B.B. Dikshit Library
AIIMS
New Delhi

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

1: Agarwal B, Pandey S, Bhutia O, Roychoudhury A. Use of thermoplasticised nasal splint in naso-orbitoethmoid fractures: a technical note. Br J Oral Maxillofac Surg. 2016 Jan;54(1):e3-4. doi: 10.1016/j.bjoms.2015.09.032. Epub 2015 Oct 25. PubMed PMID: 26507675.

2: Agarwal KK, Mukherjee A, Sharma P, Bal C, Kumar R. Incremental value of 99mTc-MDP hybrid SPECT/CT over planar scintigraphy and SPECT in avascular necrosis of the femoral head. Nucl Med Commun. 2015 Oct;36(10):1055-62. doi: 10.1097/MNM.0000000000000357. PubMed PMID: 26308940.

OBJECTIVE: The aim of the study was to evaluate the incremental value of technetium-99m-methylene diphosphonate (99mTc-MDP) single-photon emission tomography/computed tomography (SPECT/CT) over planar bone scintigraphy (BS) and SPECT in the diagnosis of avascular necrosis (AVN) of the femoral head.
MATERIALS AND METHODS: The data of 44 patients (mean age 36 ± 16 years, 34 male and 10 female) who underwent 99mTc-MDP BS along with regional SPECT/CT for suspected femoral head AVN were retrospectively evaluated. Planar BS, SPECT and SPECT/CT images were evaluated by two nuclear medicine physicians in consensus. On the basis of diagnostic confidence, a score of 1-5 was given, with 1 being definitely AVN, 2 being probably AVN, 3 being equivocal, 4 being probably normal and 5 being definitely normal. Receiver operating characteristic analysis was performed and the area under the curve was calculated. For calculation of sensitivity, specificity and predictive values for planar, an interpretive score of less than or equal to 2 was taken as AVN and a score of 3 or more was taken as no AVN. Clinical and imaging follow-up and histopathological results were taken as the reference standard.
RESULTS: Among 44 patients with 64 affected femoral heads, there were 48 true-positive, 13 true-negative, two false-positive and one false-negative lesion on SPECT/CT. The diagnostic accuracy of planar BS, SPECT and SPECT/CT was 67, 78 and 95%, respectively. Planar BS was found to have the lowest sensitivity (75%) and specificity (40%), whereas SPECT/CT had the highest sensitivity (98%) and specificity (87%). The area under the curve was highest for SPECT/CT (0.919), followed by SPECT (0.76) and planar BS (0.567). SPECT/CT was superior to both SPECT ($P = 0.02$) and planar BS ($P < 0.001$), whereas SPECT was superior to planar BS ($P = 0.03$).
CONCLUSION: SPECT/CT is superior to planar BS and SPECT alone for the diagnosis of AVN of the femoral head.

3: Aggarwal R, Soni KD. Delayed massive hydrothorax following subclavian catheter insertion: an unusual complication. Crit Care Nurs Q. 2015 Oct-Dec;38(4):405-8. doi: 10.1097/CNQ.0000000000000089. PubMed PMID: 26335220.

Complications of central venous catheter can become life threatening if not managed timely. We present a case of massive hydrothorax that developed few hours after placement of the central venous pressure line. The diagnosis was little delayed because the catheter was normally placed initially and later got displaced within few hours of shifting to the intensive care unit. However, the patient was managed timely. Our case report suggests that the position of the catheter should be checked frequently in the intensive care unit and particularly so after shifting and positioning of the patient and the associated complications should be kept in mind.

4: Alabdulwahab SS, Ahmad F, Singh H. Effects of Functional Limb Overloading on Symmetrical Weight Bearing, Walking Speed, Perceived Mobility, and Community Participation among Patients with Chronic Stroke. Rehabil Res Pract. 2015;2015:241519. doi: 10.1155/2015/241519. Epub 2015 Oct 27. PubMed PMID: 26600952; PubMed Central PMCID: PMC4639661.

Background. Stroke is a leading cause for long-term disability that often compromises the sensorimotor and gait function accompanied by spasticity. Gait

abnormalities persist through the chronic stages of the condition and only a small percentage of these persons are able to walk functionally in the community. Material and Method. Patients with chronic stroke were recruited from outpatient rehabilitation unit at Department of Neurology & Neurosurgery, All India Institute of Medical Sciences, having a history of first stroke at least six months before recruitment, with unilateral motor deficits affecting gait. The patients were randomly assigned to either the functional limb overloading (FLO) or Limb Overloading Resistance Training (LORT) group and provided four weeks of training. Result. We found that there was an improvement in gait performance, weight bearing on affected limb, and perceived mobility and community participation. Conclusion. To the best of our knowledge, this is the first study that has evaluated the effects of functional limb overloading training on symmetric weight bearing, walking ability, and perceived mobility and participation in chronic hemiplegic population. The study demonstrated a beneficial effect of training on all the outcomes, suggesting that the functional limb overloading training can be a useful tool in the management of gait problems in chronic stroke patients.

5: Ambekar A, Rao R, Agrawal A, Goyal S, Mishra A, Kishore K, Mukherjee D, Albertin C. Pattern of Drug Use and Associated Behaviors Among Female Injecting Drug Users From Northeast India: A Multi-Centric, Cross-Sectional, Comparative Study. Subst Use Misuse. 2015;50(10):1332-40. doi: 10.3109/10826084.2015.1013130. Epub 2015 Oct 6. PubMed PMID: 26441158.

BACKGROUND: Studies from developed countries document the presence of injecting drug use among females and significantly higher vulnerabilities and risks as compared with male injecting drug users (IDUs). Studies comparing vulnerabilities and drug use patterns between female and male IDUs are not available for developing countries.
OBJECTIVES: The aim of the study was to assess the drug use pattern and related HIV vulnerabilities among female IDUs and compare these findings with those from male IDUs from four states of Northeast India.
METHOD: The study used data collected as part of a nationwide study of drug use pattern and related HIV vulnerabilities among IDUs. Ninety-eight female and 202 male IDUs accessing services from harm reduction sites across the four states of Northeast region of India were chosen through random sampling methodology. Drug use pattern, injecting practices, and knowledge of HIV were assessed using a structured questionnaire.
RESULTS: Significantly higher proportion of female IDUs was uneducated, unemployed, reported their occupation as sex workers, and switched to injecting drug use faster as compared with male IDUs. Female IDUs practicing sex work differed significantly from those who did not with respect to frequency of daily injections, choice of drugs injected, and concomitant use of non-injecting drugs. More than half of female IDUs initiated sharing within the first month of injecting.
CONCLUSIONS: The study demonstrates that female IDUs differ from male IDUs in their drug use pattern, initiation into injection as well as injecting behavior, which would be an important consideration during designing of female-specific interventions.

6: Angmo D, Patil B, Agarwal R, Mohanty K, Singh A. A Unique Case of JOAG With Lamellar Ichthyosis With Rickets: A Case Report and Review of the Literature. J Glaucoma. 2015 Oct 3. [Epub ahead of print] PubMed PMID: 26439315.

PURPOSE: Ichthyosis is known to have ocular associations such as blepharitis, hypertrophic conjunctivitis, corneal vascularization, ectropion, lagophthalmos, etc. However, no reports of its association with glaucoma are there, to the best of our knowledge. We report a unique case of juvenile open-angle glaucoma (JOAG) with lamellar ichthyosis.
METHOD: A 16-year-old male child presented with a gradual, painless progressive diminution of vision in both eyes over a period of 3 years. Systemic examination revealed stunted body growth with knock-knees, suggestive of late-onset rickets.

Generalized dry scaly lesions with erythema, along with hyperkeratosis of the palms and the soles, suggestive of lamellar ichthyosis were present. On ocular examination, the intraocular pressure was 36 mm Hg; optic nerve head examination revealed a horizontally oval disc with near total cupping in the right eye and total cupping in the left eye, with extensive neuroretinal rim thinning and pallor. Gonioscopy showed wide open angles with prominent iris processes. Screening of JOAG-associated genes (MYOC, NTF4, WDR36, and CYP1B1) and ichthyosis-associated gene (TGM1) was performed by the direct PCR-sequencing method.
RESULTS: A diagnosis of JOAG with advanced glaucomatous optic neuropathy with lamellar ichthyosis and rickets was made. The patient underwent right followed by left eye trabeculectomy with 0.2 mg/dL MMC (for 1 min). Postoperatively, the intraocular pressure was 8 mm Hg at 1 week, and 12 to 14 mm Hg at the 6-week, the 3-month, and the 6-month follow-up, and the visual acuity was maintained in the right eye. No mutations in MYOC, NTF4, WDR36, CYP1B1, and TGM1 were observed in the patient and his family.
CONCLUSIONS: An association of glaucoma with ichthyosis should be kept in mind. Therefore, a detailed baseline ocular examination in children with ichthyosis is required, as early detection of glaucoma could prevent irreversible blindness.

7: Arava S, Bagmar S, Jain P, Kumaran M, Kumar S, Ray R. Primary intracardiac malignant peripheral nerve sheath tumor: A rare case report. Indian J Pathol Microbiol. 2015 Oct-Dec;58(4):531-3. doi: 10.4103/0377-4929.168867. PubMed PMID: 26549085.

Myxomas are the most common benign cardiac tumors constituting approximately 75% of all the cardiac tumors. Rest 25% are malignant and sarcomas being the commonest. Among the sarcomas primary cardiac malignant peripheral nerve sheath tumors are extremely rare. They usually arise in relation to the branches of vagus or phrenic nerves, 5-42% being associated with neurofibromatosis type 1. Clinical signs and symptoms depend on the location and extent of involvement. Complete resection is the treatment of choice but local recurrence is common.

8: Arora T, Bali SJ, Arora V, Wadhwani M, Panda A, Dada T. Diurnal versus office-hour intraocular pressure fluctuation in primary adult onset glaucoma. J Optom. 2015 Oct-Dec;8(4):239-43. doi: 10.1016/j.optom.2014.05.005. Epub 2014 Jun 16. PubMed PMID: 26386536; PubMed Central PMCID: PMC4591418.

PURPOSE: To evaluates the role of measuring intraocular pressure (IOP) outside office-hour in primary adult onset glaucoma.
METHODS: This retrospective study included 100 cases of primary adult onset glaucoma. IOP readings obtained with Goldmann applanation tonometry between 7 am and 10 pm were compared to office-hour readings.
RESULTS: One hundred patients were enrolled (mean age: 58.64 ± 10.98 years) in the study. Overall, mean diurnal IOP was significantly higher than mean office IOP ($p < 0.05$). Two-thirds of the patients had peak IOP measurements outside office-hour. Mean diurnal IOP fluctuation (7.03 ± 2.69 mm Hg) was significantly higher than mean office IOP fluctuation (4.31 ± 2.6 mm Hg) ($p < 0.003$). There was a significant correlation between baseline IOP and fluctuation in IOP ($r = 0.61$, $p<0.001$).
CONCLUSION: The mean diurnal IOP and IOP fluctuations were higher than office-hour readings in patients with primary adult onset glaucoma. Diurnal monitoring may be particularly useful in patients with high baseline IOP.

9: Asothai R, Anand V, Das D, Antil PS, Khandpur S, Sharma VK, Sharma A. Distinctive Treg associated CCR4-CCL22 expression profile with altered frequency of Th17/Treg cell in the immunopathogenesis of Pemphigus Vulgaris. Immunobiology. 2015 Oct;220(10):1129-35. doi: 10.1016/j.imbio.2015.06.008. Epub 2015 Jun 17. PubMed PMID: 26093920.

Pemphigus Vulgaris (PV), a relatively common autoimmune blistering disease in India, primarily mediated by anti-Desmoglein 3 (anti-Dsg3) autoantibodies. T-helper 17 (Th17) and T-regulatory (Treg) cells play significant role in regulating immune homeostasis in autoimmune disorders. To understand immunopathogenesis of PV, it is crucial to unfold the phenotypic expression and functional characteristics of these cells along with their specific homing chemokine receptor-ligand. This proposed study aims to unravel the functional expression of Th17 and Treg cells along with their specific homing chemokine receptor-ligand, transcription factors and cytokine levels to better understand the immunopathogenesis of PV. The Flow cytometry results showed decreased frequency of Treg cells and high number of Th17 cells ($p<0.001$) indicating immune dysregulation in PV. A significant increase ($p<0.001$) in the serum levels of Th17 associated molecules (IL-17A, CCL-20) and relative expression of RORγt, CCR6 and CCL20 was found in patients. For Treg cells, transcription factor FOXp3 was significantly lowered along with defective CCR4-CCL22 ($p<0.05$) that might be playing an ambiguous role in Treg generated immune regulation, leading to homing defect at lesional sites. This maiden study revealed the role of defective receptor-ligand interface that might have failed to suppress inflammatory milieu produced by Th17 cells thus promoting inflammation and contributing to immunopathogenesis of PV. This chemokine receptor-ligand can further be explored as potential target for development of novel therapies in PV.

10: Bala R, Hazarika A, Pandia MP, Kumar N. High arch palate: A bane for ProSeal laryngeal mask airway but a boon for I-gel. J Anaesthesiol Clin Pharmacol. 2015 Oct-Dec;31(4):568. doi: 10.4103/0970-9185.169098. PubMed PMID: 26702224; PubMed Central PMCID: PMC4676256.

11: Banik S, Prabhakar H. Is dexmedetomidine really superior to propofol? J Anesth. 2015 Oct;29(5):813. doi: 10.1007/s00540-015-2005-0. Epub 2015 Mar 27. PubMed PMID: 25812805.

12: Baruah RR, Bhatnagar V, Agarwala S, Gupta SD. Correlation of pre- and post-operative liver function, duct diameter at porta hepatis, and portal fibrosis with surgical outcomes in biliary atresia. J Indian Assoc Pediatr Surg. 2015 Oct-Dec;20(4):184-8. doi: 10.4103/0971-9261.161040. PubMed PMID: 26628810; PubMed Central PMCID: PMC4586981.

BACKGROUND AND AIMS: Extrahepatic biliary atresia is one of the most challenging conditions in pediatric surgery. The definition of prognostic factors is controversial. Surgical outcomes after bilioenteric drainage procedures are variable. This study attempts to correlate the pre- and post-operative liver histology with clinical factors in order to define early predictors of success.
MATERIALS AND METHODS: Twenty consecutive patients, treated by Kasai's portoenterostomy (KP) over a 3 years period were included in this study. Tissue obtained from the porta hepatis was analyzed for duct size using an optical micrometer and was categorized into three types: I-No demonstrable ducts; II - <50 μ; III - >50 μ. Pre- and post-operative liver biopsy was analyzed for architectural changes and fibrosis; hepatic fibrosis was quantified using existing criteria. Pre- and post-operative liver function tests (LFTs) were also done. Surgical outcomes were defined as: (A) Disappearance of jaundice within 3 months; (B) initial disappearance of jaundice with recurrence by 6 months and (C) persistence of jaundice. Duct diameters, fibrosis score, and LFT were correlated with age and clinical outcomes.
RESULTS: The surgical outcomes were: A-6 patients (30%), B-6 patients (30%), C-8 patients (40%). The duct size at the porta was I-3 patients, II-11 patients, and III-4 patients (tissue was not available in 2 cases). The change in total serum bilirubin (mg%) from pre- to post-operative period was 13.6 ± 3.9 (Group A), 4.6

± 2.8 (Group B), and 3.4 ± 3.9 (group C) (P < 0.001) and direct and indirect fractions followed a similar trend; the changes in liver enzymes were not significant. The changes in hepatic histopathological changes (ballooning of hepatocytes, giant cells, cholestasis, portal tract infiltration, ductular proliferation, lobular necrosis, and fibrosis) were also not significant but there was a definite trend in the change in fibrosis -1.500 ± 1.643 (Group A), 0.667 ± 2.582 (Group B), and 1.500 ± 1.852 (Group C) - reduction of fibrosis with good results and progression of fibrosis with poor results.
CONCLUSIONS: Following KP, jaundice persisted in 40% patients; it disappeared in 60% patients but reappeared in half of these patients 6 months postoperatively. The duct size at the porta hepatis did not correlate with age or surgical outcome. Serum bilirubin showed the best correlation with surgical outcome. Postoperative changes in hepatic fibrosis seem to have some bearing on surgical outcomes-progressive fibrosis is a poor prognostic factor.

13: Batra A, Kumari M, Paul R, Patekar M, Dhawan D, Bakhshi S. Quality of Life Assessment in Retinoblastoma: A Cross-Sectional Study of 122 Survivors from India. Pediatr Blood Cancer. 2015 Oct 21. doi: 10.1002/pbc.25781. [Epub ahead of print] PubMed PMID: 26488435.

BACKGROUND: With current modalities, cure rates of retinoblastoma are high and hence the number of survivors is increasing. However, data on quality of life (QOL) are minimal.
PROCEDURE: We analyzed QOL in 122 retinoblastoma survivors using the PedsQL(TM) 4.0 generic core scale. The self-reported questionnaire was filled by children of more than 5 years of age who had completed treatment for more than 12 months. The questionnaire consists of 23 questions on physical, social, emotional, and school domains on a scale from 0 to 4. This was converted to a scale from 0 to 100, where higher values represented better QOL. The QOL was compared with 50 siblings. Factors predicting the QOL were assessed.
RESULTS: The median age of retinoblastoma survivors was 98 months (range 60-247) and 68% were males. Overall QOL was significantly poorer in retinoblastoma survivors as compared with the controls. The emotional health domain of QOL was significantly affected. Difficulties in maintaining friendships and competing were reported in the social health domain. The school health domain showed significantly higher absenteeism. However, the physical health domain, including household work, exercise, and self-care, was similar in both the groups. Lower age at diagnosis (≤18 months) predicted better QOL (P = 0.05), whereas age at assessment, sex, IRSS stage, and previous surgery and radiotherapy were not predictive of poor QOL.
CONCLUSIONS: We found a significantly poorer QOL in retinoblastoma survivors with the psychosocial health domain being more affected than the physical domain. Age less than 18 months at diagnosis predicted better QOL.

14: Behera P, Gupta SK. Comment on: Prevalence of depression and associated risk factors among the elderly in urban and rural field practice areas of a tertiary care institution in Ludhiana. Indian J Public Health. 2015 Oct-Dec;59(4):330-1. PubMed PMID: 26584179.

15: Bermudez A, Bhatla N, Leung E. Cancer of the cervix uteri. Int J Gynaecol Obstet. 2015 Oct;131 Suppl 2:S88-95. doi: 10.1016/j.ijgo.2015.06.004. PubMed PMID: 26433680.

16: Bhad R, Lal R, Balhara YP. Disorders Related to Use of Psychoactive Substances in DSM-5: Changes and Challenges. Indian J Psychol Med. 2015 Oct-Dec;37(4):470-2. doi: 10.4103/0253-7176.168613. PubMed PMID: 26702188; PubMed Central PMCID: PMC4676222.

In the most recent edition of Diagnostic and Statistical Manual (DSM) that is DSM-5 many modifications have been made in substance use disorder section. These include changes in terminology; sections and categories; diagnostic criteria; threshold for diagnosis; severity; and specifier. Additionally, there have been certain additions and omissions from the earlier version. Critical evaluation of the changes made to the section on disorders related to use of psychoactive substances in India context has not been published so far. The current paper presents a critique of the changes made to the substance use disorder section in DSM-5. The rationale for these changes put forth by DSM-5 work group on substance related disorders have been discussed. Additionally, attempt has been made to highlight the possible future challenges consequent to the current nosological revision for substance use disorder category. Overall DSM-5 seems to be promising in fulfilling its goal of DSM-ICD harmonisation and movement towards an internationally compatible and practical diagnostic system for mental health disorders. It has increased the scope of addiction by inclusion of behavioural addiction. It has also tried to balance the categorical and dimensional approach to diagnosis. However, the real test of this newer edition of one of the most commonly used nosological systems will be during clinical care and research. This will help address the debatable issues regarding the changes that DSM-5 brings with it.

17: Bhardwaj M, Sen S, Sharma A, Kashyap S, Chosdol K, Pushker N, Bajaj MS, Bakhshi S. ZEB2/SIP1 as novel prognostic indicator in eyelid sebaceous gland carcinoma. Hum Pathol. 2015 Oct;46(10):1437-42. doi: 10.1016/j.humpath.2015.05.026. Epub 2015 Jun 10. PubMed PMID: 26220160.

Epithelial-mesenchymal transition (EMT) plays a pivotal role in tumor invasion and metastasis in various malignancies. ZEB2/SIP1 is an important EMT regulator and down-regulates E-cadherin expression. The present study was planned to explore status of EMT-associated markers ZEB2/SIP1 and E-cadherin in eyelid sebaceous gland carcinoma (SGC) and to correlate with clinicopathological high-risk features. Expressions of ZEB2 and E-cadherin were evaluated by immunohistochemistry in 65 cases of histopathologically proven eyelid SGC. The results were correlated with clinicopathological high-risk features and survival of the patients to determine the prognostic significance of ZEB2, E-cadherin, and various high-risk features. Cytoplasmic overexpression of ZEB2 and membranous loss of E-cadherin were seen in 68% and 66% of cases of eyelid SGC, respectively. ZEB2 overexpression was significantly associated with E-cadherin loss (P = .002). Overexpression of ZEB2 also showed significant association with lymph node metastasis (P = .046), orbital invasion (P = .049), large tumor size (P = .018), and advanced tumor stages (P = .036). Survival analysis revealed that patients with ZEB2 overexpression had poor survival. ZEB2 overexpression and orbital invasion were found to be independent prognostic indicators (univariate analysis). However, multivariate analysis showed that ZEB2 (hazard ratio, 0.094; 95% confidence interval, 00.012-0.709; P = .022) was the best poor prognostic indicator of eyelid SGC. Our study demonstrates the role of both ZEB2 and E-cadherin in the promotion of EMT in eyelid SGC. The outcome of this study also points toward ZEB2 as an independent prognostic marker as well as a potential therapeutic target in eyelid SGC.

18: Bhari N, Xess I, Pandey M, Arava S, Ramam M. Primary Cutaneous Trichosporonosis Responsive to Voriconazole. JAMA Dermatol. 2015 Oct 1;151(10):1139-41. doi: 10.1001/jamadermatol.2015.1354. PubMed PMID: 26061448.

19: 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 Oct;40(7):811-4. doi: 10.1111/ced.12620. Epub 2015 Mar 21. PubMed PMID: 25809408.

20: Bhoi D, Pushparajan HK, Talawar P, Kumar A, Baidya DK. Serratus anterior plane block for breast surgery in a morbidly obese patient. J Clin Anesth. 2015 Oct 22. pii: S0952-8180(15)00299-8. doi: 10.1016/j.jclinane.2015.09.004. [Epub ahead of print] PubMed PMID: 26603109.

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

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

22: Bopanna S, Shalimar. Intestinal FXR: A New Therapeutic Target for Nonalcoholic Fatty Liver Disease. J Clin Exp Hepatol. 2015 Sep;5(3):264-6. doi: 10.1016/j.jceh.2015.08.006. Epub 2015 Oct 27. PubMed PMID: 26628846; PubMed Central PMCID: PMC4632102.

23: Bush A, Kabra SK. Editorial: New Techniques for Old and New Diseases. Indian J Pediatr. 2015 Oct;82(10):930-1. doi: 10.1007/s12098-015-1880-6. Epub 2015 Aug 27. PubMed PMID: 26307757.

24: Chandra SP, Kurwale NS, Chibber SS, Banerji J, Dwivedi R, Garg A, Bal C, Tripathi M, Sarkar C, Tripathi M. Endoscopic-Assisted (Through a Mini Craniotomy) Corpus Callosotomy Combined With Anterior, Hippocampal, and Posterior Commissurotomy in Lennox-Gastaut Syndrome: A Pilot Study to Establish Its Safety and Efficacy. Neurosurgery. 2015 Oct 13. [Epub ahead of print] PubMed PMID: 26474092.

BACKGROUND: Corpus callosotomy is a palliative procedure especially for Lennox-Gastaut semiology without localization with drop attacks.

