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List of publications of AIIMS, New Delhi for the month of FEBRUARY, 2015
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1: Aftab S, Baidya DK, Maitra S. New onset frequent ventricular ectopic in a human immunodeficiency virus-infected woman after uneventful cesarean section under spinal anesthesia. J Clin Anesth. 2015 May;27(3):274-5. doi: 10.1016/j.jclinane.2015.01.005. Epub 2015 Feb 18. PubMed PMID: 25701114.

2: Agarwal KK, Karunanithi S, Roy SG, Bal C, Kumar R. 99mTc-MDP SPECT/CT demonstrating extraosseous periarticular amyloid deposits in primary systemic amyloidosis associated with multiple myeloma. Clin Nucl Med. 2015 Feb;40(2):189-90. doi: 10.1097/RLU.0000000000000593. PubMed PMID: 25275414.

Amyloidosis is a rare disorder characterized by variable extracellular accumulation of a complex substance consisting of proteinaceous fibrils (amyloid fibrils) and nonfibrillar glycoprotein or amyloid P component. We present a case of a primary systemic amyloidosis associated with multiple myeloma in a 48-year-old woman whose Tc-MDP SPECT/CT study revealed extraosseous periarticular uptake in amyloid deposits with no abnormal focal tracer uptake in the bone.

3: Bade G, Gupta S, Kabra SK, Talwar A. Slower rise of exhaled breath temperature in cystic fibrosis. Indian Pediatr. 2015 Feb;52(2):125-7. PubMed PMID: 25691179.

OBJECTIVE: To measure exhaled breath temperature in patients with cystic fibrosis.

METHODS: 17 patients (6-18 years) with cystic fibrosis and 15 age- and gender-matched healthy controls were recruited in this cross sectional study. Exhaled breath temperature was measured in subjects recruited in both the groups with a device X-halo and analyzed as plateau temperature achieved and rate of temperature rise.

RESULTS: Patients with cystic fibrosis showed no significant difference in plateau temperature [34.4(32.3-34.6) versus 33.9 (33.0-34.4)oC; P=0.35] while mean (SEM.) rate of temperature rise was significantly less in patients [0.09 (0.01) versus 0.14 (0.02) ∆°C/s ; P=0.04] as compared to controls.

CONCLUSIONS: There was a slower rise of exhaled breath temperature in patients with cystic fibrosis whereas plateau temperature was not significantly different from controls.

4: Behera C, Krishna K, Bhardwaj DN, Rautji R, Kumar A. A case of accidental fatal aluminum phosphide poisoning involving humans and dogs. J Forensic Sci. 2015 May;60(3):818-21. doi: 10.1111/1556-4029.12709. Epub 2015 Feb 24. PubMed PMID: 25707792.

Aluminum phosphide is one of the commonest poisons encountered in agricultural areas, and manner of death in the victims is often suicidal and rarely homicidal or accidental. This paper presents an unusual case, where two humans (owner and housemaid) and eight dogs were found dead in the morning hours inside a room of a house, used as shelter for stray dogs. There was allegation by the son of the owner that his father had been killed. Crime scene visit by forensic pathologists helped to collect vital evidence. Autopsies of both the human victims and the dogs were conducted. Toxicological analysis of viscera, vomitus, leftover food, and chemical container at the crime scene tested positive for aluminum phosphide. The cause of death in both humans and dogs was aluminum phosphide poisoning. Investigation by police and the forensic approach to the case helped in ascertaining the manner of death, which was accidental.

5: Behera C, Mridha AR, Kumar R, Millo T. Characteristic autopsy findings in hair dye poisoning. BMJ Case Rep. 2015 Feb 9;2015. pii: bcr2014206692. doi: 10.1136/bcr-2014-206692. PubMed PMID: 25666242.

6: Biswas A, Chaudhari PB, Julka PK, Rath GK. Radiation induced depigmentation disorder in two patients with breast cancer: Exploring a rare accompaniment. J Egypt Natl Canc Inst. 2015 Jun;27(2):101-4. doi: 10.1016/j.jnci.2015.01.003. Epub 2015 Feb 21. PubMed PMID: 25708302.

Radiation induced depigmentation disorder is a rare accompaniment. We herein report two patients of bilateral breast cancer developing depigmentation disorder, initially confined to the radiation portal with subsequent generalization within few months of completion of whole breast radiotherapy. Both these patients had no prior history of vitiligo or other autoimmune disorder. This brief report highlights the importance of awareness of this association in appropriate decision making in susceptible patients thereby preventing this morbidity and its psychological ramifications.

