquired antibodies against Plasmodium vivax tryptophan-rich antigens. Infect Immun. 2015 May;83(5):2018-29. doi: 10.1128/IAI.03095-14. Epub 2015 Mar 2. PubMed PMID: 25733522; PubMed Central PMCID: PMC4399064.

Tryptophan-rich proteins play important biological functions for the Plasmodium parasite. Plasmodium vivax contains remarkably large numbers of such proteins belonging to the "Pv-fam-a" family that need to be characterized. Earlier, we reported the presence of memory T cells and naturally acquired antibodies against 15 of these proteins in P. vivax malaria-exposed individuals (M. Zeeshan, H. Bora, and Y. D. Sharma, J Infect Dis 207:175-185, 2013, http://dx.doi.org/10.1093/infdis/jis650). Here, we sought to characterize and ascertain the cross talk between effector responses of T and B cells in malarial patients against all Pv-fam-a family proteins. Therefore, we expressed the remaining 21 of these proteins in Escherichia coli and studied the humoral and cellular immune responses based on the same parameters used in our previous study. Naturally acquired IgG antibodies were detected against all 21 antigens in P. vivax patient sera (37.7 to 94.4% seropositivity). These antigens were able to activate the lymphocytes of P. vivax-exposed individuals, and the activated CD4(+) T lymphocytes produced higher levels of Th1 (interleukin-2 [IL-2] and gamma interferon [IFN-γ]) and Th2 (IL-4 and IL-10) cytokines than the healthy controls, but the response was Th2 biased. The combined results of present and previous studies seem to suggest a striking link between induction of the CD4(+) T cell response and naturally acquired antibodies against all 36 proteins of the Pv-fam-a family, the majority of them having conserved sequences in the parasite population. Further work is required to utilize this information to develop immunotherapeutic treatments for this disease.