OBJECTIVE: To describe endoscopic-assisted complete corpus callosotomy combined with anterior, hippocampal, and posterior commissurotomy.
METHODS: Patients with drug refractory epilepsy having drop attacks as the predominant seizure type, bilateral abnormalities on imaging, and moderate to severe mental retardation were included. All underwent a complete workup (including magnetic resonance imaging).
RESULTS: Patients (n = 16, mean age 11.4 ± 6.4 years, range 6-19 years) had a mean seizure frequency of 24.5 ± 19.8/days (range 1-60) and a mean intelligence quotient of 25.23 ± 10.71. All had syndromic diagnosis of Lennox-Gastaut syndrome, with the following etiologies: hypoxic insult (10), lissencephaly (2), bilateral band heterotropia (2), and microgyria and pachygyria (2). Surgery included complete callosotomy and the section of anterior and posterior commissure by microscopic approach through a mini craniotomy (11) and endoscopic-assisted approach (5). Complications included meningitis (1), hyperammonemic encephalopathy (2), and acute transient disconnection (5). There was no mortality or long-term morbidity. Mean follow-up was 18 ± 4.7 months (range 16-27 months). Drop attacks stopped in all. Seizure frequency/duration decreased >90% in 10 patients and >50% in 5 patients, and increased in 1 patient. All patients attained presurgical functional levels in 3 to 6 months. Child behavior checklist scores showed no deterioration. Parental questionnaires reported 90% satisfaction attributed to the control of drop attacks. The series was compared retrospectively with an age/sex-matched cohort (where a callosotomy only was performed), and showed better outcome for drop attacks ($P < .003$).
CONCLUSION: This preliminary study demonstrated the efficacy and safety of complete callosotomy with anterior, hippocampal, and posterior commissurotomy in Lennox-Gastaut syndrome (drop attacks) with moderate to severe mental retardation.
ABBREVIATIONS: AC, anterior commissureACT, anterior commissurotomyCBCL, child behavior check listCC, corpus callosotomyHC, hippocampalHCT, hippocampal commissurotomyIQ, intelligence quotientPC, posterior commissurePCT, posterior commissurotomy.

25: Chaudhary O, Kumar S, Bala M, Singh J, Hazarika A, Luthra K. Association of DC-SIGNR Expression in Peripheral Blood Mononuclear Cells with DC-SIGNR Genotypes in HIV-1 Infection. Viral Immunol. 2015 Oct;28(8):472-5. doi: 10.1089/vim.2014.0148. Epub 2015 Aug 27. PubMed PMID: 26313015.

Dendritic cell-specific intracellular adhesion molecule 3 grabbing nonintegrin related molecule (DC-SIGNR) is a C-type lectin, calcium-dependent carbohydrate-binding protein, which can act as a cell-adhesion and pathogen recognition receptor. DC-SIGNR is known to be highly expressed on liver sinusoidal cells and in the lymph nodes. However, its expression in peripheral blood mononuclear cells (PBMCs) in HIV-1 infection has not been addressed. Therefore, this study determined the expression of DC-SIGNR in PBMCs of HIV-1-infected patients and healthy seronegative individuals by real-time polymerase chain reaction and assessed its correlation with CD4+ T cell counts and DC-SIGNR genotypes. A significantly higher expression of DC-SIGNR was observed in the PBMCs of HIV-1-infected patients compared with healthy seronegative individuals. Further, there was a negative correlation between DC-SIGNR expression and CD4+ T cell counts and positive with viral load, with higher DC-SIGNR expression in the PBMCs of HIV-1-infected patients with a CD4+ T cell count <200 cells/μL than those with >200 cells/μL. This is the first study to report the expression of DC-SIGNR in PBMCs of HIV-1-infected patients. A salient finding of this study is that the DC-SIGNR expression was higher in HIV-1-infected patients, and its positive correlation with viral load and negative with CD4+ T cells counts suggesting a potential role of DC-SIGNR in HIV-1 infection.

26: Chaudhury S, Sharma V, Kumar V, Nag TC, Wadhwa S. Activity-dependent synaptic plasticity modulates the critical phase of brain development. Brain Dev. 2015 Oct 26. pii: S0387-7604(15)00220-X. doi: 10.1016/j.braindev.2015.10.008. [Epub ahead of print] Review. PubMed PMID: 26515724.

Plasticity or neuronal plasticity is a unique and adaptive feature of nervous system which allows neurons to reorganize their interactions in response to an intrinsic or extrinsic stimulation and shapes the formation and maintenance of a functional neuronal circuit. Synaptic plasticity is the most important form of neural plasticity and plays critical role during the development allowing the formation of precise neural connectivity via the process of pruning. In the sensory systems-auditory and visual, this process is heavily dependent on the external cues perceived during the development. Environmental enrichment paradigms in an activity-dependent manner result in early maturation of the synapses and more efficient trans-synaptic signaling or communication flow. This has been extensively observed in the avian auditory system. On the other hand, stimuli results in negative effect can cause alterations in the synaptic connectivity and strength resulting in various developmental brain disorders including autism, fragile X syndrome and rett syndrome. In this review we discuss the role of different forms of activity (spontaneous or environmental) during the development of the nervous system in modifying synaptic plasticity necessary for shaping the adult brain. Also, we try to explore various factors (molecular, genetic and epigenetic) involved in altering the synaptic plasticity in positive and negative way.

27: Choudhury A, Narula J, Kumar P, Aggarwal S, Kiran U. Inverted left atrial appendage: a complication of de-airing during cardiac surgery. Can J Anaesth. 2015 Oct;62(10):1119-20. doi: 10.1007/s12630-015-0412-1. Epub 2015 Jul 3. PubMed PMID: 26138015.

28: Chowdhury UK, Patel K, Gupta SK, Jagia P, Singh SP. Right Coronary Artery to Pulmonary Arterial Fistula Associated With Tetralogy of Fallot: A Case Report and Review of Literature. World J Pediatr Congenit Heart Surg. 2015 Oct;6(4):654-7. doi: 10.1177/2150135115581385. PubMed PMID: 26467882.

A 16-year-old boy with tetralogy of Fallot (TOF), pulmonary stenosis, and coronary artery to pulmonary arterial fistulous communication arising from the proximal right coronary artery is reported for its rarity. The surgical importance of this anomaly is highlighted. The diagnosis should be borne in cases of TOF, with echocardiographic demonstration of severe right ventricular outflow tract obstruction without a corresponding degree of systemic arterial desaturation.

29: Chowdhury UK, Patel K, Seth S, Ray R, Jagia P, Sahu M. Congenital Erythropoietic Porphyria With Calcific Constrictive Pericarditis: A Case Report and Brief Review of Literature. World J Pediatr Congenit Heart Surg. 2015 Oct;6(4):646-9. doi: 10.1177/2150135115581384. PubMed PMID: 26467880.

An 18-year-old boy with congenital erythropoietic porphyria and calcific constrictive pericarditis underwent total pericardiectomy. The cause of pericardial calcification could be deposition of porphyrins in the pericardium. Surgical importance of this rare condition is highlighted.

30: Das CJ, Manchanda S, Panda A, Sharma A, Gupta AK. Recent Advances in Imaging of Small and Large Bowel. PET Clin. 2016 Jan;11(1):21-37. doi: 10.1016/j.cpet.2015.07.008. Epub 2015 Oct 1. Review. PubMed PMID: 26590441.

The diagnosis of bowel pathology is challenging in view of the nonspecific clinical presentation. Currently, there are various imaging modalities available

to reach an accurate diagnosis. These modalities include conventional techniques (radiographs, small bowel follow-through, conventional enteroclysis), ultrasonography, and cross-sectional examinations (computed tomography [CT] and MR imaging) as well as functional imaging modalities, such as PET-CT or PET-MR imaging. Each modality has its own advantages and disadvantages and can be used in isolation or combination. This review discusses the role of CT, MR imaging, and PET-CT in the evaluation of small and large bowel diseases.

31: Das P, Gupta SD. Cancer stem cells in hepatocellular carcinomas. Indian J Med Res. 2015 Oct;142(4):362-5. doi: 10.4103/0971-5916.169191. PubMed PMID: 26609026; PubMed Central PMCID: PMC4683819.

32: Deka D, Dadhwal V, Sharma AK, Shende U, Agarwal S, Agarwal R, Vanamail P. Perinatal survival and procedure-related complications after intrauterine transfusion for red cell alloimmunization. Arch Gynecol Obstet. 2015 Oct 22. [Epub ahead of print] PubMed PMID: 26493554.

OBJECTIVES: To study the perinatal survival and procedure-related (PR)complications after intrauterine transfusions in red cell alloimmunization.
METHODS: Prospective data of 102 women with Rh-alloimmunized pregnancy undergoing intrauterine intravascular transfusion for fetal anemia, from January 2011 to October 2014 were analyzed. Main outcome measures were perinatal survival and procedure-related (PR) complications.
RESULTS: A total of 303 intrauterine transfusions were performed in 102 women. Of 102 fetuses, 22 were hydropic at first transfusion. The mean period of gestation and hematocrit at first transfusion was 26.9 ± 3.3 weeks (range 19.7-33.8 weeks) and 17 ± 7.82 % (range 5.7-30 %), respectively. Average number of transfusions was 2.97 (range 1-7) per patient. Overall survival was 93 % and mean period of gestation at delivery was 34.5 ± 1.94 (range 28.3-37.4) weeks. Mean hematocrit at delivery was 36.9 ± 8.77 % (range 10-66 %). Fetal death occurred in four cases (3PR), neonatal death occurred in three cases (2PR). Emergency cesarean delivery after transfusion was performed in four pregnancies. The total PR complication rate was 2.97 %, resulting in overall PR loss in 1.65 % per procedure.
CONCLUSION: Our results compare favorably with other studies published in the literature. Intravascular transfusion is a safe procedure improving perinatal survival in fetuses with anemia due to Rh-alloimmunization.

33: Dhandapani M, Gupta S, Dhandapani S, Kaur P, Samra K, Sharma K, Dolma K, Mohanty M, Singla N, Gupta SK. Study of factors determining caregiver burden among primary caregivers of patients with intracranial tumors. Surg Neurol Int. 2015 Oct 9;6:160. doi: 10.4103/2152-7806.167084. eCollection 2015. PubMed PMID: 26543669; PubMed Central PMCID: PMC4610069.

BACKGROUND: Caregivers of patients with intracranial tumors handle physical, cognitive, and behavioral impairments of patients. The purpose of this study was to assess the magnitude of burden experienced by primary caregivers of patients operated for intracranial tumors and evaluate factors influencing it.
METHODS: Descriptive cross-sectional design was used to assess home-care burden experienced by primary caregivers of patients operated for intracranial tumors. Using purposive sampling, 70 patient-caregiver pairs were enrolled. Modified caregiver strain index (MCSI) was used to assess the caregiver burden. Mini mental status examination (MMSE), Katz index of independence in activities of daily living (ADL), and neuropsychiatric inventory questionnaire (NPI-Q) were used to assess the status of patients.
RESULTS: Of 70 caregivers, 45 had mild, and 22 had moderate MCSI burden. A number of behavioral changes in NPI-Q had a significant correlation with MCSI burden ($P < 0.001$), whereas MMSE and Katz-ADL of patients did not show significant relation with caregiver burden. In NPI-Q, irritability, agitation, anxiety, depression, and sleep disturbances had a significant impact on MCSI. Among caregiver factors, unemployment, low per capita income, time spent, inability to meet household

needs, quitting the job, and health problems had a significant impact on MCSI. In separate multivariate analyses, irritability component (P = 0.004) among behavioral changes of patients and caregivers' inability to meet household needs (P < 0.001) had a significant association with caregiver burden independent of other factors.
CONCLUSIONS: Behavioral changes in patients (especially irritability) and financial constraints had a significant independent impact on the burden experienced by primary caregivers of patients operated for intracranial tumors. Identifying and managing, these are essential for reducing caregiver burden.

34: Dhiman R, Singh A, Tandon R, Vanathi M. Contact lens induced Pseudomonas keratitis following descemet stripping automated endothelial keratoplasty. Cont Lens Anterior Eye. 2015 Oct;38(5):379-81. doi: 10.1016/j.clae.2015.03.013. Epub 2015 Jun 3. PubMed PMID: 26048660.

To report a case of bandage contact lens induced infectious keratitis caused by Pseudomonas aeruginosa following DSAEK.CASE REPORT: A 56-year-old female who underwent DSAEK at our institute for pseudophakic bullous keratopathy, developed contact lens induced keratitis in the fifth post operative week. Best corrected visual acuity (BCVA) reduced to perception of light in the left eye. Slit lamp examination revealed an epithelial ulcer measuring 4.7mm×6mm with surrounding infiltrates in the anterior stroma with hypopyon. The interface was clear. The corneoscleral rim culture of the donor tissue showed no growth on bacterial and fungal culture ruling out the possibility of donor-to-host transmission of infection. Microbiological evaluation identified the causative agent to be Pseudomonas aeruginosa. Based on culture and sensitivity report patient was started on hourly instillation of topical polymyxin B 20,000IU and fortified ceftazidime 5%. A response to treatment was noted and there was a complete resolution of keratitis with residual scarring.
DISCUSSION: There have been case reports suggesting a host to donor transmission of infection which manifests during the postoperative period. To the best of our knowledge there are no reports of bandage contact lens associated Pseudomonas keratitis in a case that has undergone DSAEK. The prolonged use of bandage contact lens, lens contamination, stagnation of tear film behind the lens, compromised ocular surface and post operative use of topical steroids can contribute to infectious keratitis in DSAEK cases.

35: Dhull VS, Sharma P, Patel C, Kundu P, Agarwala S, Bakhshi S, Bhatnagar V, Bal C, Kumar R. Diagnostic value of 18F-FDG PET/CT in paediatric neuroblastoma: comparison with 131I-MIBG scintigraphy. Nucl Med Commun. 2015 Oct;36(10):1007-13. doi: 10.1097/MNM.0000000000000347. PubMed PMID: 26049371.

PURPOSE: The aim of the study was to evaluate the diagnostic value of fluorine-18 fluorodeoxyglucose (18F-FDG) PET/computed tomography (CT) in paediatric patients with neuroblastoma (NB) and compare the results with iodine-131 metaiodobenzylguanidine (131I-MIBG) scintigraphy.
METHODS: Data on 40 paediatric patients (age, 5.5 ± 5.6 years; male, 32; female, eight) with histopathologically proven NB who underwent 18F-FDG PET/CT (staging, 21 patients; restaging/response monitoring, 19 patients) were retrospectively evaluated. I-MIBG scintigraphy data were available for 28/40 patients (median interval, 15 days; staging, 20 patients; restaging/response monitoring, eight patients). 131I-MIBG scintigraphy and 18F-FDG PET/CT images were evaluated by two nuclear medicine physicians in consensus and in separate sessions. Histopathology (n = 50 lesions) and/or clinical/imaging follow-up (n = 90 lesions) data were taken as the reference standard.
RESULTS: Patient-wise sensitivity, specificity, positive-predictive value, negative-predictive value and accuracy of 18F-FDG PET/CT were 100, 50, 91.89, 100 and 92.50%, respectively. A total of 140 lesions (primary, 37; lymph node, 31; bone, 50; bone marrow, 15; and others, seven) were detected on PET/CT. In 28

patients undergoing both imaging studies, the sensitivity, specificity, positive-predictive value, negative-predictive value and accuracy of 18F-FDG PET/CT were 100, 60, 92, 100 and 92.80%, respectively, and those of 131I-MIBG were 95.65, 60, 91.67, 75 and 89.20%, respectively. In these 28 patients, PET/CT detected 107 lesions (primary, 25; lymph node, 22; bone/bone marrow, 56; and others, four) and 131I-MIBG scintigraphy detected 74 lesions (primary, 24; lymph node, five; and bone/bone marrow, 45). On a patient-based comparison there was no significant difference between 18F-FDG PET/CT and 131I-MIBG (P = 1.000), but 18F-FDG PET/CT was superior to 131I-MIBG on a lesion-based comparison (P < 0.0001). Although no difference was noted for primary lesions (P = 1.000), PET/CT was superior to 131I-MIBG scintigraphy for the detection of lymph nodal (P = 0.001) and bone/bone marrow lesions (P = 0.007).
CONCLUSION: 18F-FDG PET/CT shows high accuracy in paediatric patients with NB and demonstrates more lesions as compared with 131I-MIBG scintigraphy.

36: Dixit SG, Chauhan P. Absent caudate lobe of liver: anatomical and clinical relevance. Liver Int. 2015 Oct;35(10):2338. doi: 10.1111/liv.12926. Epub 2015 Sep 15. PubMed PMID: 26230252.

37: Dwivedi R, Singh M, Kaleekal T, Gupta YK, Tripathi M. Concentration of antiepileptic drugs in persons with epilepsy: a comparative study in serum and saliva. Int J Neurosci. 2015 Oct 6:1-7. [Epub ahead of print] PubMed PMID: 26441313.

AIM OF THE STUDY: The monitoring of antiepileptic drugs (AEDs) in clinical setting is important for measuring the efficacy of drugs and their safety and in personalizing drug therapy. We investigated the levels of AED, carbamazepine (CBZ), phenytoin (PHT) and phenobarbital (PHB), to understand their association in saliva compared with those in serum during the therapy.
MATERIALS AND METHODS: In this study, we performed a prospective study of 116 persons with epilepsy (PWE; mean age 26.90 ± 11.83 years). Serum and saliva samples were collected at trough levels from the patients, who were under the treatment of CBZ, PHT and PHB either alone or in combination of these drugs for at least three months. The drug levels were assessed by high-performance liquid chromatography.
RESULTS AND CONCLUSIONS: The number of males (n = 88; 75.86%) was higher than females (n = 28; 24.14%) among the recruited patients. The intake of CBZ, PHT and PHB was observed in 49.14%, 68.10% and 38.79% of PWE, respectively. The levels of these AEDs showed a significant correlation (p < 0.05) between serum and saliva. Interestingly, the levels of mono-therapy or bi-therapy showed a significant association (p < 0.05) between serum and saliva, however, there was no significant association in case of poly-therapy. This is the first report in the Indian population on simultaneous estimation of the three commonly used AEDs, such as CBZ, PHT and PHB in serum and saliva implicating their associations, either in mono-therapy or bi-therapy in PWE.

38: Garg B, Pannu CD, Poudel RR, Morey V. Author Response: Isolated Spontaneous Primary Tubercular Erector Spinae Abscess: A Case Report and Review of Literature. Asian Spine J. 2015 Oct;9(5):831-2. doi: 10.4184/asj.2015.9.5.831. Epub 2015 Sep 22. PubMed PMID: 26435807; PubMed Central PMCID: PMC4591460.

39: Garg PK, Pandey D. Gallbladder cancer: Nihilism abates, optimism prevails. Eur J Surg Oncol. 2015 Oct;41(10):1443. doi: 10.1016/j.ejso.2014.10.067. Epub 2015 Jul 17. PubMed PMID: 26233821.

40: Goudra BG, Singh PM, Gouda G, Borle A, Gouda D, Dravida A, Chandrasekhara V. Erratum to: Safety of Non-anesthesia Provider-Administered Propofol (NAAP) Sedation in Advanced Gastrointestinal Endoscopic Procedures: Comparative Meta-Analysis of Pooled Results. Dig Dis Sci. 2015 Oct;60(10):3151. doi: 10.1007/s10620-015-3635-7. PubMed PMID: 25796580.

41: Grover S, Nebhinani N, Padmavati R, Chadda RK, Tirupati S, Pallava A. Metabolic syndrome in antipsychotic naÃ¯ve patients with schizophrenia: pooled analysis of data from three Indian studies. Early Interv Psychiatry. 2015 Oct;9(5):357-62. doi: 10.1111/eip.12117. Epub 2014 Jan 20. PubMed PMID: 24438348.

AIM: This study aimed to assess the prevalence of metabolic syndrome (MS) and subthreshold MS in antipsychotic naïve patients with schizophrenia by pooling the data from three different centres in India.
METHODS: One hundred thirty-seven antipsychotic naïve patients with schizophrenia were evaluated for MS using common criteria for clinical diagnosis.
RESULTS: Twenty-six patients (19%) met consensus criteria. Additionally, 56 patients (40.9%) fulfilled one criterion and 32 patients (23.3%) fulfilled two criteria of MS out of five criteria.
CONCLUSION: One-fifth of antipsychotic naïve patients with schizophrenia had MS and another two-third had at least one metabolic abnormality. Awareness of such a high risk is vitally important for rational selection of antipsychotic medications as well as effective implementation of preventive measures.

42: Gulati S, Misra A, Nanda K, Pandey RM, Garg V, Ganguly S, Cheung L. Efficacy and tolerance of a diabetes specific formula in patients with type 2 diabetes mellitus: An open label, randomized, crossover study. Diabetes Metab Syndr. 2015 Oct-Dec;9(4):252-7. doi: 10.1016/j.dsx.2014.10.001. Epub 2014 Nov 1. PubMed PMID: 25458669.

AIM: This study evaluated the effect of a diabetes specific formula on acute glucose, insulin, and triglyceride responses in patients with type 2 diabetes mellitus (T2DM).
METHODS: This open-label, randomized, crossover, pilot single center study had two phases (pre-treatment and treatment). After screening, the patients entered run-in period and were counseled on diet and exercise regime. They were then randomly allocated to receive either diabetes specific formula (Nutren(®) Diabetes, Nestlé Health Science, Switzerland; Group A) or isocaloric meal (Cornflakes and milk; Group B). Blood samples were collected to estimate blood glucose, insulin and triglyceride levels (Baseline at 0min and post-meal at 30, 60, 120, and 180min).
RESULTS: Area under curve for blood glucose post-meal at 30min, 60min, 120min, and 180min was significantly lower for Group A as compared with Group B (p=0.003, 0.0001, 0.0001, 0.0001, respectively). Increase in serum insulin levels from baseline was also lower for Group A post-meal at 120 and 180min, respectively, as compared to Group B (p=0.0001 and 0.0002, respectively).
CONCLUSION: The Diabetes specific formula tested in this study showed lower post-meal blood glucose and insulin levels as compared with isocaloric meal. Thus, diabetes specific formula may be an option for diabetic and hyperglycemic patients in need of nutritional support.

43: Gulati S, Jain P, Kannan L, Sehgal R, Chakrabarty B. The Clinical Characteristics and Treatment Response in Children with West Syndrome in a Developing Country: A Retrospective Case Record Analysis. J Child Neurol. 2015 Oct;30(11):1440-7. doi: 10.1177/0883073815569304. Epub 2015 Feb 23. PubMed PMID: 25713006.

This study describes the clinical characteristics, treatment, and outcome of children with West syndrome in a tertiary care hospital in north India. Overall, 310 case records diagnosed from January 2009 to June 2012 were reviewed. The median age of onset of spasms was 5 months (interquartile range = 2.5-7 months). The predominant underlying etiology was perinatal cerebral ischemia (55%). Adrenocorticotropic hormone or oral steroids were received by 92% children, of whom 43% became seizure free. Median lag time for appropriate treatment

initiation was significantly less in patients who became seizure free as compared to those with persisting seizures (11 vs 15 months, P = .001) soon after receiving treatment of choice. Later age at onset of spasms was associated with a favorable seizure outcome (P = .03). In a resource-limited setting, unawareness along with treatment costs and repeated visits to the hospital are significant obstacles to optimum management.

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

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

45: Gupta AK, Lodha R, Kabra SK. Non Cystic Fibrosis Bronchiectasis. Indian J Pediatr. 2015 Oct;82(10):938-44. doi: 10.1007/s12098-015-1866-4. Epub 2015 Aug 27. PubMed PMID: 26307756.

Bronchiectasis is a pathological abnormality of the airways in which there is permanent dilatation and thickening of the airways. Precise incidence/prevalence in India is not known. Recent data suggests that about 1 % young children admitted in a hospital with pneumonia may develop bronchiectasis. Due to significant burden of pneumonia in young children in developing countries including India, it may be a significant problem that is possibly under recognized. Causes of bronchiectasis depend on the burden of respiratory infections and availability of the investigations for identification of the underlying cause. Post infectious causes are common in countries where infections are more common; however, since these countries are usually resource constrained and therefore, are not able to appropriately diagnose the other causes, leading to more than real overrepresentation of infections as a cause. In countries with less of infectious illnesses and good diagnostic facilities, malformations of airways, immune deficiency disorders and primary ciliary dyskinesia are common causes of bronchiectasis. High resolution CT scan of chest confirms the diagnosis. Treatment is supportive care and consists of maintenance of nutrition, airway clearance and antibiotics for exacerbations. Medical treatment is successful in the majority.