7: Biswas A, Julka PK, Bakhshi S, Suri A, Rath GK. Intracranial atypical teratoid rhabdoid tumor: current management and a single institute experience of 15 patients from north India. Acta Neurochir (Wien). 2015 Apr;157(4):589-96. doi: 10.1007/s00701-015-2355-2. Epub 2015 Feb 3. PubMed PMID: 25646852.

OBJECTIVE: We intended to assess the clinicopathological features and treatment outcome in patients of intracranial atypical teratoid rhabdoid tumor (AT/RT), a rare malignant tumor of the brain.
METHODS: Medical records were reviewed and clinical data collected on AT/RT in a 6-year period (2006-2012). Overall survival was analyzed by Kaplan-Meier method. Univariate analysis of factors predictive of overall survival was done by log-rank test.

RESULTS: Fifteen patients met the study criterion (male:female = 4:1). Median age at presentation was 5 years (range, 0.8-8 years). Presenting complaints included vomiting (73.33 %), headache (46.67 %), orbital symptoms (33.33 %), motor impairment (26.67 %), gait abnormality (20 %), and seizure (20 %). Median duration of symptoms was noted to be 2 months (range, 0.5-6 months). On contrast-enhanced MRI of brain, tumor location was supratentorial in 60 % patients and infratentorial in 40 % of patients. Cystic component and hydrocephalus were noted in 73.33 % patients each, whereas contrast enhancement and calcification were discerned in 53.33 and 40 % of the patients, respectively. All patients underwent tumor resection-gross total (26.67 %), near-total (13.33 %) and subtotal (60 %). Histopathology was confirmative of AT/RT with MIB-1 labeling index varying from 11 to 85 % (median 45 %). There was a lack of immunostaining for INI-1 protein, suggesting INI-1gene mutation or deletion. Adjuvant radiation (36 Gray/20 fractions/4 weeks to entire neuraxis followed by local boost 20 Gray/10 fractions/2 weeks) was started in six patients (40 %) and completed in five patients. Young age at presentation and poor performance status precluded the use of radiation in the remainder. Systemic chemotherapy was administered in ten (66.67 %) patients. Median number of cycles given was three (range, 1-12) with ICE (ifosfamide, carboplatin, etoposide) and VAC (vincristine, dactinomycin, cyclophosphamide) being the common regimens (26.67 and 20 %, respectively). After a median follow-up of 8.33 months (mean, 12.27 months), median overall survival was noted to be 10 months. At last follow-up, two patients are in complete response, one patient is on treatment, three patients are alive with evidence of disease, and nine patients expired due to disease progression. The 1- and 2-year actuarial rate of overall survival was noted to be 48.1 and 24.1 %, respectively. On univariate analysis, extent of surgery ($p = 0.0149$), use of craniospinal radiation ($p = 0.0087$), and MIB1 labeling index ($p = 0.0034$) were significant predictors of overall survival while age (≥5 years versus <5 years) was of borderline significance ($p = 0.08$).

CONCLUSIONS: Median survival of 10 months reflects the aggressive biology of this rare neoplasm. Maximal safe resection followed by craniospinal irradiation and systemic chemotherapy with ICE or VAC regimen is a reasonable treatment strategy in this uncommon malignancy.

8: Bothra M, Bhatnagar S. Probiotics in pediatrics. Indian J Pediatr. 2015 May;82(5):399-400. doi: 10.1007/s12098-015-1719-1. Epub 2015 Feb 19. PubMed PMID: 25689962.

9: Bure D, Makhdoomi MA, Lodha R, Prakash SS, Kumar R, Parray HA, Singh R, Kabra SK, Luthra K. Mutations in the reverse transcriptase and protease genes of human immunodeficiency virus-1 from antiretroviral naïve and treated pediatric patients. Viruses. 2015 Feb 10;7(2):590-603. doi: 10.3390/v7020590. PubMed PMID: 25674767; PubMed Central PMCID: PMC4353905.