46: Gupta S, Gupta S. Reply to: "nail photography- all 10 fingernails in 1 frame". J Am Acad Dermatol. 2015 Oct;73(4):e147. doi: 10.1016/j.jaad.2015.05.018. PubMed PMID: 26369857.

47: Gupta SK, Dongare S, Mathur R, Mohanty IR, Srivastava S, Mathur S, Nag TC. Genistein ameliorates cardiac inflammation and oxidative stress in streptozotocin-induced diabetic cardiomyopathy in rats. Mol Cell Biochem. 2015 Oct;408(1-2):63-72. doi: 10.1007/s11010-015-2483-2. Epub 2015 Jun 20. PubMed PMID: 26092427.

The present study was undertaken to evaluate the protective effects of genistein against cardiac inflammation and oxidative stress in streptozotocin (STZ) (45 mg/kg body weight)-induced diabetic rats. genistein (300 mg/kg/day) was administered orally for 24 weeks to STZ-induced diabetic rats. The effects of genistein on blood glucose, % glycosylated hemoglobin (HbA1c), C-reactive protein, tumor necrosis factor (TNF- α), transforming growth factor (TGF-β1), and total antioxidant were studied. Ultrastructural and histopathological assessment of injury were also undertaken using transmission electron microscope.
STZ-induced diabetes resulted in significant increase in the levels of blood glucose, HbA1c, C-reactive protein, TNF- α and TGF-β1, and a decline in total antioxidant reserve of the myocardium. Administration of genistein to diabetic rats resulted in a decrease in blood glucose ($p < 0.001$), % HbA1c ($p < 0.0001$), C-reactive protein ($p < 0.001$), and expression of TNF- α ($p < 0.001$) and TGF-β1 ($p < 0.0001$) proteins. In addition, genistein treatment results in augmentation of total antioxidant ($p < 0.01$) reserve of the hearts. The above findings were supported by histological as well as immunohistochemical localization of NF-κB (p65) in the heart. Genistein treatment ameliorated the ultrastructural degenerative changes in the cardiac tissues as compared to the diabetic control. The result demonstrates that genistein restored the integrity of the diabetic myocardium by virtue of its anti-inflammatory and antioxidant effects.

48: Gupta V, Bhatia R, Singh UB, Ramam M, Gupta S. Penile 'tuberculid': could it be sexually acquired primary inoculation tuberculosis? J Eur Acad Dermatol Venereol. 2015 Oct 29. doi: 10.1111/jdv.13469. [Epub ahead of print] PubMed PMID: 26515329.

49: Haghighi RR, Chatterjee S, Tabin M, Sharma S, Jagia P, Ray R, Singh RP, Yadav R, Sharma M, Krishna K, Vani VC, Lakshmi R, Mandal SR, Kumar P, Arava S. DECT evaluation of noncalcified coronary artery plaque. Med Phys. 2015 Oct;42(10):5945-54. doi: 10.1118/1.4929935. PubMed PMID: 26429269.

PURPOSE: Composition of the coronary artery plaque is known to have critical role in heart attack. While calcified plaque can easily be diagnosed by conventional CT, it fails to distinguish between fibrous and lipid rich plaques. In the present paper, the authors discuss the experimental techniques and obtain a numerical algorithm by which the electron density (ρ(e)) and the effective atomic number (Z(eff)) can be obtained from the dual energy computed tomography (DECT) data. The idea is to use this inversion method to characterize and distinguish between the lipid and fibrous coronary artery plaques.
METHODS: For the purpose of calibration of the CT machine, the authors prepare aqueous samples whose calculated values of (ρ(e), Z(eff)) lie in the range of ($2.65 \times 10(23) \leq \rho(e) \leq 3.64 \times 10(23)/cm(3)$) and ($6.80 \leq Z(eff) \leq 8.90$). The authors fill the phantom with these known samples and experimentally determine HU(V1) and HU(V2), with V1,V2 = 100 and 140 kVp, for the same pixels and thus determine the coefficients of inversion that allow us to determine (ρ(e), Z(eff)) from the DECT data. The HU(100) and HU(140) for the coronary artery plaque are obtained by filling the channel of the coronary artery with a viscous solution of methyl cellulose in water, containing 2% contrast. These (ρ(e), Z(eff)) values of the coronary artery plaque are used for their characterization on the basis of theoretical models of atomic compositions of the plaque materials. These results are compared with histopathological report.
RESULTS: The authors find that the calibration gives ρ(e) with an accuracy of ±3.5% while Z(eff) is found within ±1% of the actual value, the confidence being 95%. The HU(100) and HU(140) are found to be considerably different for the same plaque at the same position and there is a linear trend between these two HU

values. It is noted that pure lipid type plaques are practically nonexistent, and microcalcification, as observed in histopathology, has to be taken into account to explain the nature of the observed (ρ(e), Z(eff)) data. This also enables us to judge the composition of the plaque in terms of basic model which considers the plaque to be composed of fibres, lipids, and microcalcification. CONCLUSIONS: This simple and reliable method has the potential as an effective modality to investigate the composition of noncalcified coronary artery plaques and thus help in their characterization. In this inversion method, (ρ(e), Z(eff)) of the scanned sample can be found by eliminating the effects of the CT machine and also by ensuring that the determination of the two unknowns (ρ(e), Ze(ff)) does not interfere with each other and the nature of the plaque can be identified in terms of a three component model.

50: Haldar P, Morineau G, Das A, Mehendale S. A surveillance model for sexually transmitted infections in India. Indian J Public Health. 2015 Oct-Dec;59(4):286-94. doi: 10.4103/0019-557X.169658. PubMed PMID: 26584168.

The strategy for prevention and control of sexually transmitted infections (STIs) in India is based on syndromic case management delivered through designated STI/reproductive tract infection (RTI) centers (DSRCs) situated in medical colleges, district hospitals, and STI-clinics of targeted interventions programs. Laboratory tests for enhanced syndromic management are available at some sites. To ensure country-level planning and effective local implementation of STI services, reliable and consistent epidemiologic information is required on the distribution of STI cases, rate and trends of newly acquired infections, and STI prevalence in specific population groups. The present STI management information system is inadequate to meet these requirements because it is based on syndromic data and limited laboratory investigations on STIs reported passively by DSRCs and laboratories. Geographically representative information on the etiology of STI syndromes and antimicrobial susceptibility of STI pathogens although essential for optimizing available treatment options, is deficient. Surveillance must provide high quality information on: (a) prevalence of STIs such as syphilis, trichomoniasis, gonorrhea, and chlamydia among high-risk groups; syphilis in the general population and pregnant antenatal women; (b) demographic characteristics such as age, sex, new/recurrent episode, and type of syndromically diagnosed STI cases; (c) proportion of acute infections such as urethral discharge (UD) in men and nonherpetic genital ulcer disease (GUD) in men and women; (d) etiology of STI syndromes; and (e) gonococcal antimicrobial susceptibility. We describe here a framework for an STI sentinel surveillance system in India, building on the existing STI reporting systems and infrastructure, an overview of the components of the proposed surveillance system, and operational challenges in its implementation.

51: Hazari N, Bhad R. Kynurenine pathway (KP) inhibitors: Novel agents for the management of depression. J Psychopharmacol. 2015 Oct;29(10):1133-4. doi: 10.1177/0269881115599386. Epub 2015 Aug 7. PubMed PMID: 26253624.

Depression is a highly prevalent and severely disabling condition globally. Despite being a major cause of disability worldwide, little progress has been made in the last three decades in developing rational and novel pharmacological treatment options for the management of depression. Recently there has been growing interest in the role of kynurenine pathway in pathophysiology of depression. In this paper, the potential role of kynurenine pathway inhibitors in the management of depression particularly in secondary and reactive depression and the development of novel antidepressant drugs targeting kynurenine pathway are discussed.

52: Huynh TJ, Aviv RI, Dowlatshahi D, Gladstone DJ, Laupacis A, Kiss A, Hill MD, Molina CA, Rodriguez-Luna D, Dzialowski I, Silva Y, Kobayashi A, Lum C, Boulanger JM, Gubitz G, Bhatia R, Padma V, Roy J, Kase CS, Symons SP, Demchuk AM;

PREDICT/Sunnybrook CTA Investigators. Validation of the 9-Point and 24-Point Hematoma Expansion Prediction Scores and Derivation of the PREDICT A/B Scores. Stroke. 2015 Nov;46(11):3105-10. doi: 10.1161/STROKEAHA.115.009893. Epub 2015 Oct 13. PubMed PMID: 26463691.

BACKGROUND AND PURPOSE: Nine- and 24-point prediction scores have recently been published to predict hematoma expansion (HE) in acute intracerebral hemorrhage. We sought to validate these scores and perform an independent analysis of HE predictors.
METHODS: We retrospectively studied 301 primary or anticoagulation-associated intracerebral hemorrhage patients presenting <6 hours post ictus prospectively enrolled in the Predicting Hematoma Growth and Outcome in Intracerebral Hemorrhage Using Contrast Bolus Computed Tomography (PREDICT) study. Patients underwent baseline computed tomography angiography and 24-hour noncontrast computed tomography follow-up for HE analysis. Discrimination and calibration of the 9- and 24-point scores was assessed. Independent predictors of HE were identified using multivariable regression and incorporated into the PREDICT A/B scores, which were then compared with existing scores.
RESULTS: The 9- and 24-point HE scores demonstrated acceptable discrimination for HE>6 mL or 33% and >6 mL, respectively (area under the curve of 0.706 and 0.755, respectively). The 24-point score demonstrated appropriate calibration in the PREDICT cohort ($\chi(2)$ statistic, 11.5; P=0.175), whereas the 9-point score demonstrated poor calibration ($\chi(2)$ statistic, 34.3; P<0.001). Independent HE predictors included spot sign number, time from onset, warfarin use or international normalized ratio >1.5, Glasgow Coma Scale, and National Institutes of Health Stroke Scale and were included in PREDICT A/B scores. PREDICT A showed improved discrimination compared with both existing scores, whereas performance of PREDICT B varied by definition of expansion.
CONCLUSIONS: The 9- and 24-point expansion scores demonstrate acceptable discrimination in an independent multicenter cohort; however, calibration was suboptimal for the 9-point score. The PREDICT A score showed improved discrimination for HE prediction but requires independent validation.

53: Jat KR, Singhal KK, Guglani V. Autohaler versus metered-dose inhaler with spacer in children with asthma. Pediatr Allergy Immunol. 2015 Oct 15. doi: 10.1111/pai.12499. [Epub ahead of print] PubMed PMID: 26467891.

Asthma is the most common chronic disease in children with significant morbidity. The inhaled corticosteroids (ICS) are mainstay treatment for persistent asthma in adults and children. The most common inhalation devices used in children are metered dose inhaler with spacer (MDIS) with or without mask and dry powder inhaler (DPI). These inhalation devices require multiple steps and co-ordination for successful administration of drug. Many asthmatic children use their inhalers devices incorrectly even after proper inhalation instructions, resulting in unreliable drug delivery (1). This article is protected by copyright. All rights reserved.

54: Kahr PC, Kahr MK, Dabral H, Agarwal R, Kothari SS, Saxena A, Ramakrishnan S. Changes in Myocardial Contractility and Electromechanical Interval During the First Month of Life in Healthy Neonates. Pediatr Cardiol. 2015 Oct 24. [Epub ahead of print] PubMed PMID: 26499358.

This study aims at documenting the changes in ventricular tissue velocities, longitudinal strain and electromechanical coupling during the first month of life. During the neonatal period, when the ventricular myocardium is not yet fully maturated, the heart is subjected to significant hemodynamic changes. We studied the ventricular performance of 16 healthy neonates at three time points over the first month of life: on days 2 (IQR [2;2]), 13 [12;14] and 27 [25;29].

We found that systolic and diastolic tissue velocities increased significantly in both left and right ventricle (by 1.2-1.7 times, $p < 0.001$). Congruently, we found that peak systolic longitudinal strain of the right and left ventricles increased significantly. However, no significant changes in longitudinal strain rate were observed. Finally, QS-intervals shortened during the neonatal period: being measured at 12 points throughout the left ventricle, time to peak systolic velocity decreased on average to 89 % in the second and to 80 % in the fourth week of life (22.3 ± 0.2 vs. 19.8 ± 0.3 vs. 17.8 ± 0.5 ms, $r = -0.564$, $p < 0.001$). When comparing opposing walls of the left ventricle, no dyssynchrony in left ventricular contraction was found. In addition to increasing systolic and diastolic tissue velocities during the first month of life, the time to peak systolic contraction shortens in the neonatal heart, which may reflect an increasing efficiency of the excitation-contraction coupling in the maturing myocardium. While there appears to be no dyssynchrony in ventricular contraction, these findings may extend our appreciation of the immature neonatal heart and certain disease states.

55: Kakkar A, Kumar A, Das A, Pathak P, Sharma MC, Singh M, Suri A, Sarkar C, Suri V. 1p/14q co-deletion: A determinant of recurrence in histologically benign meningiomas. Indian J Pathol Microbiol. 2015 Oct-Dec;58(4):433-8. doi: 10.4103/0377-4929.168852. PubMed PMID: 26549062.

BACKGROUND: Meningiomas are the most common benign central nervous system tumors. However, a sizeable fraction recurs, irrespective of histological grade. No molecular marker is available for prediction of recurrence in these tumors.
MATERIALS AND METHODS: We analyzed recurrent meningiomas with paired parent and recurrent tumors by fluorescence in situ hybridization for 1p36 and 14q32 deletion, AKT and SMO mutations by sequencing, and immunohistochemistry for GAB1, progesterone receptor (PR), p53, and MIB-1.
RESULTS: 18 recurrent meningiomas (11 grade I, 3 grade II, 4 grade III) with their parent tumors (14 grade I, 2 grade II and 2 grade III) were identified. Overall, 61% of parent and 78% of recurrent meningiomas showed 1p/14q co-deletion. Notably, grade I parent tumors showed 1p/14q co-deletion in 64% cases while 82% of grade I recurrent tumors were co-deleted. AKT mutation was seen in two cases, in both parent and recurrent tumors. SMO mutations were absent. GAB1 was immunopositive in 80% parent and 56.3% recurrent tumors. MIB-1 labeling index (LI), PR and p53 expression did not appear to have any significant contribution in possible prediction of recurrence.
CONCLUSION: Identification of 1p/14q co-deletion in a significant proportion of histologically benign (grade I) meningiomas that recurred suggests its utility as a marker for prediction of recurrence. It appears to be a better predictive marker than MIB1-LI, PR and p53 expression. Recognition of AKT mutation in a subset of meningiomas may help identify patients that may benefit from PI3K/AKT pathway inhibitors, particularly among those at risk for development of recurrence, as determined by presence of 1p/14q co-deletion.

56: Kakkar A, Biswas A, Goyal N, Suri V, Sharma MC, Gupta D, Julka PK, Sarkar C. The expression of Cyclin D1, VEGF, EZH2, and H3K27me3 in Atypical Teratoid/Rhabdoid Tumors of the CNS: A Possible Role in Targeted Therapy. Appl Immunohistochem Mol Morphol. 2015 Oct 13. [Epub ahead of print] PubMed PMID: 26469332.

Atypical teratoid/rhabdoid tumor (AT/RT) is an uncommon malignancy with a dismal outcome, which responds poorly to multimodality therapies. Animal studies have revealed Cyclin D1 as a possible therapeutic target. The addition of vascular endothelial growth factor (VEGF) inhibitors to chemotherapeutic regimens has shown promising results in pediatric central nervous system tumors. Enhancer of Zeste homolog 2 (EZH2) overexpression has been implicated in various cancers, including medulloblastomas. H3K27me3 is a new marker for pediatric high-grade gliomas. However, their role in AT/RT has not been evaluated sufficiently. We retrieved cases of AT/RT, and reviewed their clinical data and histopathologic features. Immunohistochemistry for Cyclin D1, VEGF, EZH2, and H3K27me3 was

performed. Follow-up was noted when available. Fourteen cases of AT/RT were identified (mean age, 3.4 y; range, 10 mo to 8 y). Cyclin D1 immunopositivity was noted in all cases [labeling index (LI): 5% to 98%; mean, 41.3%]. VEGF positivity was seen in 83.3% of the cases. All cases showed EZH2 overexpression (mean LI, 74.3%; range, 32% to 96%). Reduction of H3K27me3 expression was noted in 63% of the cases, with no correlation with EZH2 LI. Two patients died of postoperative complications. Of the rest, follow-up was available for 7 (range, 7 to 120 wk): 1 achieved clinical remission, whereas 6 developed progressive disease, including 3 deaths. Varying degrees of immunoreactivity to Cyclin D1, VEGF, and EZH2 were noted in the majority of the AT/RTs, and detection of these markers may be of value in the development of novel therapeutic agents and in determining which patients can benefit from them. AT/RTs show reduction in H3K27me3 expression, independent of EZH2 expression, indicating that their interaction requires further evaluation.

57: Kalra B, Gupta Y, Kalra S. Breast feeding: preventive therapy for type 2 diabetes. J Pak Med Assoc. 2015 Oct;65(10):1134-6. PubMed PMID: 26440851.

Exclusive breastfeeding for six months, continued along with top feed up to the age of 2 years and beyond, is strongly recommended by the World Health Organization. Apart from the various benefits that it provides, breast feeding may also serve to prevent the development of type 2 diabetes and metabolic syndrome in mothers, and type 1 diabetes and overweight/ obesity in their offspring. This review discusses the evidence related to breastfeeding and type 2 diabetes. It highlights pertinent aspects of breast feeding management, which can help facilitate optimal use of this natural preventive intervention.

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

INTRODUCTION: Uttarakhand (UK) state is a known endemic region for Iodine deficiency.
OBJECTIVE: To assess iodine nutritional status among adolescent girls in districts: Udham Singh Nagar (USN), Nainital (N) and Pauri (P) of UK state.
METHODS: In each district, 30 clusters (schools) were identified by using population proportionate to size cluster sampling. In each school, 60 girls (12-18 years) attending the schools were included. Total of 5430 girls from USN (1823), N (1811) and P (1796) were studied. Clinical examination of thyroid of each girl was conducted. From each cluster, spot urine and salt samples were collected.
RESULTS: Total goiter rate was found to be 6.8% (USN), 8.2% (N) and 5.6% (P). Median urinary iodine concentration levels were 250 µg/l (USN), 200 µg/l (N) and 183 µg/l (P).
CONCLUSION: Findings of the study documented that adolescent girls had adequate iodine nutritional status in the three districts of UK.

59: Kapil U, Sareen N, S Nambiar V, Khenduja P, Sofi NY. Iodine Nutritional Status among Adolescent Girls in Uttarakhand, India. J Trop Pediatr. 2015 Oct 17. pii: fmv069. [Epub ahead of print] PubMed PMID: 26477042.

60: Kapoor PM, Taneja S, Kiran U, Rajashekhar P. Comparison of the effects of inhalational anesthesia with desflurane and total intravenous anesthesia on cardiac biomarkers after aortic valve replacement. Ann Card Anaesth. 2015 Oct-Dec;18(4):502-9. doi: 10.4103/0971-9784.166455. PubMed PMID: 26440236.

OBJECTIVE (S): The aim of this study was to compare the effects of using inhalational anesthesia with desflurane with that of a total intravenous (iv) anesthetic technique using midazolam-fentanyl-propofol on the release of cardiac

biomarkers after aortic valve replacement (AVR) for aortic stenosis (AS). The specific objectives included (a) determination of the levels of ischemia-modified albumin (IMA) and cardiac troponin I (cTnI) as markers of myocardial injury, (b) effect on mortality, morbidity, duration of mechanical ventilation, length of Intensive Care Unit (ICU) and hospital stay, incidence of arrhythmias, pacing, cardioversion, urine output, and serum creatinine. Methodology and Design: Prospective randomized clinical study.
SETTING: Operation room of a cardiac surgery center of a tertiary teaching hospital.
PARTICIPANTS: Seventy-six patients in New York Heart Association classification II to III presenting electively for AVR for severe symptomatic AS.
INTERVENTIONS: Patients included in the study were randomized into two groups and subjected to either a desflurane-fentanyl based technique or total IV anesthesia (TIVA). Blood samples were drawn at preordained intervals to determine the levels of IMA, cTnI, and serum creatinine.
MEASUREMENTS AND MAIN RESULTS: The IMA and cTnI levels were not found to be significantly different between both the study groups. Patients in the desflurane group were found to had significantly lower ICU and hospital stays and duration of postoperative mechanical ventilation as compared to those in the TIVA group. There was no difference found in mean heart rate, urine output, serum creatinine, incidence of arrhythmias, need for cardioversion, and 30-day mortality between both groups. The patients in the TIVA group had higher mean arterial pressures on weaning off cardiopulmonary bypass as well as postoperatively in the ICU and recorded lower inotrope usage.
CONCLUSION: The result of our study remains ambiguous regarding the overall protective effect of desflurane in patients undergoing AVR although some benefit in terms of shorter duration of postoperative mechanical ventilation, ICU and hospital stays, as well as cTnI, were seen. However, no difference in overall outcome could be clearly established between patients who received desflurane and those that were managed solely with IV anesthetic technique using propofol.

61: Kapoor PM. Ardous journey from IACTA education and research cell to Indian College of Cardiac Anaesthesia. Ann Card Anaesth. 2015 Oct-Dec;18(4):461-3. doi: 10.4103/0971-9784.166438. PubMed PMID: 26440228.

62: Karunanithi S, Kumar G, Dhull VS, Roy SG, Kumar R. Isolated Central Nervous System Relapse After 10Â Years in a Case of Primary Testicular Lymphoma Detected on (18)F-FDG PET/CT. Nucl Med Mol Imaging. 2015 Dec;49(4):329-30. doi: 10.1007/s13139-014-0272-6. Epub 2015 Oct 16. PubMed PMID: 26550055; PubMed Central PMCID: PMC4630330.

63: Kaushik A, Makkar N, Pandey P, Parrish N, Singh U, Lamichhane G. Carbapenems and Rifampin Exhibit Synergy against Mycobacterium tuberculosis and Mycobacterium abscessus. Antimicrob Agents Chemother. 2015 Oct;59(10):6561-7. doi: 10.1128/AAC.01158-15. Epub 2015 Aug 10. PubMed PMID: 26259792; PubMed Central PMCID: PMC4576034.

An effective regimen for treatment of tuberculosis (TB) is comprised of multiple drugs that inhibit a range of essential cellular activities in Mycobacterium tuberculosis. The effectiveness of a regimen is further enhanced if constituent drugs act with synergy. Here, we report that faropenem (a penem) or biapenem, doripenem, or meropenem (carbapenems), which belong to the β-lactam class of antibiotics, and rifampin, one of the drugs that forms the backbone of TB treatment, act with synergy when combined. One of the reasons (carba)penems are seldom used for treatment of TB is the high dosage levels required, often at the therapeutic limits. The synergistic combination of rifampin and these (carba)penems indicates that (carba)penems can be administered at dosages that are therapeutically relevant. The combination of faropenem and rifampin also limits the frequency of resistant mutants, as we were unable to obtain spontaneous mutants in the presence of these two drugs. The combinations of rifampin and (carba)penems were effective not only against drug-sensitive Mycobacterium tuberculosis but also against drug-resistant clinical isolates that

are otherwise resistant to rifampin. A combination of doripenem or biapenem and rifampin also exhibited synergistic activity against Mycobacterium abscessus. Although the MICs of these three drugs alone against M. abscessus are too high to be of clinical relevance, their concentrations in combinations are therapeutically relevant; therefore, they warrant further evaluation for clinical utility to treat Mycobacterium abscessus infection, especially in cystic fibrosis patients.

64: Khakha DC, Kapoor B, Manju, Sharma SK. Three Sides of a Coin in the Life of People Living with HIV (PLWH). Indian J Community Med. 2015 Oct-Dec;40(4):233-8. doi: 10.4103/0970-0218.164385. PubMed PMID: 26435595; PubMed Central PMCID: PMC4581142.

BACKGROUND: Human Immunodeficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS) is a global epidemic, a major challenge as a health care problem of modern times. As the survival of life increases from the time of an HIV-positive diagnosis, growing concern for the quality of the life has been extended.
OBJECTIVES: To assess and correlate the coping, social support and quality of life.
MATERIALS AND METHODS: A descriptive cross-sectional study was conducted at antiretroviral therapy (ART) clinic of AIIMS, New Delhi. The sample comprised people living with HIV/AIDS (PLWHA) who were seropositive for last six months. The tools used to assess the coping, social support and quality of life were BREF COPE, MOS social support survey and WHO QOL-HIV BREF, respectively. Permission was taken from the authors of the tools. The ethical permission was taken from the center. The coping, social support and quality of life were assessed and their association was observed. Data were analyzed using SPSS 17.
RESULTS: The most commonly used coping styles were acceptance and religion. The social support used by most of PLWHA was tangible support and affectionate support, while the least used support was positive social interaction. The lowest quality of life is seen in social relations, followed by physical quality of life. There was positive association seen between coping and quality of life as well as social support and quality of life.
CONCLUSION: There was positive association between coping, social support and quality of life.

65: Khalifa M, Noureen A, Ertelthalner K, Bandegi AR, Delport R, Firdaus WJ, Geethanjali FS, Luthra K, Makemaharn O, Pang RW, Salem AH, Sasaki J, Schiefenhoevel W, Lingenhel A, Kronenberg F, Utermann G, Schmidt K. Lack of association of rs3798220 with small apolipoprotein(a) isoforms and high lipoprotein(a) levels in East and Southeast Asians. Atherosclerosis. 2015 Oct;242(2):521-8. doi: 10.1016/j.atherosclerosis.2015.07.015. Epub 2015 Jul 15. PubMed PMID: 26302166.

OBJECTIVE: The variant allele of rs3798220 in the apolipoprotein(a) gene (LPA) is used to assess the risk for coronary artery disease (CAD) in Europeans, where it is associated with short alleles of the Kringle IV-2 (KIV-2) copy number variation (CNV) and high lipoprotein(a) (Lp(a)) concentrations. No association of rs3798220 with CAD was detected in a GWAS of East Asians. Our study investigated the association of rs3798220 with Lp(a) concentrations and KIV-2 CNV size in non-European populations to explain the missing association of the variant with CAD in Asians.
METHODS: We screened three populations from Africa and seven from Asia by TaqMan Assay for rs3798220 and determined KIV-2 CNV sizes of LPA alleles by pulsed-field gel electrophoresis (PFGE). Additionally, CAD cases from India were analysed. To investigate the phylogenetic origin of rs3798220, 40 LPA alleles from Chinese individuals were separated by PFGE and haplotyped for further SNPs.
RESULTS: The variant was not found in Africans. Allele frequencies in East and Southeast Asians ranged from 2.9% to 11.6%, and were very low (0.15%) in CAD

cases and controls from India. The variant was neither associated with short KIV-2 CNV alleles nor elevated Lp(a) concentrations in Asians.
CONCLUSION: Our study shows that rs3798220 is no marker for short KIV-2 CNV alleles and high Lp(a) in East and Southeast Asians, although the haplotype background is shared with Europeans. It appears unlikely that this SNP confers atherogenic potential on its own. Furthermore, this SNP does not explain Lp(a) attributed risk for CAD in Asian Indians.

66: Khan WH, Srungaram VR, Islam A, Beg I, Haider MS, Ahmad F, Broor S, Parveen S. Biophysical characterization of G protein ectodomain of group B human respiratory syncytial virus from E. Coli. Prep Biochem Biotechnol. 2015 Oct 7. [Epub ahead of print] PubMed PMID: 26444871.

Human respiratory syncytial virus (hRSV) is an important pathogen of acute respiratory tract infection. The human respiratory syncytial virus (hRSV) expresses major surface transmembrane glycoproteins, F and G. The G protein of hRSV is a neutralizing antigen and is thus a vaccine candidate. The G protein of hRSV consists of three functional domains, namely N-terminal cytoplasmic region, attachment region and ectodomain region. In the present study, ectodomain G protein, G(ΔTM) was cloned and expressed in prokaryotic system. The codon optimized ectodomain G protein gene of BA genotype of group B hRSV strain was amplified from synthetic gene. The amplified fragment was cloned into pGEMT-easy vector and subcloned into pET-28a vector. The protein was expressed in BL21-AI cells. The G(ΔTM) was purified with Ni-NTA column. The purified protein was used for biophysical characterization, including circular dichroism, as well as thermal and chemical denaturation. The molar absorption co-efficient of G(ΔTM) was found to be 7950 M(-1)cm(-1). The mean residue ellipticity at 222 nm ([θ]222) was -19701.7 deg cm(2) dmol(-1) at pH 8.0 and 25 °C. It was concluded that G(ΔTM) mainly consist of α -helix (74.9%) with some amount of β-sheet (4%). On thermal denaturation of G(ΔTM), protein was stable up to 85 °C without any transition curve. However, heat induced denaturation of G(ΔTM) resulted in total loss of β-sheet whereas not much change was observed in α -helix part of the secondary structure. Urea-, GdmCl- and acid-induced denaturation resulted in almost total loss of the overall secondary structure including both α -helix and β-sheet. It was concluded that G(ΔTM) is α -helical protein and it is highly stable at high temperature, but could be easily denatured using high concentration of GdmCl/Urea or acidic condition. This is the first investigation of cloning, expression and characterization of G(ΔTM) of BA viruses from India. Structural characterization of G protein will assist in vaccine development efforts. In addition, the present study will also assist in designing of drug against hRSV.

67: Khokhar S, Gupta S, Gogia V, Tewari R, Agarwal T. Changes in stereoacuity following implantable Collamer lens implantation in patients with myopia. Indian J Ophthalmol. 2015 Oct;63(10):788-90. doi: 10.4103/0301-4738.171510. PubMed PMID: 26655005.

The study evaluated the impact of implantable Collamer lens (ICL) implantation on stereoacuity in myopes in a retrospective case series. Ninety-five eyes of 48 patients were recruited. Distance and near stereoacuity were measured using distance Randot stereotest and TNO test, respectively, before surgery and at 4 weeks postoperatively. Mean age of the patients was 23.67 ± 3.7 years. Mean uncorrected distance visual acuity (UDVA) was 1.28 ± 0.37 logarithm of the minimum angle of resolution (logMAR) (median: 1.3; range: 0.3-1.8), and median best-corrected distance visual acuity (BDVA) was 0.18 logMAR (range: 0-0.6). There was a significant improvement in both UDVA and BDVA postsurgery ($P < 0.001$; Wilcoxon signed rank test). The overall improvement in stereopsis was observed in 15/48 (31.25%) and 13/48 (27.10%) subjects for near and distance, respectively, with no significant difference between the two ($P = 0.82$; Fisher's exact test). Among stereoblind individuals, the odd's ratio for near stereoacuity to improve

in comparison to distance stereoacuity was 8.85 (95% confidence interval: 1.68-46.70; P = 0.01). ICL implantation for refractive correction aided stereoacuity improvement in myopes more so for near.

68: Krishnan A, Amarchand R, Gupta V, Lafond KE, Suliankatchi RA, Saha S, Rai S, Misra P, Purakayastha DR, Wahi A, Sreenivas V, Kapil A, Dawood F, Pandav CS, Broor S, Kapoor SK, Lal R, Widdowson MA. Epidemiology of acute respiratory infections in children - preliminary results of a cohort in a rural north Indian community. BMC Infect Dis. 2015 Oct 26;15:462. doi: 10.1186/s12879-015-1188-1. PubMed PMID: 26502931; PubMed Central PMCID: PMC4624162.

BACKGROUND: Despite acute respiratory infections being a major cause of death among children in developing countries including India, there is a lack of community-based studies that document its burden and aetiology.
METHODS: A dynamic cohort of children aged 0-10 years was established in four villages in a north Indian state of Haryana from August 2012 onwards. Trained health workers conducted weekly home visits to screen children for acute respiratory infection (ARI) defined as one of the following: cough, sore throat, nasal congestion, earache/discharge, or breathing difficulty. Nurses clinically assessed these children to grade disease severity based on standard age-specific guidelines into acute upper or lower respiratory infection (AURI or ALRI) and collected nasal/throat swabs for pathogen testing.
RESULTS: Our first year results show that ARI incidence in 0-10 years of age was 5.9 (5.8-6.0) per child-year with minimal gender difference, the ALRI incidence in the under-five age group was higher among boys (0.43; 0.39-0.49) as compared to girls (0.31; 0.26-0.35) per child year. Boys had 2.4 times higher ARI-related hospitalization rate as compared to girls.
CONCLUSION: ARI impose a significant burden on the children of this cohort. This study platform aims to provide better evidence for prevention and control of pneumonia in developing countries.

69: Kumar A, Sharma A, Mohanti BK, Thakar A, Shukla NK, Thulkar SP, Sikka K, Bhasker S, Singh CA, Vishnubhatla S. A phase 2 randomized study to compare short course palliative radiotherapy with short course concurrent palliative chemotherapy plus radiotherapy in advanced and unresectable head and neck cancer. Radiother Oncol. 2015 Oct;117(1):145-51. doi: 10.1016/j.radonc.2015.07.026. Epub 2015 Aug 21. PubMed PMID: 26303014.

BACKGROUND: Treatment of unresectable HNSCC is not well defined and has a poor outcome. This study has been designed to address the unmet needs of such groups of patients with primary end points of (a) proportion of patients eligible for radical treatment in each arm (b) loco-regional disease control at 6months between two arms.
MATERIALS AND METHODS: Locally advanced and unresectable HNSCC patients (except Nasopharynx and Larynx) unfit for radical treatment were randomized to arm A [short course RT alone (4Gy/#/day for 5days)] or arm B [RT as arm A+concurrent cisplatin at 6mg/m(2)/day IV bolus for 5days]. Those with at least PR were taken for further RT to complete biological equivalent dose of 70Gy, in both the arms. In arm B, concurrent CDDP at a dose of 40mg/m(2)/week was administered.
RESULTS: 114 patients (57 in each arm) were randomized but 111 were analyzable. 15 (27.27%) patients in arm A and 28 (50%) patients in arm B had ⩾PR (p=0.01) however patients taken for FRT were 14 (25.45%) and 26 (46.42%) in arms A and B respectively (p=0.02). Locoregional control i.e. (CR+PR) at 6months was 16.36% in arm A versus 32.14% in arm B (p=0.15). Median PFS (arm A - 3.2months, arm B - 6.2months; p=0.02) and OS (arm A - 5.9months, arm B - 10.1months; p=0.03) was significantly more in arm B. There was relative improvement in quality of life for most parameters in arm B.
CONCLUSION: Concurrent low dose CTRT can be an effective treatment modality in advanced and incurable HNSCC. However, a larger phase III trial is required.

70: Kumar KR, Kumar H, Baidya DK, Arora MK. Successful use of spinal anesthesia for inguinal hernia repair in a child with Hunter syndrome with difficult airway. J Clin Anesth. 2015 Oct 23. pii: S0952-8180(15)00274-3. doi: 10.1016/j.jclinane.2015.08.025. [Epub ahead of print] PubMed PMID: 26604014.

71: Kumar R. PET/Computed Tomography-based Intervention. PET Clin. 2015 Oct;10(4):xi-xii. doi: 10.1016/j.cpet.2015.07.001. PubMed PMID: 26384601.

72: Kumar RM, Saini L, Kaushik JS, Chakrabarty B, Kumar A, Gulati S. A Combination of Moyamoya Pattern and Cerebral Venous Sinus Thrombosis: A Case of Tubercular Vasculopathy. J Trop Pediatr. 2015 Oct;61(5):393-6. doi: 10.1093/tropej/fmv036. Epub 2015 Jul 1. PubMed PMID: 26136258.

BACKGROUND: Moyamoya vasculopathy, arising secondary to tubercular meningitis (TBM) is unusual. There have also been a few reports of cerebral venous sinus thrombosis (CVST) in TBM. A case of TBM, complicated simultaneously by Moyamoya syndrome and CVST, is being presented here.
CASE: A 1-year-old girl presented with febrile encephalopathy, vomiting, seizures and left hemiparesis. Cerebrospinal fluid analysis was suggestive of TBM. Extensive infarcts were noted in the magnetic resonance imaging, involving right middle cerebral artery (MCA), anterior cerebral artery and the left MCA. Magnetic resonance venogram revealed left transverse venous sinus thrombosis and magnetic resonance angiography showed bilateral moyamoya pattern of arteriopathy. Patient was started on antitubercular therapy and low molecular weight heparin.
CONCLUSIONS: Early vascular involvement affecting both arterial and venous structures has not hitherto been reported in CNS tuberculosis. Early recognition of secondary complications of CNS tuberculosis is crucial to prevent the morbidity and mortality associated with TBM.

73: Lohiya A, Yadav K, Kant S, Kumar R, Pandav CS. Prevalence of iodine deficiency among adult population residing in Rural Ballabgarh, district Faridabad, Haryana. Indian J Public Health. 2015 Oct-Dec;59(4):314-7. doi: 10.4103/0019-557X.169668. PubMed PMID: 26584174.

Community-based surveys are essential to monitor iodine deficiency disorders (IDD) program at both the state and national levels. There is paucity of information on population iodine nutrition status in Haryana state using standard methods. A cross-sectional study was conducted in villages of Comprehensive Rural Health Services Project (CRHSP), Ballabgarh, Haryana, India. A total of 465 randomly selected individuals were assessed for urinary iodine concentration (UIC) by microplate method and household salt iodine content using iodometric titration. Of the interviewed households, 73% were using adequately iodized salt (≥15 ppm). Iodine nutrition was deficient in 17% respondents (UIC <100 μg/L); 20.2% among males and 13.9% among females. Iodine intake of the study population as measured by UIC was adequate but nearly one-fourth of households in the study population were consuming inadequately iodized salt. The availability and access to adequately iodized salt in the study population should be improved by strengthening regulatory monitoring.

74: Lokdarshi G, Pushker N, Bajaj MS. Sclerosing Lesions of the Orbit: A Review. Middle East Afr J Ophthalmol. 2015 Oct-Dec;22(4):447-51. doi: 10.4103/0974-9233.167807. PubMed PMID: 26692715; PubMed Central PMCID: PMC4660530.

Orbital sclerosing inflammation is a distinct group of pathologies characterized by indolent growth with minimal or no signs of inflammation. However, contrary to earlier classifications, it should not be considered a chronic stage of acute inflammation. Although rare, orbital IgG4-related disease has been associated with systemic sclerosing pseudotumor-like lesions. Possible mechanisms include

autoimmune and IgG4 related defective clonal proliferation. Currently, there is no specific treatment protocol for IgG4-related disease although the response to low dose steroid provides a good response as compared to non-IgG4 sclerosing pseudotumor. Specific sclerosing inflammations (e.g. Wegener's disease, sarcoidosis, Sjogren's syndrome) and neoplasms (lymphoma, metastatic breast carcinoma) should be ruled out before considering idiopathic sclerosing inflammation as a diagnosis.

75: Lomi N, Sharma R, Khokhar S, Dada T, Vanathi M, Agarwal T. Risk factors for intra-operative complications during phacoemulsification performed by residents. Int Ophthalmol. 2015 Oct 22. [Epub ahead of print] PubMed PMID: 26494477.

The purpose of this study was to determine the risk factors for occurrence of intra-operative complications during phacoemulsification performed by residents. One hundred fifty patients with cataract who underwent phacoemulsification by residents, with an experience of five or more phacoemulsification surgery, at a tertiary care centre were included in this study. The pre-operative data of these patients were collected from the hospital records. Surgeons were interviewed immediately after the surgery regarding the surgeon experience, phacoemulsification technique, machine factors, and intra-operative complications. Statistical analysis was done to determine pre-operative and intra-operative risk factors. The overall surgical complication rate in resident-performed phacoemulsification was 37 % of which major and minor complications were 21 and 16 %, respectively. Success in terms of placement of intraocular lens in capsular bag was 84 %. The most common major and minor complications found were posterior capsular tear and irregular capsulorhexis, respectively. Systemic and ocular features of patients as well as type of machine (longitudinal versus torsional longitudinal) had no significant association in terms of complication rate. Increase in success rate was seen with increase in semester and number of surgeries performed. Patient factors including general physical condition, systemic diseases, and anatomical factors do not influence success in resident-performed phacoemulsification. With increase in semester of residents, there is a significant decrease in intra-operative complications. Minor complications in the beginning of case lead to increase in major complications later on during the case and decrease in success rate by junior-semester residents.

76: Madan K, Garg P, Kabra SK, Mohan A, Guleria R. Transesophageal Bronchoscopic Ultrasound-guided Fine-needle Aspiration (EUS-B-FNA) in a 3-Year-Old Child. J Bronchology Interv Pulmonol. 2015 Oct;22(4):347-50. doi: 10.1097/LBR.0000000000000169. PubMed PMID: 26492608.

Evaluation of mediastinal lymphadenopathy in children is challenging and surgical procedures (mediastinoscopy/thoracotomy) are usually performed wherever tissue sampling is required. Endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) is a widely utilized and minimally invasive modality for evaluation of mediastinum (lymphadenopathy, masses, and nodal staging in patients with lung cancer) in adults. Smaller size of pediatric trachea potentially limits the use of EBUS. The EBUS bronchoscope can also be introduced into the esophagus for mediastinal evaluation and sampling, a technique described as transesophageal bronchoscopic ultrasound-guided fine-needle aspiration (EUS-B-FNA). We herein report the successful utilization of EUS-B-FNA to obtain diagnostic mediastinal lymph node sampling in a 3-year-old child. The procedure was accomplished under moderate conscious sedation without any procedural complications. EUS-B-FNA, by obviating entry of EBUS scope into small pediatric trachea and reduced anesthesia requirement can evolve into an extremely useful modality for evaluation of pediatric mediastinal lymphadenopathy.

77: Madhuprakash J, Bobbili KB, Moerschbacher BM, Singh TP, Swamy MJ, Podile AR. Inverse relationship between chitobiase and transglycosylation activities of chitinase-D from Serratia proteamaculans revealed by mutational and biophysical analyses. Sci Rep. 2015 Oct 23;5:15657. doi: 10.1038/srep15657. PubMed PMID:

26493546; PubMed Central PMCID: PMC4616163.

Serratia proteamaculans chitinase-D (SpChiD) has a unique combination of hydrolytic and transglycosylation (TG) activities. The TG activity of SpChiD can be used for large-scale production of chito-oligosaccharides (CHOS). The multiple activities (hydrolytic and/or chitobiase activities and TG) of SpChiD appear to be strongly influenced by the substrate-binding cleft. Here, we report the unique property of SpChiD substrate-binding cleft, wherein, the residues Tyr28, Val35 and Thr36 control chitobiase activity and the residues Trp160 and Trp290 are crucial for TG activity. Mutants with reduced (V35G and T36G/F) or no (SpChiDΔ30-42 and Y28A) chitobiase activity produced higher amounts of the quantifiable even-chain TG product with degree of polymerization (DP)-6, indicating that the chitobiase and TG activities are inversely related. In addition to its unprecedented catalytic properties, unlike other chitinases, the single modular SpChiD showed dual unfolding transitions. Ligand-induced thermal stability studies with the catalytically inactive mutant of SpChiD (E153A) showed that the transition temperature increased upon binding of CHOS with DP2-6. Isothermal titration calorimetry experiments revealed the exceptionally high binding affinities for E153A to CHOS with DP2-6. These observations strongly support that the architecture of SpChiD substrate-binding cleft adopted to control chitobiase and TG activities, in addition to usual chitinase-mediated hydrolysis.

78: Maharana PK, Sharma N, Das S, Agarwal T, Sen S, Prakash G, Vajpayee RB. Salzmann's Nodular Degeneration. Ocul Surf. 2016 Jan;14(1):20-30. doi: 10.1016/j.jtos.2015.08.006. Epub 2015 Oct 17. Review. PubMed PMID: 26462409.

Salzmann's nodular degeneration (SND) is a rare, noninflammatory, slowly progressive degenerative disease of the cornea that is characterized by the appearance of nodular bluish gray opacities that vary in number and size. It is usually bilateral; most commonly occurring in people aged 50-60 years old, with a female preponderance; and often associated with a history of prior corneal inflammation. The clinical features usually depend on the location of the nodules. Generally, the nodules of SND are bluish white to gray in color, 1-2 mm in size, and round, conical or prismatic in shape. The overlying Bowman's layer is usually absent from the nodular areas and is partially replaced by granular Periodic Acid Schiff-positive eosinophilic material resembling the basement membrane. Diagnostic investigations include ultrasonic pachymetry, anterior segment optical coherence tomography, ultrasound biomicroscopy, and confocal microscopy. The majority of patients respond well to conservative management with topical lubricants; severe cases may require surgical intervention. The various surgical modalities described include superficial keratectomy, which may be combined with phototherapeutic keratectomy and keratoplasty. Various modifications of these procedures include the use of alcohol-assisted epithelial delamination, intraoperative mitomycin-C or amniotic membrane transplantation to make the procedure easy, reduce the risk of recurrence and improve postoperative comfort. Recurrences are rarely reported; overall, the visual prognosis following treatment is optimal.

79: Maiwall R, Kumar S, Chandel SS, Kumar G, Rastogi A, Bihari C, Sharma MK, Thakur B, Jamwal K, Nayak S, Mathur RP, Sarin SK. AKI in patients with acute on chronic liver failure is different from acute decompensation of cirrhosis. Hepatol Int. 2015 Oct;9(4):627-39. doi: 10.1007/s12072-015-9653-x. Epub 2015 Sep 2. PubMed PMID: 26329121.

BACKGROUND AND AIMS: The current definitions of acute kidney injury (AKI) including HRS have been derived from patients with decompensated cirrhosis. No studies have carefully addressed AKI in patients with acute on chronic liver failure (ACLF). We evaluated the prevalence, spectrum, natural history and mortality of AKI at admission and new-onset AKI in hospitalized patients with

ACLF and compared the results with patients with acute decompensation of cirrhosis (ADC).
PATIENTS AND METHODS: Consecutive patients with ACLF (n = 382) and ADC (n = 451) were prospectively studied. Serial renal and liver functions were recorded and correlated with the disease course and outcome.
RESULTS: AKI at admission and new onset AKI in the hospital were not different in patients with ACLF and ADC ($p > 0.05$). However, a significant difference in the spectrum of AKI was noted; functional volume-responsive AKI was more common ($p < 0.05$) in ADC, while patients with ACLF more frequently had the structural form of AKI ($p < 0.05$). Moreover, patients with ADC had significantly less AKI progression ($p < 0.05$) and prolonged duration ($p < 0.05$), a lower requirement of RRT ($p < 0.05$) and also less AKI resolution ($p < 0.05$) compared to ACLF patients. Patients with ACLF (versus ADC) had a significantly higher mortality on multivariate analysis.
CONCLUSIONS: The kidneys are differentially affected in patients with cirrhosis with or without liver failure. Patients with ACLF with AKI have more structural AKI, greater potential for reversibility despite higher progression as well as higher mortality compared to patients with ADC. Prevention and early detection of AKI should be considered in patients with ACLF.

80: Mallick S, Benson R, Julka PK. Breast cancer prevention with anti-estrogens: review of the current evidence and future directions. Breast Cancer. 2015 Oct 6. [Epub ahead of print] PubMed PMID: 26439380.

There is a potential for reducing the incidence of breast cancer by modifying or changing the reversible risk factors like dietary modifications, modifications in the sedentary life habits, etc. One of such methods which has gained popularity now is chemoprevention. Many agents have been evaluated in the chemoprevention setting in females with increased risk of breast cancers. Metformin, NSAIDS, Bisphosphonates, and statins were evaluated by various investigators with variable results. One of the agents that have been proven to be beneficial in this setting is the anti-estrogens. A major disadvantage of chemoprevention is that unlike prophylactic mastectomy it can never reduce the risk to near zero although it reduces the risk significantly. Another issue is the compliance as chemoprevention with anti-estrogens will need to be continued for 5 years while surgery is a one-time procedure. Another disadvantage is the possible side effects peculiar to each drug used which may not be a significant concern in prophylactic mastectomy group. All these factors must also be kept in mind and properly explained to the patient before starting chemoprevention using anti-estrogens. Here in this review we intend to look into the large randomized controlled trials to quantify the present status of chemoprevention with anti-estrogens.