The success of highly active antiretroviral therapy (HAART) is challenged by the emergence of resistance-associated mutations in human immunodeficiency virus-1 (HIV-1). In this study, resistance associated mutations in the reverse transcriptase (RT) and protease (PR) genes in antiretroviral therapy (ART) naïve and treated HIV-1 infected pediatric patients from North India were evaluated. Genotyping was successfully performed in 46 patients (30 ART naive and 16 treated) for the RT gene and in 53 patients (27 ART naive and 26 treated) for PR gene and mutations were identified using Stanford HIV Drug Resistance Database. A major drug resistant mutation in RT gene, L74I (NRTI), and two such mutations, K101E and G190A (NNRTI), were observed in two ART naïve patients, while M184V was detected in two ART treated patients. Overall, major resistance associated mutations in RT gene were observed in nine (30%) and seven (36%) of ART naïve and treated children respectively. Minor mutations were identified in PR gene in five children. Few non-clade C viral strains (≈30%) were detected, although subtype C was most predominant. The screening of ART naïve children for mutations in HIV-1 RT and protease genes, before and after initiation of ART is desirable for drug efficacy and good prognosis.

10: Chakraborty PS, Tripathi M, Agarwal KK, Kumar R, Vijay MK, Bal C. Metastatic poorly differentiated prostatic carcinoma with neuroendocrine differentiation: negative on 68Ga-PSMA PET/CT. Clin Nucl Med. 2015 Feb;40(2):e163-6. doi: 10.1097/RLU.0000000000000594. PubMed PMID: 25275415.

Glu-NH-CO-NH-Lys-(Ahx)-[Ga-68(HBED-CC)], abbreviated as Ga-PSMA, is a novel radiotracer undergoing evaluation for PET/CT imaging of prostate carcinoma. Its major advantage is the sensitive detection of lesions even at low prostate-specific antigen level and high target-to-background ratios obtained in metastatic lesions, which is better than that obtained with F-fluoromethylcholine. We present the case of a 28-year-old man with poorly differentiated prostate carcinoma with neuroendocrine differentiation, whose lesions did not show significant Ga-PSMA localization. As literature on utility of Ga-PSMA PET/CT for imaging prostate carcinoma grows, it is important to be aware of potential false negatives that could influence study results.

11: Chandra PS, Goyal N. In reply: the severity of basilar invagination and atlantoaxial dislocation correlates with sagittal joint inclination, coronal joint inclination, and craniocervical tilt: a description of new indices for the craniovertebral junction. Neurosurgery. 2015 Feb;76(2):E235-9. doi: 10.1227/NEU.0000000000000600. PubMed PMID: 25549199.

12: Chandra PS. In reply: distraction, compression, and extension reduction of basilar invagination and atlantoaxial dislocation. Neurosurgery. 2015 Feb;76(2):E240-2. doi: 10.1227/NEU.0000000000000605. PubMed PMID: 25549197.

13: Chopra S, Garg A, Chopra M, Ghosh A, Sreenivas V, Sood S, Kapil A, Das BK. Declining trends of Syphilis seroprevalance among antenatal clinic cases and STD clinic cases in a tertiary care centre: from January 2002 to December 2012. Indian J Med Microbiol. 2015 Feb;33 Suppl:126-8. doi: 10.4103/0255-0857.150917. PubMed PMID: 25657130.

Syphilis affects nearly 1.36 million pregnant women, majority of these cases being concentrated in the developing countries. We aimed at analysing the 11 years' trends in syphilis seroprevalence in antenatal clinics (ANC) and STD clinic cases. Laboratory data of syphilis cases from 2002-2012 were retrospectively analysed. Out of the total 73,642 cases, 393 (0.53%) tested positive for Syphilis. A statistically significant decline in syphilis prevalence was found in both ANC and STD clinic cases. The efforts of various interventional programs should continue to make the screening and treatment facilities readily accessible to continue the decline in syphilis seropositivity.

14: Choudhary A, Pati SK, Patro RK, Deorari AK, Dar L. Comparison of conventional, immunological and molecular techniques for the diagnosis of symptomatic congenital human cytomegalovirus infection in neonates and infants. Indian J Med Microbiol. 2015 Feb;33 Suppl:15-9. doi: 10.4103/0255-0857.150874. PubMed PMID: 25657137.

PURPOSE: Human cytomegalovirus (HCMV) is the commonest pathogen causing congenital infection globally. The diagnosis of congenital infection is based either on viral isolation (in cell culture) or demonstration of HCMV DNA from the urine. Saliva is also being used as an alternative sample to urine for the same. The objective of this study was to compare the following assays-polymerase chain reaction (PCR) from urine, saliva and blood, serology (anti-HCMV IgM) and antigen detection (HCMV pp65 antigenaemia) for the diagnosis of congenital HCMV infection.