81: Mallick S, Gandhi AK, Sharma DN, Gupta S, Haresh KP, Rath GK, Julka PK. Pediatric gliosarcoma treated with adjuvant radiotherapy and temozolomide. Childs Nerv Syst. 2015 Dec;31(12):2341-4. doi: 10.1007/s00381-015-2919-8. Epub 2015 Oct 5. PubMed PMID: 26438548.

PURPOSE: Primary pediatric gliosarcoma (pPGS) is an extremely rare entity with only 25 cases reported in the English literature. The value of concurrent and adjuvant temozolomide is not known in this group of patient.
METHODS: Five patients of pPGS treated from 2006 to 2011 were included in this retrospective analysis. All patients underwent maximal safe surgical resection. Adjuvant therapy included conformal radiation 60 Gy in 30 fractions (2 Gy daily for 5 days in a week) with concurrent temozolomide 75 mg/m(2) daily followed by six cycles of maintenance temozolomide 150-200 mg/m(2) (day 1 to day 5) every 4 weeks. We combined the survival data of 25 patients (already published) and five of our patients and analyzed them in terms of progression free survival (PFS) and overall survival (OS) using Kaplan-Meier method.
RESULTS: Male to female ratio was 1:4 and median age was 12 years (range, 7-19 years). All but one patient underwent gross total resection and four patients completed adjuvant radiotherapy as well as concurrent and adjuvant

temozolomide. At a median follow up of 22.6 months (range, 0 to 45.3 months), two patients were dead and two were alive without disease while one was lost to follow up. For the pooled data, estimated median PFS and OS of all 30 patients reported in literature were 12 and 43 months, respectively. Two years PFS and OS rate for all patients was 44.2 and 62.9 %, respectively.
CONCLUSION: Adjuvant radiotherapy and temozolomide is well tolerated and show an encouraging survival in pPGS.

82: Mehrotra N, Baidya A, Brijwal M, Aggarwal R, Chaudhry R. Actinomycosis of eye: Forgotten but not uncommon. Anaerobe. 2015 Oct;35(Pt B):1-2. doi: 10.1016/j.anaerobe.2015.06.001. Epub 2015 Jun 6. PubMed PMID: 26057988.

Actinomyces species are known to cause a variety of human infections. Ocular actinomycosis is a rare disease. We report an unusual case of bilateral actinomycotic blepharoconjunctivitis in the absence of canaliculitis that presented with forniceal masses in eye. The case report is discussed here along with Indian literature.

83: Mishra A, Prakash S, Sreenivas V, Das TK, Ahuja V, Gupta SD, Makharia GK. Structural and Functional Changes in the Tight Junctions of Asymptomatic and Serology-negative First-degree Relatives of Patients With Celiac Disease. J Clin Gastroenterol. 2015 Oct 31. [Epub ahead of print] PubMed PMID: 26535478.

BACKGROUND: Ten to 15% of first-degree relatives (FDRs) of celiac disease (CeD) patients develop CeD. Although intestinal barrier functions (intestinal permeability) are abnormal in the subset of serology-negative FDRs, what leads to the abnormal barrier function is not known.
GOALS: To study the ultrastructure and functions of tight junctions in serology-negative FDRs of CeD patients.
STUDY: The intestinal permeability was measured in 97 asymptomatic and anti-tissue transglutaminase antibody (anti-tTG Ab)-negative FDRs (using the lactulose mannitol ratio) and in 75 controls. The ultrastructure of tight junctions using transmission electron microscopy, and the expression of key tight junction proteins (claudin-2, claudin-3, occludin, JAM-A, and ZO-1) and zonulin using real-time PCR and immunohistochemistry were assessed in anti-tTG Ab-negative, HLA-DQ2/-DQ8-positive FDRs having normal villi and in disease controls. In addition, the serum zonulin level was measured in 172 anti-tTG Ab-negative FDRs and 198 controls.
RESULTS: The intestinal permeability was significantly increased in FDRs than in controls. Ultrastructural abnormalities such as dilatation of the tight junction (P=0.004) and loss of the pentalaminar structure (P=0.001) were more common in FDRs than in disease controls. There was significant underexpression of tight junction proteins ZO-1 (P=0.040) and occludin (P=0.041) in FDRs. There was no significant difference in the serum zonulin level between FDRs and controls (P=0.154).
CONCLUSIONS: Even asymptomatic, anti-tTG-Ab-negative FDRs with a normal villous histology have both ultrastructural and functional abnormalities in tight junctions. These findings are indirect evidence of the presence of tight junction abnormalities before the onset of the disease and may have therapeutic implications.

84: Misra A, Anoop S, Gulati S, Mani K, Bhatt SP, Pandey RM. Body Fat Patterning, Hepatic Fat and Pancreatic Volume of Non-Obese Asian Indians with Type 2 Diabetes in North India: A Case-Control Study. PLoS One. 2015 Oct 16;10(10):e0140447. doi: 10.1371/journal.pone.0140447. eCollection 2015. Erratum in: PLoS One. 2015;10(11):e0142749. PubMed PMID: 26474415; PubMed Central PMCID: PMC4608569.

OBJECTIVE: To evaluate body fat patterning and phenotype including hepatic fat and pancreatic volume of non-obese (BMI: < 25 kg/m2) Asian Indians with type 2 diabetes residing in North India.

METHODS: Non-obese patients with type 2 diabetes (n = 93) and non-obese, normo-glycemic subjects (n = 40) were recruited. BMI, waist & hip circumferences, skinfold thickness at 8 sites, body fat, lean mass and detailed abdominal fat evaluation [total abdominal fat, total subcutaneous fat (superficial, deep, anterior, and posterior), total intra-abdominal fat (intra-peritoneal, retroperitoneal)], liver span, grades of fatty liver and pancreatic volume were compared.
RESULTS: Waist circumference, subscapular skinfolds and total truncal fat (on DEXA) were higher whereas calf, total peripheral skinfolds and total leg fat (on DEXA) lower in patients. Specifically, the following volumes were higher in cases as compared to controls; total abdominal fat (19.4%), total intra-abdominal fat (49.7%), intra-peritoneal fat (47.7%), retroperitoneal fat (70.7%), pancreatic volume (26.6%), pancreatic volume index (21.3%) and liver span (10.8%). In cases, significant positive correlations were observed for pancreatic volume with BMI, waist and hip circumferences, W-HR, subscapular, abdominal and total truncal skinfolds, truncal, total subcutaneous, total intra-abdominal, intra-peritoneal, retroperitoneal fat depots, liver span and fatty liver.
CONCLUSIONS: In non-obese Asian Indians with type 2 diabetes, subcutaneous and intra-abdominal obesity, including fatty liver, and pancreatic volume were higher and peripheral subcutaneous adiposity was lower than BMI matched non-diabetic subjects. Importantly, increased pancreatic volume in patients was highly correlated with multiple measures of abdominal obesity and liver fat.

85: Modi S, Arora G, Bal CS, Sreenivas V, Kailash S, Sagar R, Goswami R. Effect of basal ganglia calcification on its glucose metabolism and dopaminergic function in idiopathic hypoparathyroidism. Clin Endocrinol (Oxf). 2015 Oct;83(4):563-71. doi: 10.1111/cen.12649. Epub 2014 Nov 27. PubMed PMID: 25366923.

BACKGROUND: The functional significance of basal ganglia calcification (BGC) in idiopathic hypoparathyroidism (IH) is not clear.
OBJECTIVE: To assess the effect of BGC on glucose metabolism and dopaminergic function in IH.
METHODS: (18) F-FDG and (99m) Tc-TRODAT-1 nuclear imaging were performed in 35 IH patients with (n = 26) and without (n = 9) BGC. Controls were subjects without hypoparathyroidism or BGC (nine for (18) F-FDG and 12 for (99m) Tc-TRODAT-1). Relationship of the glucose metabolism and dopaminergic function was assessed with the neuropsychological and biochemical abnormalities.
RESULTS: (18) F-FDG uptake in IH patients with calcification at caudate and striatum was less than that of IH patients without calcification (1·06 ± 0·13 vs 1·24 ± 0·09, P = <0·0001 and 1·06 ± 0·09 vs 1·14 ± 0·08, P = 0·03, respectively). (18) F-FDG uptake did not correlate with neuropsychological dysfunctions. (18) F-FDG uptake in IH without BGC was significantly lower than that of controls. The mean (99m) Tc-TRODAT-1 uptake at basal ganglia was comparable between IH with and without BGC and between IH without BGC and controls. Serum calcium-phosphorus ratio maintained by the patients correlated with (18) F-FDG uptake at striatum (r = 0·57, P = 0·001). For every 0·1 unit reduction in calcium-phosphorus ratio, (18) F-FDG uptake decreased by 2·5 ± 0·68% (P = 0·001).
CONCLUSION: BGC was associated with modest reduction (15%) in (18) F-FDG uptake at basal ganglia in IH but did not affect dopaminergic function. (18) F-FDG uptake did not correlate with neuropsychological dysfunctions. Interestingly, chronic hypocalcaemia-hyperphosphataemia also contributed to reduction in (18) F-FDG uptake which was independent of BGC.

86: Mohankumar N, Ranjan P, Kumari A. Drug-induced liver injury: Diagnosing (and treating) it early. J Fam Pract. 2015 Oct;64(10):634-44. PubMed PMID: 26551474.

Drug-induced liver injury can have an insidious--and unpredictable--course. Left unchecked, it can progress to liver failure. This article and algorithm can facilitate prompt diagnosis and treatment.

87: Mukherjee A, Khandelwal D, Singla M, Lodha R, Kabra SK. Outcomes of Category II anti-tuberculosis treatment in Indian children. Int J Tuberc Lung Dis. 2015 Oct;19(10):1153-7. doi: 10.5588/ijtld.14.0826. PubMed PMID: 26459525.

SETTING: The emerging threat of multidrug-resistant tuberculosis (MDR-TB) has cast doubt on the efficacy of Category II anti-tuberculosis treatment in retreatment cases. Data on outcomes of treatment with the Category II regimen in children are scarce.
OBJECTIVE: To study outcomes of Category II anti-tuberculosis treatment in Indian children.
DESIGN: Charts belonging to patients registered between 2004 and 2012 at the Paediatric Tuberculosis Clinic, All India Institute of Medical Sciences, New Delhi, India, were reviewed, and children receiving Category II anti-tuberculosis treatment were included in the study. Outcomes were recorded as treatment success and poor outcome, which included treatment failure and default.
RESULTS: A total of 125 children (mean age 101.6 months, standard deviation 42.9; girls 58 [46.4%]) were initiated on Category II anti-tuberculosis treatment, mainly due to worsening clinical conditions (36.8%) and relapse (36%). Treatment success, treatment failure and default were recorded in respectively 80 (64%), 20 (16%) and 25 (20%) children. Children who were non-adherent to previous treatment tended to default from Category II treatment as well (11.8% in previous non-defaulters vs. 37.5% in previous defaulters, P = 0.004).
CONCLUSION: Category II anti-tuberculosis treatment was effective in approximately 60% of children who had failed or defaulted from the previous regimen. All efforts should be made to isolate Mycobacterium tuberculosis and perform drug susceptibility testing to identify MDR-TB in children.

88: Nadarajah J, Madhusudhan KS, Yadav AK, Chandrashekhara SH, Kumar A, Gupta AK. MR imaging of cavernous sinus lesions: Pictorial review. J Neuroradiol. 2015 Dec;42(6):305-19. doi: 10.1016/j.neurad.2015.04.010. Epub 2015 Oct 1. Review. PubMed PMID: 26421483.

The main purpose of this pictorial review is to highlight the important MR imaging findings of various conditions involving the cavernous sinus in addition to brief description of normal anatomy. The pathological conditions that can involve the cavernous sinus can be categorized into infective, inflammatory, granulomatous, vascular and neoplastic causes. Imaging, especially with MRI, plays an important role not only in detection but also in definition of disease extent and in characterization of the pathology. Currently, high-resolution MR images clearly show various components of cavernous sinus which help in making a proper diagnosis and thus appropriate further management.

89: Nagarajan S, Paul VK, Yadav N, Gupta S. The National Rural Health Mission in India: its impact on maternal, neonatal, and infant mortality. Semin Fetal Neonatal Med. 2015 Oct;20(5):315-20. doi: 10.1016/j.siny.2015.06.003. Epub 2015 Sep 15. Review. PubMed PMID: 26385051.

The National Rural Health Mission (NRHM) has been a watershed in the history of India's health sector. As a previously unattempted investment, governance, and mobilization effort, the NRHM succeeded in injecting new energy into India's public health system. A huge expansion of infrastructure and human resources is the hallmark of the NRHM action. Demand-side initiatives led to enhanced utilization of public health facilities, especially for facility births. The impact is visible. The Mission has brought Millennium Development Goals 4 and 5 within India's grasp. Acceleration in infant and neonatal mortality reduction is especially notable. The NRHM has created conditions for the country to move toward universal health coverage.

90: Panda A, Khalil S, Mirdha BR, Singh Y, Kaushik S. Prevalence of Naegleria fowleri in Environmental Samples from Northern Part of India. PLoS One. 2015 Oct 20;10(10):e0137736. doi: 10.1371/journal.pone.0137736. eCollection 2015. PubMed PMID: 26484533; PubMed Central PMCID: PMC4618853.

Naegleria fowleri the causative agent of Primary Amoebic Meningoencephalitis, is ubiquitously distributed worldwide in various warm aquatic environments and soil habitats. The present study reports on the presence of Naegleria spp. in various water bodies present in Rohtak and Jhajjar district, of state Haryana, India. A total of 107 water reservoirs were screened from summer till autumn (2012 and 2013). In order to isolate Naegleria spp. from the collected water samples, the water samples were filtered and the trapped debris after processing were transferred to non-nutrient agar plates already seeded with lawn culture of Escherichia coli. Out of total 107 water samples, 43 (40%) samples were positive by culture for free living amoeba after incubation for 14 days at 37°C. To identify the isolates, the ITS1, 5.8SrDNA and ITS2 regions were targeted for PCR assay. Out of total 43 positive samples, 37 isolates were positive for Naegleria spp. using genus specific primers and the most frequently isolated species was Naegleria australiensis. Out of 37 Naegleria spp. positive isolates, 1 isolate was positive for Naegleria fowleri. The sequence analysis revealed that the Naegleria fowleri strain belonged to Type 2.

91: Pandey D, Garg PK, Jakhetiya A, Sharma J, Chandrashekhara SH. Markedly elevated liver transaminases following pancreaticoduodenectomy: celiac artery thrombosis in disguise. Hepatobiliary Surg Nutr. 2015 Oct;4(5):367-8. doi: 10.3978/j.issn.2304-3881.2015.05.03. PubMed PMID: 26605286; PubMed Central PMCID: PMC4607836.

92: Pandey RK, Batra MM, Darlong V, Garg R, Punj J, Kumar S. Anesthetic management of parturient with thoracic kyphoscoliosis, malaria and acute respiratory distress syndrome for urgent cesarean section. J Anaesthesiol Clin Pharmacol. 2015 Oct-Dec;31(4):558-9. doi: 10.4103/0970-9185.169090. PubMed PMID: 26702219; PubMed Central PMCID: PMC4676251.

The management of cesarean section in kyphoscoliotic patient is challenging. The respiratory changes and increased metabolic demands due to pregnancy may compromise the limited respiratory reserves in such patients. Presence of other comorbidities like malaria and respiratory tract infection will further compromise the effective oxygenation. We report a case of kyphoscoliosis along with malaria and acute respiratory distress syndrome for urgent cesarean section.

93: Pandit AK, Prasad K, Seth T. Autologous hematopoietic stem cell transplantation in progressive severe multiple sclerosis. Ann Indian Acad Neurol. 2015 Oct-Dec;18(4):459-63. doi: 10.4103/0972-2327.165482. PubMed PMID: 26713025; PubMed Central PMCID: PMC4683892.

Multiple sclerosis (MS) is a chronic inflammatory disease of central nervous system (CNS), which is disabling and majorly involves younger population. Various available treatments in forms of immunomodulation are not very effective; however, stem cell transplantation seems to be promising in recent literature. The current case report is a novel evidence for autologous hematopoietic stem cell transplantation (HSCT) in progressive MS.CASE SUMMARY: A 33 year old male with secondary progressive MS (SPMS), after being failed and/or intolerance to standard approved interferon (IFN) and mitoxantrone therapy, autologous HSCT was administered. At 2years of post-stem cell transplantation follow-up, he has remained stable with some improvement in functional status (Expanded Disability Status Scale (EDSS) reduced by 1.5), with no relapse, no treatment related complications, and no fresh magnetic resonance imaging (MRI) lesions. CONCLUSION: Autologous stem cell transplantation may be beneficial in progressive forms of MS, but needs to be tested in well-designed randomized trial.

94: Pant N, Kumar G, Upadhyay AD, Gupta YK, Chaturvedi PK. Correlation between lead and cadmium concentration and semen quality. Andrologia. 2015 Oct;47(8):887-91. doi: 10.1111/and.12342. Epub 2014 Sep 16. PubMed PMID: 25228328.

There are contrary reports of association of lead and cadmium with the decline in semen quality. This study evaluates whether seminal lead (Pb) and cadmium (Cd) at environmental concentration are associated with altered semen quality. We conducted a study of healthy fertile and infertile men 20-43 years of age attending the Andrology Laboratory of Reproductive Biology Department for semen analysis. The semen analysis was carried out according to the WHO 2010 guidelines. Seminal lead and cadmium were estimated by ICP-AES. The lead and cadmium values were significantly higher in infertile subjects. A negative association between seminal lead or cadmium concentration and sperm concentration, sperm motility and per cent abnormal spermatozoa was found. This study shows that exposure to Pb (5.29-7.25 μg dl(-1)) and cadmium (4.07-5.92 μg dl(-1)) might affect semen profile in men. Age, diet, smoking and tobacco chewing habits may have an influence on the increase in exposure to Pb and Cd in the individual subjects.

95: Parakh N, Jagia P, Hote M, Arava S. Giant Hydatid Cyst of the Interventricular Septum. Echocardiography. 2015 Oct 26. doi: 10.1111/echo.13090. [Epub ahead of print] PubMed PMID: 26498475.

96: Prabhakar P, Reeta KH, Maulik SK, Dinda AK, Gupta YK. Protective effect of thymoquinone against high-fructose diet-induced metabolic syndrome in rats. Eur J Nutr. 2015 Oct;54(7):1117-27. doi: 10.1007/s00394-014-0788-7. Epub 2014 Oct 28. PubMed PMID: 25347965.

PURPOSE: Thymoquinone (TQ), a bioactive constituent of Nigella sativa (Linn.) seed, which is commonly used as a spice in Asian food, has been reported to possess a wide range of biological effects. The present study evaluated the effect of TQ on high-fructose diet (HFD)-induced metabolic syndrome (MetS) in male Wistar rats.
METHODS: MetS was induced by 60% HFD over 42 days. TQ (25, 50 and 100 mg/kg, p.o. once daily) was administered along with HFD for 42 days. Pioglitazone (10 mg/kg, p.o. once daily) was used as a standard drug. Plasma glucose, triglycerides, total cholesterol and HDL-cholesterol were estimated on days 0 and 42. Change in blood pressure, oral glucose tolerance and insulin resistance were measured. Hepatic thiobarbituric acid reactive substances (TBARS), reduced glutathione (GSH), superoxide dismutase (SOD) and catalase levels were estimated as measures of hepatic oxidative stress. Hepatic mRNA of PPAR-α and PPAR-γ was also studied.
RESULTS: TQ prevented the characteristic features of HFD-induced MetS, such as hyperglycaemia, hypertriglyceridemia, hypercholesterolaemia and elevated systolic blood pressure. TQ also prevented impaired glucose tolerance and insulin resistance. It also ameliorated HFD-induced increase in hepatic TBARS and depletion of SOD, catalase and GSH. TQ prevented reduction in hepatic mRNA of PPAR-α and PPAR-γ in HFD rats, and the effects were comparable to those of pioglitazone.
CONCLUSIONS: This study demonstrates protective effect of TQ against HFD-induced MetS on rats which might have been mediated via PPAR mechanism.

97: Prakash S, Sagar R. Phenomenology of obsessive compulsive disorder: Taking a fresh look. Asian J Psychiatr. 2015 Oct;17:114-5. doi: 10.1016/j.ajp.2015.08.009. Epub 2015 Aug 31. PubMed PMID: 26360590.

98: Pundir AS, Singh UA, Ahuja N, Makhija S, Dikshit PC, Radotra B, Kumar P, Shankar SK, Mahadevan A, Roy TS, Iyengar S. Growth and refinement of excitatory

synapses in the human auditory cortex. Brain Struct Funct. 2015 Oct 5. [Epub ahead of print] PubMed PMID: 26438332.

We had earlier demonstrated a neurofilament-rich plexus of axons in the presumptive human auditory cortex during fetal development which became adult-like during infancy. To elucidate the origin of these axons, we studied the expression of the vesicular glutamate transporters (VGLUT) 1 and 2 in the human auditory cortex at different stages of development. While VGLUT-1 expression predominates in intrinsic and cortico-cortical synapses, VGLUT-2 expression predominates in thalamocortical synapses. Levels of VGLUT-2 mRNA were higher in the auditory cortex before birth compared to postnatal development. In contrast, levels of VGLUT-1 mRNA were low before birth and increased during postnatal development to peak during childhood and then began to decrease in adolescence. Both VGLUT-1 and VGLUT-2 proteins were present in the human auditory cortex as early as 15GW. Further, immunohistochemistry revealed that the supra- and infragranular layers were more immunoreactive for VGLUT-1 compared to that in Layer IV at 34GW and this pattern was maintained until adulthood. As for VGLUT-1 mRNA, VGLUT-1 synapses increased in density between prenatal development and childhood in the human auditory cortex after which they appeared to undergo attrition or pruning. The adult pattern of VGLUT-2 immunoreactivity (a dense band of VGLUT-2-positive terminals in Layer IV) also began to appear in the presumptive Heschl's gyrus at 34GW. The density of VGLUT-2-positive puncta in Layer IV increased between prenatal development and adolescence, followed by a decrease in adulthood, suggesting that thalamic axons which innervate the human auditory cortex undergo pruning comparatively late in development.

99: Purkait S, Sharma V, Jha P, Sharma MC, Suri V, Suri A, Sharma BS, Sarkar C. EZH2 expression in gliomas: Correlation with CDKN2A gene deletion/ p16 loss and MIB-1 proliferation index. Neuropathology. 2015 Oct;35(5):421-31. doi: 10.1111/neup.12201. Epub 2015 Jun 12. PubMed PMID: 26096306.

Enhancer of zeste homolog 2 (EZH2) mediated down-regulation of CDKN2A/p16 has been observed in cell lines as well as in a few carcinomas. However, there is no study correlating EZH2 expression with CDKN2A/p16 status in gliomas. Hence, the present study was conducted to evaluate EZH2 expression in astrocytic and oligodendroglial tumors and correlate with CDKN2A/p16 status as well as MIB-1 labeling index (LI). Gliomas of all grades (n = 118) were studied using immunohistochemistry to assess EZH2, p16 and MIB-1 LI and fluorescence in situ hybrization to evaluate CDKN2A gene status. EZH2 expression and CDKN2A homozygous deletion (HD) were both significantly more frequent in high-grade gliomas (HGG). Further, strong EZH2 expression (LI ≥ 25%) was significantly more common in HGGs without CDKN2A HD (48.7%; 19/39) as compared to cases with deletion (15.8%; 3/19). Loss of p16 expression was noted in 100% and 51.3% of CDKN2A deleted and non-deleted tumors, respectively. Notably, 80% (16/20) of the CDKN2A non-deleted HGGs with p16 loss had strong EZH2 expression, in contrast to only 15.8% (3/19) in the deleted group. Loss of p16 expression significantly correlated with MIB-1 LI, irrespective of EZH2 status. Thus, this study shows that EZH2 expression correlates with tumor grade in both astrocytic and oligodendroglial tumors and hence can be used as a diagnostic marker to differentiate between low and HGGs. Further, this is the first report demonstrating an inverse correlation of strong EZH2 expression with CDKN2A HD in HGGs. Loss of p16 protein expression is mostly attributable to CDKN2A HD and correlates significantly with MIB-1 LI. Notably, our study for the first time suggests a possible epigenetic mechanism of p16 loss in CDKN2A non-deleted HGGs mediated by strong EZH2 expression. A hypothetical model for control of proliferative activity in low versus HGGs is therefore proposed.

100: Purohit AH, Kumar P, Sharma S, Kapil A, Gupta A, Mukhopadhyay AK. Volume, conductivity, and scatter parameters as diagnostic aid to bacterial sepsis: A tertiary care experience. Indian J Pathol Microbiol. 2015 Oct-Dec;58(4):459-63.

doi: 10.4103/0377-4929.168853. PubMed PMID: 26549067.

b>Introduction and Materials and Methods: Early diagnosis of sepsis is extremely important to reduce high mortality and morbidity. In this study, clinical usefulness of the volume, conductivity and scatter parameters (mean channels of cell volume, conductivity, and light scatter) in neutrophils was analyzed for predicting acute bacterial infection, which are obtained by the Coulter LH 750 Hematology Analyzer (Beckman Coulter, Fullerton, CA, USA) during automated differential counts.RESULTS: Peripheral blood samples from 162 patients with positive blood cultures for bacteria and 40 healthy controls were studied. We observed a significant increase in the mean channel of neutrophil volume (MNV) from septic patients compared with control subjects (156 ± 13.5 vs. 143 ± 4.8; P < 001).
DISCUSSION AND CONCLUSION: An elevation of the MNV was associated with a higher white blood cell count and percentage of neutrophils and was present even in patients who did not have leukocytosis or neutrophilia. With a cut-off of 149 for the MNV, a specificity of 91.4% and sensitivity of 88.7% were achieved. As a quantitative, objective, and more sensitive parameter, we propose that the MNV has a potential to be an additional indicator for acute bacterial infection.

101: Rabodoarivelo MS, Imperiale B, Andrianiavomikotroka R, Brandao A, Kumar P, Singh S, Ferrazoli L, Morcillo N, Rasolofo V, Palomino JC, Vandamme P, Martin A. Performance of Four Transport and Storage Systems for Molecular Detection of Multidrug-Resistant Tuberculosis. PLoS One. 2015 Oct 2;10(10):e0139382. doi: 10.1371/journal.pone.0139382. eCollection 2015. PubMed PMID: 26431352; PubMed Central PMCID: PMC4591989.

BACKGROUND: Detection of drug-resistant tuberculosis is essential for the control of the disease but it is often hampered by the limitation of transport and storage of samples from remote locations to the reference laboratory. We performed a retrospective field study to evaluate the performance of four supports enabling the transport and storage of samples to be used for molecular detection of drug resistance using the GenoType MTBDRplus.
METHODS: Two hundred Mycobacterium tuberculosis strains were selected and spotted on slides, FTA cards, GenoCards, and in ethanol. GenoType MTBDRplus was subsequently performed with the DNA extracted from these supports. Sensitivity and specificity were calculated and compared to the results obtained by drug susceptibility testing.
RESULTS: For all supports, the overall sensitivity and specificity for detection of resistance to RIF was between 95% and 100%, and for INH between 95% and 98%.
CONCLUSION: The four transport and storage supports showed a good sensitivity and specificity for the detection of resistance to RIF and INH in M. tuberculosis strains using the GenoType MTBDRplus. These supports can be maintained at room temperature and could represent an important alternative cost-effective method useful for rapid molecular detection of drug-resistant TB in low-resource settings.

102: Rai R, Das B, Choudhary N, Talukdar A, Rao DN. MAP of F1 and V antigens from Yersinia pestis astride innate and adaptive immune response. Microb Pathog. 2015 Oct;87:13-20. doi: 10.1016/j.micpath.2015.07.012. Epub 2015 Jul 15. PubMed PMID: 26188288.

Yersinia pestis, a causative agent of plague, has a plethora of armors to fight against major components of innate immunity and survive within host cells. Dendritic cells and macrophages are important antigen presenting cells for effective immune response. This report is focused on the changes in DC activation and TLR2 and TLR4 expression on macrophages induced by MAP of F1 and V antigens of Y. pestis. F1 and V MAPs bear potential synthetic T and B cell epitopes from F1 and V protein respectively. We evaluated these parameters in DC's isolated from spleen and lamina propria and macrophages isolated from peritoneal lavage of mice after intranasal immunization. F1 MAP and V MAP significantly increased the expression of CD80 and CD86 on CD11c(+) dendritic cells isolated from spleen and

lamina propria as well as intracellular IL-12 levels. Similarly, in macrophages derived from peritoneal cavity, the above formulation enhanced TLR2 and TLR4 expression. Again after in vitro stimulation with F1 and V MAP these macrophages produced significantly high IL12 and TNFα. The study clearly indicates involvement of DC and macrophages for efficient antigen presentation to immune cells. From this study we conclude that F1MAP and VMAP ameliorate innate immune mechanism. These two synthetic constructs exert their effect via TLR2 and TLR4, leading to the production of proinflammatory cytokines by macrophages and are able to increase DC activation, that could be helpful in generation of adaptive immunity as well as is important strong immune response.

103: Raj Y, Sahu D, Pandey A, Venkatesh S, Reddy D, Bakkali T, Das C, Singh KJ, Kant S, Bhattacharya M, Stover J, Jha UM, Kumar P, Mishra RM, Chandra N, Gulati BK, Mathur S, Joshi D, Chavan L. Modelling and estimation of HIV prevalence and number of people living with HIV in India, 2010-2011. Int J STD AIDS. 2015 Oct 22. pii: 0956462415612650. [Epub ahead of print] PubMed PMID: 26494704.

This paper provides HIV estimation methodology used in India and key HIV estimates for 2010-2011. We used a modified version of the Spectrum tool that included Estimation and Projection Package as part of its AIDS Impact Module. Inputs related to population size, age-specific pattern of fertility, sex-ratio at birth, age and sex-specific pattern of mortality, and volume and age-sex distribution of net migration were derived from census records, Sample Registration System and large-scale demographic health surveys. Epidemiological and programmatic data were derived from HIV sentinel surveillance, large-scale epidemiological surveys and the programme management information system. Estimated adult HIV prevalence retained a declining trend in India, following its peak in 2002 at a level of 0.41% (within bounds 0.35-0.47%). By 2010 and 2011, it levelled at estimates of 0.28% (0.24-0.34%) and 0.27% (0.22-0.33%), respectively. The estimated number of people living with HIV (PLHIV) reduced by 8% between 2007 and 2011. While children accounted for approximately 6.3% of total HIV infections in 2007, this proportion increased to about 7% in 2011. With changing priorities and epidemic patterns, the programme has to customise its strategies to effectively address the emerging vulnerabilities and adapt them to suit the requirements of different geographical regions.

104: Rajeshkumar RK, Vennila R, Karthikeyan S, Prasad NR, Arumugam M, Velpandian T, Balasubramaniam T. Antiproliferative activity of marine stingray Dasyatis sephen venom on human cervical carcinoma cell line. J Venom Anim Toxins Incl Trop Dis. 2015 Oct 12;21:41. doi: 10.1186/s40409-015-0036-5. eCollection 2015. PubMed PMID: 26464574; PubMed Central PMCID: PMC4603964.

BACKGROUND: Venoms comprise mixtures of numerous bioactive compounds that have a wide range of pharmacologic actions. Toxins from venomous animals have attracted the attention of researchers because of their affinity for primary sites responsible for lethality and their efficacy at extremely low concentrations. The venoms of marine stingrays have not been extensively studied and limited data is available on them. The present study aims to evaluate the antiproliferative and biochemical properties of the venom obtained from a species of marine stingray (Dasyatis sephen) on human cervical cancer cell line HeLa.
METHODS: The antiproliferative effect of D. sephen venom was determined by MTT assay, and the oxidative stress was determined by lipid peroxidation method along with assessment of changes in the enzymatic and non-enzymatic antioxidant status. We observed intracellular reactive oxygen species (ROS) levels by DCFH-DA method, mitochondrial membrane potential alterations by rhodamine 123 staining and apoptotic morphological changes by acridine orange/ethidium bromide dual staining method.
RESULTS: D. sephen venom enhances lipid peroxidative markers such as

thiobarbituric acid reactive substance, conjugated diene, and lipid hydroperoxide in HeLa cell lines. Stingray venom enhances the ROS levels, which is evidenced by the increased 2-7-diacetyl dichlorofluorescein fluorescence. Further, D. sephen venom treatment altered the mitochondrial membrane potential in HeLa cells. Additionally, we observed increased apoptotic morphological changes in D. sephen venom-treated groups.
CONCLUSIONS: Dasyatis sephen venom exhibits potent antiproliferative effect on HeLa cell line and upon further purification it could be a promising antiproliferative agent.

105: Roshan V, Pathy S, Mallick S, Chander S, Sen S, Chawla B. Adjuvant Radiotherapy with Three-Dimensional Conformal Radiotherapy of Lacrimal Gland Adenoid Cystic Carcinoma. J Clin Diagn Res. 2015 Oct;9(10):XC05-XC07. doi: 10.7860/JCDR/2015/14452.6669. Epub 2015 Oct 1. PubMed PMID: 26557600; PubMed Central PMCID: PMC4625319.

BACKGROUND & AIM: Adenoid cystic carcinoma (ACC) of lacrimal gland is a rare tumour with aggressive behaviour. There is sparse data to address optimum therapy for such tumours. So, the present study was aimed at evaluating the role of adjuvant three dimensional conformal radiotherapy (3D-CRT) in cases of incomplete (R1) resection along with review of literature pertaining to management of lacrimal adenoid cystic carcinoma.
MATERIALS AND METHODS: We retrospectively reviewed the demographic and treatment data of 10 biopsy proven ACC of lacrimal gland patients, treated from December 2006 to June 2013. They were treated with radiotherapy following surgical resection. Eight patients underwent gross total excision of the tumour mass (enbloc excision) followed by conformal radiotherapy to a dose of 60 Gray/30fractions/ 6 weeks. Two patients with advanced disease were treated with palliative radiotherapy after biopsy.
RESULTS: The median age was 32 years. There were equal numbers of male and female patients. The median duration of symptoms was 7 months. At a median follow up of 21 months, eight patients had no evidence of disease and had complete tumour response, two patients worsened, and one of the two had systemic failure with bone metastasis.
CONCLUSION: Despite a small sample size and short follow, enbloc surgical excision with adjuvant radiotherapy is well tolerated and shows good control in ACC of lacrimal gland.

106: Rubens M, Ramamoorthy V, Saxena A, Shehadeh N, Appunni S. HIV Vaccine: Recent Advances, Current Roadblocks, and Future Directions. J Immunol Res. 2015;2015:560347. doi: 10.1155/2015/560347. Epub 2015 Oct 22. Review. PubMed PMID: 26579546; PubMed Central PMCID: PMC4633685.

HIV/AIDS is a leading cause of mortality and morbidity worldwide. In spite of successful interventions and treatment protocols, an HIV vaccine would be the ultimate prevention and control strategy. Ever since identification of HIV/AIDS, there have been meticulous efforts for vaccine development. The specific aim of this paper is to review recent vaccine efficacy trials and associated advancements and discuss the current challenges and future directions. Recombinant DNA technologies greatly facilitated development of many viral products which were later incorporated into vectors for effective vaccines. Over the years, a number of scientific approaches have gained popularity and include the induction of neutralizing antibodies in late 1980s, induction of CD8 T cell in early 1990s, and combination approaches currently. Scientists have hypothesized that stimulation of right sequences of somatic hypermutations could induce broadly reactive neutralizing antibodies (bnAbs) capable of effective neutralization and viral elimination. Studies have shown that a number of host and viral factors affect these processes. Similarly, eliciting specific CD8 T cells immune responses through DNA vaccines hold future promises. In summary, future studies should focus on the continuous fight between host immune responses and ever-evasive viral factors for effective vaccines.

107: Sablok A, Batra A, Thariani K, Batra A, Bharti R, Aggarwal AR, Kabi BC, Chellani H. Supplementation of vitamin D in pregnancy and its correlation with feto-maternal outcome. Clin Endocrinol (Oxf). 2015 Oct;83(4):536-41. doi: 10.1111/cen.12751. Epub 2015 Mar 9. PubMed PMID: 25683660.

CONTEXT: Vitamin D deficiency is widely prevalent throughout the world. Pregnant women, neonates and infants form most vulnerable groups for vitamin D deficiency.
OBJECTIVE: (1) To find prevalence of vitamin D deficiency in pregnant women. (2) To evaluate the effect of supplementation with cholecalciferol in improving vitamin D levels in pregnant women and evaluate its correlation with feto-maternal outcome.
DESIGN: Randomized control trial from years 2010 to 2012.
SETTING: Tertiary care centre, Delhi, India.
PARTICIPANTS: One-hundred and eighty pregnant women. Study population divided randomly into two groups: group A: nonintervention (60 women) and group B: intervention (120 women).
INTERVENTION: The intervention group received supplementation of vitamin D in dosages depending upon 25(OH)-D levels.
MAIN OUTCOME MEASURES: Risk of maternal complications such as preterm labour, pre-eclampsia and gestational diabetes associated with vitamin D deficiency and risk of low birthweight and poor Apgar score in infants of mothers with vitamin D deficiency.
RESULTS: Adjusted serum 25(OH)-D concentration was lower in group A as compared to group B (mean 46·11 ± 74·21 nmol/l vs 80 ± 51·53 nmol/l). Forty-four percent patients in group A and 20·3% patients in group B developed preterm labour/pre-eclampsia/gestational diabetes. Newborns of mothers in group A had lower cord blood levels of 25(OH)-D levels as compared to group B (mean 43·11 ± 81·32 nmol/l vs 56·8 ± 47·52 nmol/l). They also had lower birthweight of mean 2·4 ± 0·38 kg as compared to group B 2·6 ± 0·33 kg.
CONCLUSIONS: Vitamin D supplementation reduces risk of maternal comorbidities and helps improve neonatal outcomes.

108: Sahoo SS, Suri A, Bansal S, Devarajan SL, Sharma BS. Outcome of revascularization in moyamoya disease: Evaluation of a new angiographic scoring system. Asian J Neurosurg. 2015 Oct-Dec;10(4):252-9. doi: 10.4103/1793-5482.162681. PubMed PMID: 26425151; PubMed Central PMCID: PMC4558798.

BACKGROUND: Moyamoya disease (MMD) is a chronic progressive cerebrovascular occlusive disease affecting commonly the anterior circle of Willis. Matushima grade inadequately reflects the angiographic changes postrevascularization procedure.
AIMS: To analyze the clinical and angiographic outcome of revascularization procedures (direct [ST-middle cerebral artery (MCA) anastomosis] and indirect [encephalo-duro-arterio-myo-synangiosis (EDAMS)]) in MMD and validate a new angiographic scoring system.
MATERIALS AND METHODS: Retrospective study included symptomatic patients of MMD who underwent revascularization; both indirect and combined methods between January 2002 and April 2012. Follow-up angiography was done after at least 3 months. We devised a novel scoring system the "angiographic outcome score" (AOS) including reformation of distal MCA and anterior cerebral artery, regression of basal moyamoya vessels, leptomeningeal collaterals and overall perfusion. AOS was applied to the angiograms independently by a neuroradiologist and a neurosurgeon that were blinded toward its preoperative or postoperative status.
RESULTS: Totally 33 patients underwent 36 EDAMS and 4 combined procedures (EDAMS + ST-MCA bypass). The mean follow-up was 20 months. None had recurrent transient ischemic attack or fresh infarct. Postoperative AOS was significantly higher than preoperative AOS. The Spearman rho showed positive correlation between Matushima grade and postoperative AOS. Significant regression of basal moyamoya vessels and increase in number of loci of transdural collaterals was seen.

CONCLUSIONS: EDAMS is a simple yet effective method of revascularization in both pediatric as well as adult age groups. AOS is a simple, precise and easily reproducible scoring system, which reflects the favorable angiographic changes after revascularization.

109: Sambhunath D, Pankaj K, Usha K. Role of phenoxybenzamine in perioperative clinical practice. Ann Card Anaesth. 2015 Oct-Dec;18(4):577-8. doi: 10.4103/0971-9784.166473. PubMed PMID: 26440247.

110: Sandip S, Afshan I, Khandelwal RK. MR features of metronidazole-induced encephalopathy. BMJ Case Rep. 2015 Oct 5;2015. pii: bcr2015212609. doi: 10.1136/bcr-2015-212609. PubMed PMID: 26438684.

111: Saxena R, Narula J, Malik V, Kumar S, Talwar S. Giant Left Atrial Myxoma. J Card Surg. 2015 Oct;30(10):746-8. doi: 10.1111/jocs.12615. Epub 2015 Sep 9. PubMed PMID: 26350586.

112: See JA, Kaukinen K, Makharia GK, Gibson PR, Murray JA. Practical insights into gluten-free diets. Nat Rev Gastroenterol Hepatol. 2015 Oct;12(10):580-91. doi: 10.1038/nrgastro.2015.156. Epub 2015 Sep 22. Review. PubMed PMID: 26392070.

Coeliac disease is a global disease, and the only currently available treatment is a gluten-free diet (GFD). Although conceptually simple, the diet changes are substantial and have a profound effect on a patient's life. Untreated coeliac disease is associated with complications, including excess mortality, most of which can be avoided with a strict GFD. However, there are many barriers, including availability, cost and safety of gluten-free foods, and gluten cross-contamination. The GFD can be restrictive in social situations, leading to poor quality of life and, ultimately, nonadherence. As the number of patients with coeliac disease increases worldwide, clinicians need to be aware of the challenges patients face. Heightened awareness by physicians, dietitians and other providers can help maximize successful treatment, improve outcomes, and reduce health-care costs and disease burden. Routine follow-up is necessary to reinforce the need for a GFD, provide social and emotional support, and achieve mucosal healing, leading to reduced risk of complications. Unfortunately, there is wide variation in follow-up practices. The objective of this Review is to increase awareness of the challenges, management and follow-up of patients with coeliac disease to help them achieve GFD adherence and prevent complications whilst preserving their quality of life.

113: Shabir I, Khurana ML, Joseph AA, Eunice M, Mehta M, Ammini AC. Phenotype, genotype and gender identity in a large cohort of patients from India with 5Î±-reductase 2 deficiency. Andrology. 2015 Oct 9. doi: 10.1111/andr.12108. [Epub ahead of print] PubMed PMID: 26453174.

Deficiency of the 5α-reductase 2 enzyme impairs the conversion of testosterone to dihydrotestosterone (DHT) and differentiation of external genitalia, seminal vesicles and prostate in males. The present study describes the phenotype, genotype and gender identity in a large cohort of patients with 5αRD2. All patients underwent detailed clinical evaluation, hormonal profile, karyotyping and molecular analysis of the SRD5A2 gene. The molecular analysis of the SRD5A2 gene showed the presence of mutant alleles in 24 patients. We found 6 novel mutations IVS(1-2) T>C, p.A52T, 188-189insTA, 904-905ins A, p.A12T and p.E57X in our patients. All patients had ambiguous genitalia and the degrees of under-virilization ranged from penoscrotal hypospadias and microphallus to clitoromegaly. The position of gonads was variable in patients with same mutation. All the patients with mutations in the SRD5A2 gene had male gender identity. Those reared as female had gender dysphoria and underwent gender reassignment. Though a specific genotype-phenotype correlation could not be established in our patient but confirming the diagnosis of 5αRD2 with assessment of the SRD5A2 gene may help in appropriate gender assignment.

114: Shabir I, Khurana ML, Marumudi E, Joseph AA, Mehta M, John J, Ammini AC. Homozygous p.R246Q Mutation and Impaired Spermatogenesis: Long Term Follow-up of 4 Children from One Family with 5 Alpha Reductase 2 Deficiency. Indian J Pediatr. 2015 Oct 8. [Epub ahead of print] PubMed PMID: 26446026.

115: Shalimar, Kumar D, Vadiraj PK, Nayak B, Thakur B, Das P, Datta Gupta S, Panda SK, Acharya SK. Acute on chronic liver failure due to acute hepatic insults: Etiologies, course, extrahepatic organ failure and predictors of mortality. J Gastroenterol Hepatol. 2015 Oct 31. doi: 10.1111/jgh.13213. [Epub ahead of print] PubMed PMID: 26519215.

BACKGROUND AND AIM: Acute-on-chronic-liver failure (ACLF) due to precipitating factors (variceal bleed/infections) identifies cirrhotics at risk for high short term mortality. Information on ACLF due to acute hepatic insults is lacking. The aim of the study was to evaluate acute hepatic insults in ACLF and their effect on the course and outcome.
METHODS: In a prospective study, 213 consecutive patients of ACLF due to acute hepatic insults were included. Etiology of acute hepatic insult, frequency of silent and overt chronic liver disease(CLD), organ failure(OF), and outcomes were assessed. Prognostic models such as model for endstage liver disease(MELD), acute physiology and chronic health evaluation(APACHE II) and chronic liver failure-sequential organ failure(CLIF-SOFA) were evaluated.
RESULTS: Etiologies of acute hepatic insult were hepatitis virus(es)- 81(38%; HBV-42, HEV-39), continuous alcohol consumption-77(33.3%), Antituberculosis drugs-11(5.2%), autoimmune hepatitis flare-5(2.3%), cryptogenic-44(20.7%). The common causes of CLD were alcohol (n=85/40%), HBV(n=52/24%) and cryptogenic(n=50/20%). The MELD, APACHE II and CLIF-SOFA scores were similar among silent and overt CLD and didn't influence outcome. Predominant etiologies of ACLF were hepatitis virus(es) reactivation or superinfection in silent CLD(52/112,46.4%) and alcohol among overt CLD(43/101,43%). Independent predictors of mortality included hepatic-encephalopathy(early,HR:4.01; advanced,HR:6.10), serum creatinine ≥1.5mg/dl(HR:4.53), CLIF-SOFA ≥8(HR:1.69) and etiology of acute hepatic insult(alcohol, HR:4.08; cryptogenic, HR:3.18). HEV-ACLF had lower mortality(12.8% vs.33%-54% in other etiologies;p<0.001). OF was major determinant of mortality. With increasing number of OF, mortality increased linearly(p=0.001).
CONCLUSIONS: Hepatitis virus(es) and continuous alcohol consumption are important causes of ACLF caused by acute hepatic insults. HEV-ACLF has lower mortality. OF is an important prognostic predictor.

116: Sharma A, Singh N, Mahapatra M, Ranjan R, Kishor K, Saxena R. Factors contributing to APC-resistance in women with recurrent spontaneous miscarriages: Indian perspective. Blood Cells Mol Dis. 2015 Oct;55(3):213-5. doi: 10.1016/j.bcmd.2015.06.011. Epub 2015 Jun 23. PubMed PMID: 26227848.

Phenotypic resistance to APC is a complex mechanism associated with increased risk of venous thrombosis in women with recurrent spontaneous abortions. The primary aim of this prospective case control study was to find out the frequencies of different congenital and acquired thrombophilic factors predisposing to APC resistance and to evaluate the strength of their association with recurrent pregnancy losses. FV Leiden accounted for around 40% of all APCR positive patients and the difference in the group frequencies compared with controls, was found to be statistically significant (p=0.001). 18.33% (11/60) FV Leiden-negative APC-resistant patients hadFVIII: c values exceeding 95th percentile of the control population (145IU/dL), as compared to 3% in the control group (p=0.001). Mean FVIII level in control subjects was 118±14.0IUdL(-), compared with 127.7±31.2IUdL(-) in the patient group (p=0.009). Apart from FVIII,

only the anti-phospholipid antibodies showed a statistically significant association with APCR phenotype (p=0.028), unlike other thrombophilic factors such as Protein C, Protein S, FV levels, HR2 haplotype or other rarer FV variants. The strong positive association of FVL mutation, anti-phospholipid antibodies and elevated FVIII levels with APCR phenotype calls for incorporating them as first line investigations in patients with recurrent spontaneous miscarriages with APCR positivity.

117: Sharma G, Lodha R, Shastri S, Saini S, Kapil A, Singla M, Mukherjee A, Jat KR, Kabra M, Kabra SK. Zinc Supplementation for One Year Among Children with Cystic Fibrosis Does Not Decrease Pulmonary Infection. Respir Care. 2016 Jan;61(1):78-84. doi: 10.4187/respcare.04038. Epub 2015 Oct 6. PubMed PMID: 26443019.