MATERIALS AND METHODS: Urine and blood samples were collected from 31 infants (median age: 13 weeks) with suspected HCMV infection. For 18 infants, additional saliva samples were collected and all the above assays were compared.
RESULTS: PCR for HCMV DNA from urine and anti-HCMV IgM were performed for all 31 infants. Of these, 22 (70.9%) were positive for both assays. In 18 (of the 22) infants positive by both assays, PCR for HCMV DNA from saliva was positive in all 18 (100%), PCR from blood in 7/18 (38.8%) and HCMV pp65 antigenaemia only in 1/18 (5.5%) of the infants.

CONCLUSION: Detection of HCMV DNA in urine combined with anti-HCMV IgM are suitable assays to diagnose HCMV infection in infants. Both PCR from the blood and HCMV pp65 antigenaemia lack sensitivity in infants. Salivary PCR combines convenience with high sensitivity and can substitute PCR from urine, especially in the outpatient and field settings. To the best of our knowledge, this is the first study from India to evaluate salivary PCR for the diagnosis of congenital HCMV infection.

15: Darlong V, Khanna P, Baidya DK, Chandralekha, Pandey R, Punj J, Kumar R, Sikka K. Perioperative complications of cochlear implant surgery in children. J Anesth. 2015 Feb;29(1):126-30. doi: 10.1007/s00540-014-1878-7. Epub 2014 Jul 2. PubMed PMID: 24986254.

Cochlear implant is a commonly performed surgery for hearing loss in pre-school and school children. However, data on anesthesia management and anesthesia-related complications are sparse. We retrospectively reviewed the data of our institute from January, 2007 to December, 2012. Medical records and anesthesia charts of all the patients who had undergone cochlear implant under general anesthesia between this period were reviewed. Information related to the demographic profile, preoperative evaluation, anesthetic techniques, and perioperative complications were collected and analyzed. A total of 190 patients underwent cochlear implant surgery for pre-lingual (175) and post-lingual (15)

deafness. General endotracheal anesthesia with inhalational agents was used in all the cases. Difficult intubation was encountered in three patients. Anesthesia-related complications were laryngospasm at extubation (4.73 %), emergence agitation (2.63 %), and postoperative nausea and vomiting (1.05 %). Major surgical complications were CSF leak without meningitis (3.15 %), device migration/failure (1.05 %), and flap infection (1.57 %). Cochlear implant under general anesthesia in small children is safe and anesthesia-related complications were minimal. Surgical complications, although more frequent, were predominantly minor and self-limiting.

16: Das A, Singh PK, Suri V, Sable MN, Sharma BS. Spinal hemangiopericytoma: an institutional experience and review of literature. Eur Spine J. 2015 May;24 Suppl 4:606-13. doi: 10.1007/s00586-015-3789-1. Epub 2015 Feb 8. PubMed PMID: 25662907.

PURPOSE: Hemangiopericytoma is a rare tumor of CNS with potential for recurrence and widespread metastasis, even outside CNS with even rare involvement of spinal cord. This case series presents five patients to evaluate the clinical presentation, radiological features, management, pathology and outcome of spinal hemangiopericytomas.

METHODS: Between 2004 and 2013, five patients underwent surgery for spinal hemangiopericytoma. Histopathological data were reviewed in all cases and clinical and follow-up details were collected from the data available in our department.

RESULTS: There were three males and two females, including one pediatric patient. Three patients had dorsal spine involvement and two patients had involvement of cervical spine. There were two patients with intradural extramedullary tumors, one patient each with pure intramedullary tumor, pure extradural tumor and both intra and extradural tumor. All of them presented with motor weakness. Gross total resection of the tumor was done in three patients. Four patients received post-operative radiotherapy. Histopathology showed anaplastic tumor in four cases with high MIB-1 LI. Most of them were positive for CD34, mic-2 and bcl-2. Three patients who underwent gross total resection improved significantly in the follow-up period. Two patients who underwent subtotal resection expired due to spread of their disease.

CONCLUSION: Spinal hemangiopericytoma is a rare tumor. Strong clinical suspicion is required to diagnose it pre-operatively. Gross total resection is the goal and radiotherapy should be given in case of residual tumor or high-grade tumors.

17: Das A, Singh A, Gajendra S, Gupta R, Sazawal S, Seth R. An unusual case of phenotype switch between AML FAB subtypes. Clin Case Rep. 2015 Feb;3(2):118-20. doi: 10.1002/ccr3.169. Epub 2014 Dec 4. PubMed PMID: 25767711; PubMed Central PMCID: PMC4352367.