BACKGROUND: Children with cystic fibrosis may have a deficiency of micronutrients, including zinc, which may affect their susceptibility to infections. There is a paucity of data on zinc supplementation among children with cystic fibrosis. We hypothesized that a pharmacologic dose of zinc administered daily for 12 months would reduce the need for antibiotics by 50%.
METHODS: This double-blind randomized placebo-controlled trial was conducted among children with cystic fibrosis to assess the effect of zinc supplementation on the need for antibiotics and pulmonary function tests. The children, age 5-15 y, of either sex, received either 30-mg zinc tablets or similar looking placebo tablets daily in addition to standard care. They were followed up every month for a period of 12 months and whenever they had pulmonary exacerbations. Their serum zinc was estimated at baseline and at 12 months of enrollment. During each visit, the children underwent a pulmonary function test and sputum culture.
RESULTS: Of a total of 43 children screened, 40 were enrolled, and of them, 37 completed the study. The median (interquartile range) number of days of the administration of antibiotics over 12 months of follow-up among the children receiving zinc was 42 (14-97) d. In the placebo group, it was 38 (15-70) d (P = .79). There were no significant differences in the percent-of-predicted FEV1 or change in FEV1 values at 12 months (P = .44). The number of children in whose respiratory specimens Pseudomonas was isolated was similar for the 2 groups at different time intervals. The adverse events reported were similar in the 2 groups.
CONCLUSION: We did not find any significant difference in the need for antibiotics, pulmonary function tests, hospitalization, colonization with Pseudomonas, or the need for antibiotics for children with cystic fibrosis receiving zinc supplementation of 30 mg/d.

118: Sharma JB, Sneha J, Singh UB, Kumar S, Roy KK, Singh N, Dharmendra S, Vanamail P. Comparative Study of Laparoscopic Abdominopelvic and Fallopian Tube Findings Before and After Antitubercular Therapy in Female Genital Tuberculosis With Infertility. J Minim Invasive Gynecol. 2015 Oct 8. pii: S1553-4650(15)01603-9. doi: 10.1016/j.jmig.2015.09.023. [Epub ahead of print] PubMed PMID: 26455527.

STUDY OBJECTIVE: To study the effect of antitubercular treatment (ATT) on the laparoscopic abdominopelvic and fallopian tube findings in female genital tuberculosis (FGBT).
DESIGN: Prospective cohort (Canadian Task Force classification II2).
SETTING: Tertiary referral center in northern India.
PATIENTS: Fifty women with infertility and diagnosed with FGTB on laparoscopy, histopathology findings, or endometrial sampling (acid-fast bacilli culture, granuloma on histopathology, positive polymerase chain reaction).
INTERVENTIONS: Diagnostic laparoscopy in all women diagnosed with FGTB before and after a 6-month course of ATT (2 months of rifampicin, isoniazid, pyrazinamide,

and ethambutol, followed by 4 months of rifampicin and isoniazid). All procedures were performed by the same surgeon between June 2012 and May 2014.
MEASUREMENTS AND MAIN RESULTS: The mean patient age was 28.7 years, mean parity was 0.9, and mean body mass index was 23.6 kg/m(2). Infertility was seen in all 50 women (66% primary infertility, 34% secondary infertility), with a mean duration of 6.06 years. Abnormal laparoscopic findings of FGTB included tubercles in the pelvic peritoneum, fallopian tube, and ovary in 27 women (54%) before ATT and in only 1 (2.04%) woman after ATT ($p < .001$). Caseous nodules and encysted ascites were seen in 4 women (8%) before ATT, and in no women after ATT ($p < .001$); however, there was no change from before ATT to after ATT in the rate of pelvic adhesions (42% vs 42.5%) and perihepatic adhesions (56% vs 58%). Laparoscopic findings in fallopian tubes included hydrosalpinx (32%), pyosalpinx (4%), beaded tubes (12%), nonvisualization of tube (20%), and tubal blockage on the right side (56%), left side (50%), and both sides (38%) before ATT. Hydrosalpinx, beaded tubes, and nonvisualized tube were seen in 33.4%, 4.1%, and 20.8% cases, respectively, after ATT; however, free spill increased to 52% on the right side and 50% on left side after ATT.
CONCLUSION: ATT improves laparoscopic findings in FGTB with infertility. However, advanced fibrotic lesions (eg, pelvic and perihepatic adhesions, bilateral blocked tubes) do not improve with ATT.

119: Sharma JB. Current Diagnosis and Management of Female Genital Tuberculosis. J Obstet Gynaecol India. 2015 Dec;65(6):362-71. doi: 10.1007/s13224-015-0780-z. Epub 2015 Oct 7. Review. PubMed PMID: 26663993; PubMed Central PMCID: PMC4666212.

Female genital tuberculosis (FGTB) is an important cause of significant morbidity, short- and long-term sequelae especially infertility whose incidence varies from 3 to 16 % cases in India. Mycobacterium tuberculosis is the etiological agent for tuberculosis. The fallopian tubes are involved in 90-100 % cases, endometrium is involved in 50-80 % cases, ovaries are involved in 20-30 % cases, and cervix is involved in 5-15 % cases of genital TB. Tuberculosis of vagina and vulva is rare (1-2 %). The diagnosis is made by detection of acid-fast bacilli on microscopy or culture on endometrial biopsy or on histopathological detection of epithelioid granuloma on biopsy. Polymerase chain reaction may be false positive and alone is not sufficient to make the diagnosis. Laparoscopy and hysteroscopy can diagnose genital tuberculosis by various findings. Treatment is by giving daily therapy of rifampicin (R), isoniazid (H), pyrazinamide (Z) and ethambutol (E) for 2 months followed by daily 4 month therapy of rifampicin (R) and isoniazid (H). Alternatively 2 months intensive phase of RHZE can be daily followed by alternate day combination phase (RH) of 4 months. Three weekly dosing throughout therapy (RHZE thrice weekly for 2 months followed by RH thrice weekly for 4 months) can be given as directly observed treatment short-course. Surgery is rarely required only as drainage of abscesses. There is a role of in vitro fertilization and embryo transfer in women whose fallopian tubes are damaged but endometrium is healthy. Surrogacy or adoption is needed for women whose endometrium is also damaged.

120: Sharma P, Kumar R, Alavi A. PET/Computed Tomography Using New Radiopharmaceuticals in Targeted Therapy. PET Clin. 2015 Oct;10(4):495-505. doi: 10.1016/j.cpet.2015.05.007. Epub 2015 Jul 3. Review. PubMed PMID: 26384596.

Targeted therapy is gaining prominence in the management of different cancers. Given different mechanism of action compared with traditional chemoradiotherapy, selection of patients for targeted therapy and monitoring response to these agents is difficult with conventional imaging. Various new PET radiopharmaceuticals have been evaluated for molecular imaging of these targets to achieve specific patient selection and response monitoring. These PET/computed tomography (CT) agents target the cell surface receptors, hormone receptors, receptor tyrosine kinases, or angiogenesis components. This article reviews the established and potential role of PET/CT with new radiopharmaceuticals for

guiding targeted therapy.

121: Sharma SK, Kohli M, Yadav RN, Chaubey J, Bhasin D, Sreenivas V, Sharma R, Singh BK. Evaluating the Diagnostic Accuracy of Xpert MTB/RIF Assay in Pulmonary Tuberculosis. PLoS One. 2015 Oct 23;10(10):e0141011. doi: 10.1371/journal.pone.0141011. eCollection 2015. PubMed PMID: 26496123; PubMed Central PMCID: PMC4619889.

Pulmonary tuberculosis still remains a major communicable disease worldwide. In 2013, 9 million people developed TB and 1.5 million people died from the disease. India constitutes 24% of the total TB burden. Early detection of TB cases is the key to successful treatment and reduction of disease transmission. Xpert MTB/RIF, an automated cartridge-based molecular technique detects Mycobacterium tuberculosis and rifampicin resistance within two hours has been endorsed by WHO for rapid diagnosis of TB. Our study is the first study from India with a large sample size to evaluate the performance of Xpert MTB/RIF assay in PTB samples. The test showed an overall sensitivity and specificity of 95.7% (430/449) and 99.3% (984/990) respectively. In smear negative-culture positive cases, the test had a sensitivity of 77.7%. The sensitivity and specificity for detecting rifampicin resistance was 94.5% and 97.7% respectively with respect to culture as reference standard. However, after resolving the discrepant samples with gene sequencing, the sensitivity and specificity rose to 99.0% and 99.3% respectively. Hence, while solid culture still forms the foundation of TB diagnosis, Xpert MTB/RIF proposes to be a strong first line diagnostic tool for pulmonary TB cases.

122: Sharma U, Upadhyay D, Mewar S, Mishra A, Das P, Gupta SD, Dwivedi SN, Makharia GK, Jagannathan NR. Metabolic abnormalities of gastrointestinal mucosa in celiac disease: An in vitro proton nuclear magnetic resonance spectroscopy study. J Gastroenterol Hepatol. 2015 Oct;30(10):1492-8. doi: 10.1111/jgh.12979. PubMed PMID: 25867107.

BACKGROUND AND AIM: Celiac disease (CeD) is a common autoimmune disorder in which ingestion of gluten and related proteins leads to inflammation in the small intestine. Although the histological findings in CeD are characteristic, they are not specific. In this study, proton nuclear magnetic resonance (NMR) spectroscopy was used to investigate the differences in metabolic profile of duodenal mucosal biopsies of patients with CeD and controls to find out the biomarker/s of villous atrophy.
METHODS: Duodenal mucosal biopsies were collected from 29 CeD patients (mean age 26.2±10.8 years) and 17 controls (mean age 34.1±11.1 years) and were subjected to proton NMR spectroscopy following perchloric acid extraction. Assignment of metabolite resonances was carried out and their concentrations were determined. For comparison between the groups unpaired t-test/Wilcoxon rank sum test was used. Partial least squares-discriminant analysis was performed to study the clustering behavior of the samples from CeD patients and controls using the Unscrambler 10.2 software.
RESULTS: Partial least squares-discriminant analysis clearly differentiated CeD patients from controls. Significantly higher concentrations of isoleucine, leucine, aspartate, succinate, and pyruvate, and lower concentration of glycerophosphocholine, were observed in the duodenal mucosa of CeD patients compared with controls. The results suggest abnormalities in glycolysis, Krebs cycle (energy deficiency), and amino acid metabolism, which may affect the biosynthetic pathways and consequently contribute to villous atrophy.
CONCLUSIONS: NMR spectroscopy with multivariate analysis of duodenal mucosal biopsies revealed a characteristic metabolic profile in CeD patients. The work provided an insight in determining biomarker/s for villous atrophy and diagnosis of CeD patients.

Asia Pty Ltd.

123: Shrivastava M, Subbiah V. Elevated caspase 3 activity and cytosolic cytochrome c in NT2 cybrids containing amyotrophic lateral sclerosis subject mtDNA. Int J Neurosci. 2015 Oct 2:1-11. [Epub ahead of print] PubMed PMID: 26268635.

Apoptosis of motor neurons is an important feature in amyotrophic lateral sclerosis (ALS). A vital role of mitochondria in apoptosis and cell survival is well documented. Eventually mitochondria have shown to be an early target in the pathogenesis of ALS. On account of these facts, we investigated the involvement of mitochondrial-dependent apoptosis in ALS and control (CTR) cybrids, generated fusing human platelets with mitochondrial DNA-depleted NT2-neuroteratocarcinoma cells. After a 6 week selection process during which transferred subject mtDNA repopulated the NT2 cells and restored mitochondrial oxygen consumption, we assessed cell viability and two programmed cell death parameters, caspase 3 activity and cytosolic cytochrome c levels. Compared to the control cybrid lines (n = 5), the ALS cybrid lines (n = 10) showed 45% less XTT reduction and higher caspase 3 activity ($p < 0.05$, two-way Student's t test) exhibiting lesser cell viability and execution of apoptosis. Elevated cytosolic cytochrome c levels in ALS cybrid lines (n = 8) than in CTR (n = 4) ($p < 0.05$, two-way Student's t-test) indicating its mitochondrial release and initiation of apoptosis. This indicates apoptosis as one of the possible mechanisms of cell death in ALS. Our findings support the view that in ALS, subject's mitochondria are altered in non-degenerating tissues in such a way that intrinsic apoptotic pathway activity is relatively increased.

124: Sihota R, Angmo D, Sen S, Gupta V, Dada T, Pandey RM. The Long-term Outcome of Primary "Bleb-sparing, Epithelial Exchange" in Dysfunctional Filtering Blebs. J Glaucoma. 2015 Oct 13. [Epub ahead of print] PubMed PMID: 26465075.

OBJECTIVE: To evaluate the long-term outcome of epithelial peeling and conjunctival replacement as a primary procedure in dysfunctional filtering blebs, without excising the bleb.
MATERIALS AND METHODS: A prospective, observational case series involving 34 consecutive eyes, having prior operated trabeculectomy with a dysfunctional filtering bleb, that met the inclusion criteria and were reviewed for at least 12 months. The bleb epithelium was peeled off and replaced with the adjacent conjunctiva, without bleb excision. Patients were reviewed at 1 week, 1 and 3 months postoperatively, and thereafter every 6 months for best corrected visual acuity (BCVA), applanation tonometry, bleb morphology and leaks, the lens status, glaucoma medications, and any complications. ASOCT was performed preoperatively and at the last review. Complete success (primary outcome) was defined as an intraocular pressure (IOP) >6 and <18 mm Hg without any additional antiglaucoma medications at the last follow-up.
RESULTS: The average age of the patients was 36.6±20.7 years. The average time of follow-up was 23.9±6.1 months (range, 13 to 40 mo). The mean preoperative IOP was 5.8±4.2 mm Hg. Postoperatively, the IOP at 24 months was 12.6±3.9 mm Hg ($P<0.0001$). The bleb characteristics were graded according to the Indiana Bleb Appearance Grading Scale (IBAGS), which showed significant results in terms of the height (H), the vascularity (V), and Seidel (S) ($P<0.0001$). The preoperative and the postoperative BCVAs in logMAR were 0.51±0.26 and 0.37±0.21 ($P=0.0001$), respectively. Complete success was noted in 31/34 eyes (91.18%) and qualified success was noted in 3 eyes (8.82%). One patient developed a mild ptosis after bleb revision.
CONCLUSIONS: Epithelial peeling of the bleb with replacement by advancement, without bleb excision, maintains bleb function and resolves bleb dysfunction in the long term.

125: Singh AK, Rathore S, Tang Y, Goldfarb NE, Dunn BM, Rajendran V, Ghosh PC, Singh N, Latha N, Singh BK, Rawat M, Rathi B. Hydroxyethylamine Based Phthalimides as New Class of Plasmepsin Hits: Design, Synthesis and Antimalarial

Evaluation. PLoS One. 2015 Oct 26;10(10):e0139347. doi: 10.1371/journal.pone.0139347. eCollection 2015. PubMed PMID: 26502278; PubMed Central PMCID: PMC4621027.

A novel class of phthalimides functionalized with privileged scaffolds was designed, synthesized and evaluated as potential inhibitors of plasmepsin 2 (Ki: 0.99 ± 0.1 μM for 6u) and plasmepsin 4 (Ki: 3.3 ± 0.3 μM for 6t), enzymes found in the digestive vacuole of the plasmodium parasite and considered as crucial drug targets. Three compounds were identified as potential candidates for further development. The listed compounds were also assayed for their antimalarial efficacy against chloroquine (CQ) sensitive strain (3D7) of Plasmodium falciparum. Assay of twenty seven hydroxyethylamine derivatives revealed four (5e, 6j, 6o and 6s) as strongly active, which were further evaluated against CQ resistant strain (7GB) of P. falciparum. Compound 5e possessing the piperidinopiperidine moiety exhibited promising antimalarial activity with an IC50 of 1.16 ± 0.04 μM. Further, compounds 5e, 6j, 6o and 6s exhibited low cytotoxic effect on MCF-7 cell line. Compound 6s possessing C2 symmetry was identified as the least cytotoxic with significant antimalarial activity (IC50: 1.30 ± 0.03 μM). The combined presence of hydroxyethylamine and cyclic amines (piperazines and piperidines) was observed as crucial for the activity. The current studies suggest that hydroxyethylamine based molecules act as potent antimalarial agent and may be helpful in drug development.

126: Singh Balhara YP, Kalra S. Psychiatric disorders in diabetes. J Pak Med Assoc. 2015 Oct;65(10):1137-8. PubMed PMID: 26440852.

Diabetes and psychiatric disorders share a bi-directional relationship, with both affecting each other adversely. Just as achieving glycaemic control is important, so is ensuring that the person enjoys a good quality of life. All individuals with diabetes must be screened regularly for co-morbidity, especially depressive and anxiety disorders. Multiple evidence based psychotropic pharmacological interventions are available for management of these psychiatric disorders. Additionally, non-pharmacological interventions play a key role in comprehensive management of such patients.

127: Singh H, Patel CD, Sharma G, Naik N. Comparison of left ventricular systolic function and mechanical dyssynchrony using equilibrium radionuclide angiography in patients with right ventricular outflow tract versus right ventricular apical pacing: A prospective single-center study. J Nucl Cardiol. 2015 Oct;22(5):903-11. doi: 10.1007/s12350-014-0033-z. Epub 2015 Jan 23. PubMed PMID: 25609582.

BACKGROUND: Chronic ventricular pacing is known to adversely affect left ventricular (LV) function. Studies comparing right ventricular outflow tract (RVOT) pacing with RV apical (RVA) pacing have shown heterogeneous outcomes. Our aim was to objectively assess LV function and mechanical dyssynchrony in patients with RVOT and RVA pacing using equilibrium radionuclide angiography (ERNA).
METHODS: Fifty-one patients who underwent permanent pacemaker implantation and had normal LV function were prospectively included. Twenty-nine patients had pacemaker lead implanted in the RVOT and 22 at the RVA site. All patients underwent ERNA within 5 days post-pacemaker implantation and follow-up studies at 6 and 12 months. Standard deviation of LV mean phase angle (SD LV mPA) expressed in degrees, which was derived by Fourier first harmonic analysis of phase images, was used to quantify left intraventricular dyssynchrony.
RESULTS: No significant difference was observed between the two groups with respect to indication (P = .894), Type/mode (P = .985), and percentage of ventricular pacing (P = .352). Paced QRS duration was significantly longer in RVA group than RVOT group (P = .05). There was no statistically significant difference between the RVA and RVOT groups at baseline with respect to LVEF (P = .596) and SD LV mPA (P = .327). Within the RVA group, a significant decline in LVEF was observed over 12-month follow-up (from 57.3% ± 5.32% to 55.6% ± 6.25%; P = .012). In the RVOT group, the change in LVEF was not statistically significant (from 56.7% ± 4.08% to 54.3% ± 6.63%; P = .159). No significant change in SD LV

mPA was observed over 12-month follow-up within the RVA group (from 10.5 ± 2.58° to 10.4 ± 3.54°; P = 1.000) as well as in the RVOT group (from 9.7 ± 3.28° to 9.4 ± 2.85°; P = .769). However, between the RVA and RVOT groups, no significant difference was observed at 12-month follow-up in terms of LVEF and dyssynchrony (LVEF P = .488; SD LV mPA P = .296).
CONCLUSION: No significant difference was observed between RVOT and RVA groups with regard to LV function and synchrony over a 12-month follow-up. RVOT pacing offers may lead to better preservation of LV function on longer follow-up.

128: Singh L, Nag TC, Kashyap S. Ultrastructural changes of mitochondria in human retinoblastoma: correlation with tumor differentiation and invasiveness. Tumour Biol. 2015 Oct 5. [Epub ahead of print] PubMed PMID: 26434937.

Retinoblastoma still represents a challenge for pediatric tumors. Mitochondria have been implicated in tumor progression, cell differentiation, and apoptotic pathways. Electron microscopy allows the study of mitochondrial morphology and it is still debated in human retinoblastoma. Demographic, clinical, and histopathological parameters were recorded in 17 enucleated retinoblastoma specimens. Hematoxylin and eosin staining was performed to study tumor characteristics and the extent of invasion in ocular structures. The aim of this study was to describe and analyze the mitochondrial morphology in human retinoblastoma by transmission electron microscopy (TEM). There was a male preponderance in our study. Ages ranged from 2 to 78 months. Histopathological analysis revealed that 15 (88.2 %) tumors were poorly differentiated retinoblastomas. Massive choroidal invasion was the most frequent histopathological high-risk factor among the others. Histopathological high-risk factors were found in 7/17 (41.1 %) cases. Tumor samples of all patients were examined by means of TEM. All cases showed tumor cells with high nucleocytoplasmic ratio. Poorly differentiated retinoblastoma cases showed fewer mitochondria, scant cytoplasm, disorganized organelles (mitochondria), and necrosis, whereas well-differentiated retinoblastomas had larger number of mitochondria and more organized organelles. However, there was no significant difference in mitochondrial changes between invasive and noninvasive tumors. Our study observed that cristolysis and swollen mitochondria were more frequent in retinoblastoma tumors. Understanding the structural and functional characteristics of mitochondria in retinoblastoma might be essential for the design of future therapeutic strategies. The authors have no proprietary or commercial interest in any materials discussed in this article.

129: Singh N, Sahu DK, Mishra A, Agarwal P, Goel MM, Chandra A, Singh SK, Srivastava C, Ojha BK, Gupta DK, Kant R. Multiomics approach showing genome-wide copy number alterations and differential gene expression in different types of North-Indian pediatric brain tumors. Gene. 2016 Feb 1;576(2 Pt 2):734-42. doi: 10.1016/j.gene.2015.09.078. Epub 2015 Oct 8. PubMed PMID: 26456192.

PURPOSE: Based on copy number alterations and transcriptional profiles, the posterior fossa tumors (medulloblastoma (MB), ependymoma and pilocytic astrocytoma) have been classified into various subgroups. The study design was aimed to identify and catalog genome-wide copy number alterations and differential gene expression in different types of North-Indian pediatric posterior fossa tumors and matched control tissue through Molecular Inversion Probe (MIP) Based and Human Transcriptome Array.
EXPERIMENTAL DESIGN: MIP based OncoScan Array and Human Transcriptome Array 2.0 were used to molecularly-categorize histopathologically and immunohistochemically proven tumor samples on the basis of copy number variations and altered gene expression patterns and/or alternative splicing events.
RESULTS: Based on molecular, histopathological/immunohistochemical and age-dependent factors MB was subgrouped into group-3 MB, Wnt and SHH; ependymoma into balanced, numerical and structural/anaplastic; and pilocytic astrocytoma was stratified age-dependently. Compared with the vermis tissue of MB, the vermis tissue of ependymoma showed higher levels of gain and losses compared with their counter tumor parts implicating metastasis within the confined region. Group-3 MB

and anaplastic ependymoma represented highest differentially expressed genes both at gene and exon levels in the CN altered regions compared with other subgroups of MB and ependymoma respectively.
CONCLUSION: This multiomics approach based molecular characterization of posterior fossa tumors together with clinical and histopathological factors may help us in the area of personalized medicine.

130: Singh PM, Rajeshwari S, Borle A, Rangasamy V. Sevoflurane-Based General Anesthesia Induction via Nasopharyngeal Endotracheal Tube Prior to Definitive Airway Control in Pediatric Oral Tumors. Anesth Prog. 2015 Fall;62(3):118-21. doi: 10.2344/12-00037R1.1. PubMed PMID: 26398129; PubMed Central PMCID: PMC4581017.

Airway-related tumors in pediatrics are always challenging for anesthesiologists. We present 2 cases of friable, bleeding large tumors in the oral cavity where conventional methods of securing the airway were not possible. Induction of general anesthesia could potentially lead to complete airway collapse and catastrophic obstruction in such cases. Awake fibrotic intubation is limited in pediatric patients. We describe the innovative use of an endotracheal tube inserted blindly as a nasopharyngeal airway guided by end-tidal carbon dioxide trace. This allowed us to bypass the anatomical obstruction and induce anesthesia using sevoflurane in high-flow oxygen. By the described technique, we were able to maintain and assist the spontaneous breathing of the child as well. We also highlight limitations of the use of a conventional nasopharyngeal airway in such situations.

131: Singh S, Sharma BB, Sharma SK, Sabir M, Singh V; ISAAC collaborating investigators. Prevalence and severity of asthma among Indian school children aged between 6 and 14 years: associations with parental smoking and traffic pollution. J Asthma. 2015 Oct 30:1-7. [Epub ahead of print] PubMed PMID: 26365004.

OBJECTIVE: Phase three of the International Study of Asthma and Allergy in Children (ISAAC) was carried out at various sites in India. The prevalence of asthma symptoms in school children and the effect of environmental tobacco smoke and traffic pollution on the occurrence of asthma were analysed.
METHODS: Two groups of school children, aged 6-7 yr and 13-14 yr, participated according to the ISAAC protocol. Schools were randomly selected and responses to the ISAAC questionnaire were recorded.
RESULTS: The prevalence of asthma was 5.35% in the 6-7 yr age group and 6.05% in the 13-14 yr age group. The odds ratios (ORs) for the risk of asthma in children with exposure to mild, moderate and heavy traffic pollution compared with minimal traffic pollution were 1.63 (95% CI: 1.43, 1.85), 1.71 (95% CI: 1.49, 1.96) and 1.53 (95% CI: 1.31, 1.78), respectively, in the younger group. Similarly, in the older group, they were 1.19 (95% CI: 1.04, 1.36), 1.51 (95% CI: 1.31, 1.75) and 1.51 (95% CI: 1.29, 1.76). Asthma was associated with maternal smoking [6-7 yr group: OR = 2.72 (2.05, 3.6); 13-14 yr group: OR = 2.14 (1.72, 2.66)] and paternal smoking [6-7 yr group: OR = 1.9 (1.70, 2.11); 13-14 yr group: OR = 1.21 (1.09, 1.34)].
CONCLUSIONS: The prevalence of asthma was lower in the 6-7 than the 13-14 yr age group. Environmental tobacco smoke and traffic pollution were the factors most strongly associated with asthma in Indian children.

132: Sinha AC, Singh PM, Bhat S. Are we operating too late? Â Mortality Analysis and Stochastic Simulation of Costs Associated with Bariatric Surgery: Reconsidering the BMI Threshold. Obes Surg. 2015 Oct 20. [Epub ahead of print] PubMed PMID: 26487650.

BACKGROUND: Present guidelines recommend bariatric surgery at BMI ≥40 kg/m(2) or

BMI ≥35 kg/m(2) with obesity-related morbidity.
METHODS: Evidence for cost and mortality/morbidity risk of bariatric surgery and obesity-related diseases was evaluated determining equivalency point of absolute incremental mortality risk by BMI and risks associated with bariatric surgery. A stochastic model was developed evaluating costs related to surgical procedure at a given BMI.
RESULTS: Bariatric surgery produces significant lifetime cost savings associated with diabetes, gallstones, hypertension, high cholesterol, colon cancer, heart disease, and stroke in men at BMI 30 kg/m(2) for laparoscopic gastric bypass. For women, laparoscopic gastric bypass saves cost at BMI 32 kg/m(2) and laparoscopic gastric banding at BMI 37 kg/m(2). In white men, relative to single-year mortality risks by BMI, surgical intervention becomes risk-beneficial at BMI 25 kg/m(2) for laparoscopic gastric banding, BMI 27 kg/m(2) for laparoscopic gastric bypass procedure and open gastric banding, and BMI 37 kg/m(2) for open gastric bypass. Risk benefit for African-American men by procedure occurs at BMI <25 kg/m(2), BMI 27 kg/m(2), and BMI 42 kg/m(2), respectively. In white women, surgical intervention is beneficial at BMI 25.5 kg/m(2) (laparoscopic gastric banding), BMI 28.5 kg/m(2) (laparoscopic gastric bypass procedure), and BMI 45 kg/m(2) (open gastric banding). Risk benefit for black women by procedure occurs at BMI 27.5 kg/m(2), BMI 33.5 kg/m(2), and BMI 50+ kg/m(2), respectively.
CONCLUSION: Risk and cost benefit suggest surgical guidelines should be reconsidered. Threshold for bariatric surgery should be redefined to BMI 35 kg/m(2) or BMI 30 kg/m(2) with comorbidities.

133: Sood M, Patra BN, Agrawal A, Khandelwal SK. Pituitary Macroadenoma Presenting with Multiple Psychiatric Complications. Indian J Psychol Med. 2015 Oct-Dec;37(4):462-4. doi: 10.4103/0253-7176.168600. PubMed PMID: 26702185; PubMed Central PMCID: PMC4676219.

We report a case of pituitary macroadenoma with multiple physical and psychiatric complications, which posed a significant diagnostic dilemma and management challenge for the treating teams of neurosurgery, endocrinology and psychiatry. A pragmatic approach comprising of interdisciplinary collaboration resulted in satisfactory management of the case.

134: Srivastava A, Dixit AB, Banerjee J, Tripathi M, Sarat Chandra P. Role of inflammation and its miRNA based regulation in epilepsy: Implications for therapy. Clin Chim Acta. 2016 Jan 15;452:1-9. doi: 10.1016/j.cca.2015.10.023. Epub 2015 Oct 23. Review. PubMed PMID: 26506013.

There is a need to develop innovative therapeutic strategies to counteract epilepsy, a common disabling neurological disorder. Despite the recent advent of additional antiepileptic drugs and respective surgery, the treatment of epilepsy remains a major challenge. The available therapies are largely based on symptoms, and these approaches do not affect the underlying disease processes and are also associated frequently with severe side effects. This is mainly because of the lack of well-defined targets in epilepsy. The discovery that inflammatory mediators significantly contribute to the onset and recurrence of seizures in experimental seizure models, as well as the presence of inflammatory molecules in human epileptogenic tissue, highlights the possibility of targeting specific inflammation related pathways to control seizures that are otherwise resistant to the available AEDs. Emerging studies suggest that miRNAs have a significant role in regulating inflammatory pathways shown to be involved in epilepsy. These miRNAs can possibly be used as novel therapeutic targets in the treatment of epilepsy as well as serve as diagnostic biomarkers of epileptogenesis. This review highlights the immunological features underlying the pathogenesis of epileptic seizures and the possible miRNA mediated approaches for drug resistant epilepsies that modulate the immune-mediated pathogenesis.

135: Tomar GS, Saxena A, Kumar N, Goyal K. A well known and important adverse effect of phenytoin in a neurosurgical patient. BMJ Case Rep. 2015 Oct 16;2015. pii: bcr2015212227. doi: 10.1136/bcr-2015-212227. PubMed PMID: 26475882.

Gum hypertrophy is a well-known and important adverse effect of phenytoin therapy in a neurosurgical patient. We present an interesting case of a 21-year-old man who, following head injury after a road traffic accident, developed status epilepticus diagnosed with gum hypertrophy in the jaws, with ongoing antiepileptics. He was managed conservatively as per hospital protocol.

136: Tripathi H, Mehdi MU, Gupta D, Sen S, Kashyap S, Nag TC, Purwar M, Jassal M, Agrawal AK, Mohanty S, Tandon R. Long-term preservation of donor corneas in glycerol for keratoplasty: exploring new protocols. Br J Ophthalmol. 2015 Oct 27. pii: bjophthalmol-2015-306944. doi: 10.1136/bjophthalmol-2015-306944. [Epub ahead of print] PubMed PMID: 26508778.

AIM: To evaluate the role of temperature and adjunctive dehydration in better long-term preservation of human corneas when preserved and stored in glycerol.
METHODS: Different preservation temperatures and effects of adding silica gel in glycerol-preserved corneal tissues were evaluated. Human corneal tissues not suitable for optical keratoplasty initially preserved in McCarey-Kaufman medium were transferred to glycerol and stored at four different temperatures for 3 months as follows: tissues in anhydrous glycerol with and without silica gel at -80°C, -20°C, 4°C and at room temperature (RT). Parameters evaluated included microbial sterility, thickness (Digimatic micrometer), transparency (slit lamp examination, UV-Vis spectrophotometer), mechanical strength (Instron 5848 Microtester), tissue integrity (H&E staining), antigenicity (immunohistochemistry) and ultrastructure of collagen (transmission electron microscopy, TEM).
RESULTS: Microbial test after 3 months of glycerol preservation confirmed sterility of the tissues. The thickness increased in corneas preserved at RT with and without silica gel ($p<0.001$). RT corneas had the lowest transparency and tensile strength. Tissues in anhydrous glycerol stored with and without silica gel at -80°C were the most transparent ($p<0.001$) and had the highest tensile strength ($p<0.001$). Tissue integrity was maintained and expression of Human Leukocyte Antigen D related (HLA-DR) was less in glycerol-preserved corneas at -80°C. TEM studies indicated that parallel alignment of stromal collagen was disrupted at RT-preserved corneas.
CONCLUSIONS: Corneal tissue preserved at -80°C was the best method for preservation as it maintained the sterility, thickness, optical transparency, mechanical strength and ultrastructural features.

137: Tripathi M, Tang CC, Feigin A, De Lucia I, Nazem A, Dhawan V, Eidelberg D. Automated Differential Diagnosis of Early Parkinsonism Using Metabolic Brain Networks: A Validation Study. J Nucl Med. 2016 Jan;57(1):60-6. doi: 10.2967/jnumed.115.161992. Epub 2015 Oct 8. PubMed PMID: 26449840.

The differentiation of idiopathic Parkinson disease (IPD) from multiple system atrophy (MSA) and progressive supranuclear palsy (PSP), the most common atypical parkinsonian look-alike syndromes (APS), can be clinically challenging. In these disorders, diagnostic inaccuracy is more frequent early in the clinical course when signs and symptoms are mild. Diagnostic inaccuracy may be particularly relevant in trials of potential disease-modifying agents, which typically involve participants with early clinical manifestations. In an initial study, we developed a probabilistic algorithm to classify subjects with clinical

parkinsonism but uncertain diagnosis based on the expression of metabolic covariance patterns for IPD, MSA, and PSP. Classifications based on this algorithm agreed closely with final clinical diagnosis. Nonetheless, blinded prospective validation is required before routine use of the algorithm can be considered.METHODS: We used metabolic imaging to study an independent cohort of 129 parkinsonian subjects with uncertain diagnosis; 77 (60%) had symptoms for 2 y or less at the time of imaging. After imaging, subjects were followed by blinded movement disorders specialists for an average of 2.2 y before final diagnosis was made. When the algorithm was applied to the individual scan data, the probabilities of IPD, MSA, and PSP were computed and used to classify each of the subjects. The resulting image-based classifications were then compared with the final clinical diagnosis.
RESULTS: IPD subjects were distinguished from APS with 94% specificity and 96% positive predictive value (PPV) using the original 2-level logistic classification algorithm. The algorithm achieved 90% specificity and 85% PPV for MSA and 94% specificity and 94% PPV for PSP. The diagnostic accuracy was similarly high (specificity and PPV > 90%) for parkinsonian subjects with short symptom duration. In addition, 25 subjects were classified as level I indeterminate parkinsonism and 4 more subjects as level II indeterminate APS.
CONCLUSION: Automated pattern-based image classification can improve the diagnostic accuracy in patients with parkinsonism, even at early disease stages.

138: Upadhyay R, Kumar P, Sharma DN, Haresh KP, Gupta S, Julka PK, Rath GK, Bhankar H. Invasive lobular carcinoma of the male breast: A rare histology of an uncommon disease. J Egypt Natl Canc Inst. 2015 Oct 31. pii: S1110-0362(15)00091-6. doi: 10.1016/j.jnci.2015.10.001. [Epub ahead of print] PubMed PMID: 26530727.

Male breast carcinoma is a rare malignancy comprising less than 1% of all breast cancers. It is a serious disease with most patients presenting in advanced stages. Infiltrating ductal carcinoma is the most common histology while lobular carcinoma represents less than 1% of all these tumors. We report a case of locally advanced lobular carcinoma of breast in a 60year old male.

139: Vallonthaiel AG, Singh MK, Dinda AK, Kakkar A, Thakar A, Das SN. Expression of Cell Cycle-associated Proteins p53, pRb, p16, p27, and Correlation With Survival: A Comparative Study on Oral Squamous Cell Carcinoma and Verrucous Carcinoma. Appl Immunohistochem Mol Morphol. 2015 Oct 1. [Epub ahead of print] PubMed PMID: 26447892.

Verrucous carcinoma (VC) is a well-differentiated form of squamous cell carcinoma (SCC) with better prognosis. Differences in molecular pathogenesis between the 2 have not been well-characterized. We conducted this study to evaluate immunohistochemical expression of cell-cycle regulatory proteins p53, pRb, p16, and p27 in SCC and VC, compare the expression in these 2 neoplasms, and assess if these markers have any diagnostic or prognostic value. Sixty cases of SCC with and without lymph node metastasis and 31 cases of VC were studied. Immunohistochemical analysis for p53, pRb, p16, and p27 was performed and the results were analyzed. SCC was most frequent in tongue (52%), whereas VC in buccal mucosa (81%). Mean age of SCC patients was significantly lower than in VC. Majority of SCCs were in stage III and IV (63%), whereas VCs were in stage I and II (84%). p53 immunopositivity was more frequent in SCC (65%) than in VC (23%) ($P \leq 0.001$). VC had lower p53 as compared with well-differentiated SCC and SCC without lymph node metastasis. No significant difference was seen in pRb, p16, and p27 expression. Disease-free survival (DFS) at 1 year for SCC was 57% whereas it was 80% for VC ($P=0.02$). DFS and overall survival of SCC correlated with nodal status and stage; cell-cycle-associated protein expression had no association

with DFS. To conclude, p53 immunoexpression differs in SCC and VC, suggesting different pathogenesis, and it may have some utility as an adjunct to morphology to differentiate between the 2. Expression of cell-cycle-associated proteins does not influence survival in SCC.

140: Varshney M, Gupta R, Balhara YP. Yes, India has done it: Decriminalization of suicide in India. Asian J Psychiatr. 2015 Oct;17:103. doi: 10.1016/j.ajp.2015.07.005. Epub 2015 Jul 26. PubMed PMID: 26253554.

141: Venkatesh P, Sharma R, Vashist N, Vohra R, Garg S. Detection of retinal lesions in diabetic retinopathy: comparative evaluation of 7-field digital color photography versus red-free photography. Int Ophthalmol. 2015 Oct;35(5):635-40. doi: 10.1007/s10792-012-9620-7. Epub 2012 Sep 8. PubMed PMID: 22961609.

Red-free light allows better detection of vascular lesions as this wavelength is absorbed by hemoglobin; however, the current gold standard for the detection and grading of diabetic retinopathy remains 7-field color fundus photography. The goal of this study was to compare the ability of 7-field fundus photography using red-free light to detect retinopathy lesions with corresponding images captured using standard 7-field color photography. Non-stereoscopic standard 7-field 30° digital color fundus photography and 7-field 30° digital red-free fundus photography were performed in 200 eyes of 103 patients with various grades of diabetic retinopathy ranging from mild to moderate non-proliferative diabetic retinopathy to proliferative diabetic retinopathy. The color images (n = 1,400) were studied with corresponding red-free images (n = 1,400) by one retina consultant (PV) and two senior residents training in retina. The various retinal lesions [microaneurysms, hemorrhages, hard exudates, soft exudates, intra-retinal microvascular anomalies (IRMA), neovascularization of the retina elsewhere (NVE), and neovascularization of the disc (NVD)] detected by all three observers in each of the photographs were noted followed by determination of agreement scores using κ values (range 0-1). Kappa coefficient was categorized as poor (≤0), slight (0.01-0.20), fair (0.2 -0.40), moderate (0.41-0.60), substantial (0.61-0.80), and almost perfect (0.81-1). The number of lesions detected by red-free images alone was higher for all observers and all abnormalities except hard exudates. Detection of IRMA was especially higher for all observers with red-free images. Between image pairs, there was substantial agreement for detection of hard exudates (average κ = 0.62, range 0.60-0.65) and moderate agreement for detection of hemorrhages (average κ = 0.52, range 0.45-0.58), soft exudates (average κ = 0.51, range 0.42-0.61), NVE (average κ = 0.47, range 0.39-0.53), and NVD (average κ = 0.51, range 0.45-0.54). Fair agreement was noted for detection of microaneurysms (average κ = 0.29, range 0.20-0.39) and IRMA (average κ = 0.23, range 0.23-0.24). Inter-observer agreement with color images was substantial for hemorrhages (average κ = 0.72), soft exudates (average κ = 0.65), and NVD (average κ = 0.65); moderate for microaneurysms (average κ = 0.42), NVE (average κ = 0.44), and hard exudates (average κ = 0.59) and fair for IRMA (average κ = 0.21). Inter-observer agreement with red-free images was substantial for hard exudates (average κ = 0.63) and moderate for detection of hemorrhages (average κ = 0.56), SE (average κ = 0.60), IRMA (average κ = 0.50), NVE (average κ = 0.44), and NVD (average κ = 0.45). Digital red-free photography has a higher level of detection ability for all retinal lesions of diabetic retinopathy. More advanced grades of retinopathy are likely to be detected earlier with red-free imaging because of its better ability to detect IRMA, NVE, and NVD. Red-free monochromatic imaging of the retina is a more effective and less costly alternative for detection of vision-threatening diabetic retinopathy.

142: Verma M, Arora A, Malviya S, Nehra A, Sagar R, Tripathi M. Do expressed emotions result in stigma? A potentially modifiable factor in persons with epilepsy in India. Epilepsy Behav. 2015 Nov;52(Pt A):205-11. doi: 10.1016/j.yebeh.2015.08.008. Epub 2015 Oct 8. PubMed PMID: 26453891.

OBJECTIVE: Feeling stigmatized or having comorbid depression in a PWE may significantly influence epilepsy care and treatment. An important contributory

factor to this can be the expressed emotions (EEs) from family, friends, or society. The present study aimed at understanding the influence of EEs, as exhibited by close relatives, on the perception of stigma and comorbid depression experienced by PWEs.
METHOD: Eighty PWEs aged 18years and above, both genders, visiting neurology OPD in AIIMS Hospital, were recruited. Using the PHQ-09, we subdivided them into Group I (PWEs with comorbid depression) and Group II (PWEs without comorbid depression), followed by administration of Levels of Expressed Emotions Scale and Stigma Scale for Epilepsy, respectively.
RESULTS: The comparative analysis, using independent t-test (for categorical data), Pearson's correlation (for continuous data), and multivariate regression analysis, reflected significant influence of EEs on depression and stigma, with more than 20% of the participants reporting comorbid depression, out of which more than 50% further expressed feelings of inferiority or disgrace due to the ways in which family or society discriminated them from healthy persons, thereby highlighting a greater associations of high EEs as opposed to low EEs from key individuals on patients' perception of stigma or feeling of depression.
CONCLUSION: The result suggested that EEs from a relative might go unnoticed but may significantly overwhelm the patient, thereby making him succumb to depression or feeling stigmatized. The analysis of such a clinical profile and relationship between EEs and perceived stigma/depression may help us understand the pattern of attribution styles adopted by PWEs, thereby utilizing it further for enhancing the efficacy of cognitive-behavioral therapy for facilitating sustained recovery and improved quality of life for PWEs.

143: Vibha D, Behari M, Goyal V, Shukla G, Bhatia R, Srivastava AK, Vivekanandhan S. Clinical profile of Monomelic Amyotrophy (MMA) and role of persistent viral infection. J Neurol Sci. 2015 Dec 15;359(1-2):4-7. doi: 10.1016/j.jns.2015.10.026. Epub 2015 Oct 18. PubMed PMID: 26671077.

OBJECTIVES: The objective of our study was to describe the clinical characteristics, electrophysiology, MRI features and conduct viral assays in patients with Monomelic Amyotrophy (MMA) and follow them up over one year.
METHODS: Consecutive patients with MMA who attended the Neurology services from April 2013 to March 2014 were included. Age and sex matched controls were taken for the purpose of viral assay analysis. The clinical evaluation was repeated at six months and one year.
RESULTS: 109 cases and 109 controls were included in the study. The patients were predominantly males (98.2%; n=107/109) and had involvement of upper limbs (83.5%; n=91/109). 26 (23.8%) patients with clinically unilateral involvement had bilateral neurogenic changes in the electromyography. Serological assays of Japanese E, West Nile Virus, and Poliovirus 1, 2 and 3, HIV 1 and 2 were negative in all the cases and controls.
CONCLUSIONS: Patients with MMA are predominantly young males with upper limb wasting and weakness. MRI of the cervical cord is normal in most of the patients (67.9%). The present study did not find any evidence of the association of viral infection in MMA.

144: Yadav S, Kumar R. Solitary second metatarsal metastasis as the first site of distant spread in TCC urinary bladder: A case report. Indian J Urol. 2015 Oct-Dec;31(4):363-5. doi: 10.4103/0970-1591.163312. PubMed PMID: 26604452; PubMed Central PMCID: PMC4626925.

Metastasis to the skeleton is uncommon in muscle-invasive carcinoma of the urinary bladder. When present, it most commonly involves the axial and proximal appendicular skeleton, and acrometastasis (metastasis to hand and foot) is very rare. We report a patient who developed a solitary metastatic lesion of the left metatarsal 2 weeks after radical cystectomy. The lack of suspicion and magnetic

resonance imaging findings suggestive of inflammation led to a diagnosis of tubercular osteomyelitis and antitubercular therapy was started. The patient developed nodal metastasis and, because the foot lesion did not respond to treatment, fine needle aspiration cytology from it revealed poorly differentiated metastatic cancer.

145: Yadav S, Sharma S, Singh P, Nayak B. Pregnancy with a ruptured renal artery aneurysm: management concerns and endovascular management. BMJ Case Rep. 2015 Oct 26;2015. pii: bcr2015211884. doi: 10.1136/bcr-2015-211884. PubMed PMID: 26504094.

Renal artery aneurysm (RAA) affects <0.01% of the general population. Rupture of RAA is a rare catastrophe that can complicate pregnancy and is associated with high maternal and fetal mortality. Presentation is usually acute with severe flank pain, with or without haematuria, and haemodynamic instability requiring exploration and nephrectomy. A 26-year-old pregnant woman had sudden onset of gross haematuria and on evaluation was found to have a left RAA with an intrapelvic rupture and thinned out renal parenchyma. In view of the high risk of surgery, she was managed with endovascular placement of an Amplatzer type II vascular plug. Immediate and complete occlusion of blood flow was achieved and nephrectomy was avoided. Follow-up Doppler ultrasound revealed a reduced 5 cm mass in the left renal fossa with no internal flow and plug in position. She is currently on follow-up with 3-6 monthly ultrasonography not requiring any intervention.

2015 BMJ Publishing Group Ltd.`

146: Zhou S, Flamier A, Abdouh M, TÃ©treault N, Barabino A, Wadhwa S, Bernier G. Differentiation of human embryonic stem cells into cone photoreceptors through simultaneous inhibition of BMP, TGFÎ² and Wnt signaling. Development. 2015 Oct 1;142(19):3294-306. doi: 10.1242/dev.125385. PubMed PMID: 26443633.

Cone photoreceptors are required for color discrimination and high-resolution central vision and are lost in macular degenerations, cone and cone/rod dystrophies. Cone transplantation could represent a therapeutic solution. However, an abundant source of human cones remains difficult to obtain. Work performed in model organisms suggests that anterior neural cell fate is induced 'by default' if BMP, TGFβ and Wnt activities are blocked, and that photoreceptor genesis operates through an S-cone default pathway. We report here that Coco (Dand5), a member of the Cerberus gene family, is expressed in the developing and adult mouse retina. Upon exposure to recombinant COCO, human embryonic stem cells (hESCs) differentiated into S-cone photoreceptors, developed an inner segment-like protrusion, and could degrade cGMP when exposed to light. Addition of thyroid hormone resulted in a transition from a unique S-cone population toward a mixed M/S-cone population. When cultured at confluence for a prolonged period of time, COCO-exposed hESCs spontaneously developed into a cellular sheet composed of polarized cone photoreceptors. COCO showed dose-dependent and synergistic activity with IGF1 at blocking BMP/TGFβ/Wnt signaling, while its cone-inducing activity was blocked in a dose-dependent manner by exposure to BMP, TGFβ or Wnt-related proteins. Our work thus provides a unique platform to produce human cones for developmental, biochemical and therapeutic studies and supports the hypothesis that photoreceptor differentiation operates through an S-cone default pathway during human retinal development.