Phenotypic switch between any leukemia subtypes is of concern to a treating physician and more so, in acute myelocytic leukemia (AML) as the mechanisms for switch and subsequent chemotherapy regimen to be used remain unclear. AML-non-M3 from AML-M3 subtype needs special mention as this has been unheard off.

18: Dash D, Aggarwal V, Joshi R, Padma MV, Tripathi M. Effect of reduction of antiepileptic drugs in patients with drug-refractory epilepsy. Seizure. 2015 Apr;27:25-9. doi: 10.1016/j.seizure.2015.02.025. Epub 2015 Feb 26. PubMed PMID: 25891923.

PURPOSE: The present study was conducted with the aim of evaluating the effects of reducing the number of antiepileptic drugs (AEDs) administered to patients with drug-refractory epilepsy (DRE) during their admission and document any change in seizure frequency in subsequent follow up.

METHODS: A total of 962 patients with DRE who were admitted to the neurology

wards waiting for connection to video EEG were recruited for this prospective study. After their admission to the neurology ward, modifications in the number and dosage of AEDs were done with a target of a maximum of three AEDs in every patient. Drug tapering was done using a standardized protocol. The primary outcome was the change in seizure frequency in the follow-up period of 6 months. Secondary outcome measures were the adverse event profile (AEP) and the quality of life (QOL).

RESULTS: Of the 1134 patients screened, 962 patients gave consent to participate in the study. The mean number of AEDs received by each patient was 4.24. After the tapering following a standardized protocol each patient received a mean of 2.65 AEDs per patient. In 82.70% patients with DRE, there was either a reduction or no change in seizure frequency in the subsequent 6 months follow up. There was a significant reduction in the AEP score after the reduction in the number of AEDs (P = 0. 001).

CONCLUSION: Our study proves that optimization of reduction of the number of AED's in patients with DRE leads to reduction or no change in seizure frequency with a significant decrease in adverse effects.

19: Dhingra R, Srivastava S, Behra S, Vadiraj PK, Venuthurimilli A, Shalimar, Dash NR, Madhusudhan KS, Gamanagatti SR, Garg PK. Single or multiport percutaneous endoscopic necrosectomy performed with the patient under conscious sedation is a safe and effective treatment for infected pancreatic necrosis (with video). Gastrointest Endosc. 2015 Feb;81(2):351-9. doi: 10.1016/j.gie.2014.07.060. Epub 2014 Oct 5. PubMed PMID: 25293824.

BACKGROUND: Infected pancreatic necrosis (IPN) is a dreaded adverse event of acute pancreatitis (AP). Most patients with IPN require drainage and necrosectomy, preferably by a minimally invasive method.

OBJECTIVE: To study the success and safety of an alternative form of minimally invasive necrosectomy for IPN.
DESIGN: Observational study.
SETTING: Tertiary care academic center.
PATIENTS: Consecutive patients with IPN formed the study group.
INTERVENTION: Patients with IPN were initially treated conservatively including percutaneous drainage. Those who failed to improve underwent percutaneous endoscopic necrosectomy (PEN). Single- or multiport PEN was performed by using a flexible endoscope through the percutaneous tract. PEN involved vigorous lavage and suction followed by necrosectomy. Multiple sessions were undertaken depending on the size and number of collections and the amount of necrotic debris.
MAIN OUTCOME MEASUREMENTS: Control of sepsis and resolution of collection(s) without the need for surgical necrosectomy.

RESULTS: During the period from October 2012 to July 2013, 165 patients (mean age, 38.82 ± 14.99 years; 119 male patients) were studied. Of them, 103 patients had necrotizing pancreatitis and IPN had developed in 74. Of these 74 patients with IPN, 15 underwent PEN after a mean interval of 39.2 days. Fourteen of the 15 patients improved after a mean of 5 sessions of PEN. Two of 15 patients had minor adverse events: self-limiting bleeding and pancreatic fistula in 1 patient each. One patient required surgery but died of organ failure.
LIMITATIONS: Lack of a control arm.

CONCLUSION: PEN is a safe and effective minimally invasive technique for necrosectomy for IPN.

20: Dhull VS, Sharma P, Mukherjee A, Jana M, Bal C, Kumar R. 18F-FDG PET-CT for Evaluation of Cardiac Angiosarcoma: A Case Report and Review of Literature. Mol Imaging Radionucl Ther. 2015 Feb 5;24(1):32-36. doi: 10.4274/mirt.02486. PubMed PMID: 25800597; PubMed Central PMCID: PMC4372771.

Cardiac angiosarcomas are rare neoplasms. We here present the case of a 24 year old male with a cardiac mass which was characterised as malignant on 18F-Fluorodeoxyglucose (18F-FDG) positron emission tomography-computed tomography (PET-CT). In addition 18F-FDG PET-CT also demonstrated pericardial infiltration and bone metastases. The tumor was confirmed to be angiosarcoma on biopsy and palliative chemotherapy was started. Here we have highlighted the potential role of 18F-FDG PET-CT in patients with cardiac angiosarcoma and presented a brief review.

21: Doshi SR, Naik N. Vegetation plop. Int J Cardiovasc Imaging. 2015 Apr;31(4):733-4. doi: 10.1007/s10554-015-0609-y. Epub 2015 Feb 25. PubMed PMID: 25712167.

22: Dwivedi R, Gupta YK, Singh M, Joshi R, Tiwari P, Kaleekal T, Tripathi M. Correlation of saliva and serum free valproic acid concentrations in persons with epilepsy. Seizure. 2015 Feb;25:187-90. doi: 10.1016/j.seizure.2014.10.010. Epub 2014 Oct 24. PubMed PMID: 25455060.

PURPOSE: Therapeutic drug monitoring (TDM) of antiepileptic drugs (AEDs) in serum is frequently used in clinical settings however saliva could be an alternative to measure free concentration of drugs. In the present study, we observed the possible correlation of VPA concentration between serum and saliva in persons with epilepsy (PWE).

METHODS: A total of 59 paired serum and saliva samples were assayed from 65 consecutive PWE (51 males and 14 females; age range 9-65 years). Patients were subjected to either VPA monotherapy or its combination with other AEDs for at least three months. Steady state trough concentration of unbound VPA drug was quantified using HPLC. The correlation between serum and saliva free VPA concentration was evaluated.

RESULTS: Out of 65 patients, 27 were on monotherapy of VPA and 38 were on VPA with other antiepileptic drugs. Saliva VPA concentration significantly correlated with serum free VPA concentration ($p<0.05$). Poor correlation was observed between serum and saliva VPA concentration with the daily dose ($p>0.05$) respectively. CONCLUSIONS: Our study reveals that serum and saliva VPA concentrations are significantly associated in PWE. These associations may facilitate monitoring and evaluation of VPA levels non-invasively for PWE.

23: Faruq M, Srivastava AK, Singh S, Gupta R, Dada T, Garg A, Behari M, Mukerji M. Spinocerebellar ataxia 7 (SCA7) in Indian population: predilection of ATXN7-CAG expansion mutation in an ethnic population. Indian J Med Res. 2015 Feb;141(2):187-98. PubMed PMID: 25900954; PubMed Central PMCID: PMC4418155.

BACKGROUND & OBJECTIVES: Spinocerebellar ataxia 7 (SCA7) is a rare form of neurodegenerative disorder with the clinical manifestation of cerebellar ataxia and retinal degeneration. In this study we describe the clinico-genetic characteristics of nine SCA7 families of Indian origin and cross compare these with other available worldwide studies.

METHODS: Thirty five individuals from nine SCA7 families were clinico-genetically characterized and CAG repeat distribution analysis was carried out in 382 control DNA samples from healthy controls (derived from 21 diverse Indian populations based on ethnic and linguistic and geographical location).

RESULTS: Of the nine families studied, 22 affected individuals and one asymptomatic carrier were identified. The average age at disease onset was 23.4±12.6 yr. The length of expanded CAG ranged from 40-94 with mean value of 53.2±13.9. The main clinical findings in affecteds individuals included cerebellar ataxia, and retinal degeneration along with hyper-reflexia (95%), slow saccades (85%) and spasticity (45%). Analysis of the association of number of CAG repeats with disease onset revealed that <49 repeats were associated with earlier age at onset in South East Asians compared to European populations. Further analysis of CAG repeats from 21 diverse Indian populations showed pre-mutable repeats (28-34) alleles in the IE-N-LP2 population. Six of the nine families identified in this study belonged to the same ethnic population.

INTERPRETATIONS & CONCLUSION: Our results show that presenece of SCA7 is relatively rare and confined to one ethnic group from Haryana region of India. We observed a homogeneous phenotypic expression of SCA7 mutation as described earlier and an earlier age of onset in our patients with CAG <49. The identification of pre-mutable allele in IE-N-LP2 suggests this population to be at the risk of SCA7.

24: Gamanagatti S, Rangarajan K, Kumar A, Jineesh. Blunt Abdominal Trauma: Imaging and Intervention. Curr Probl Diagn Radiol. 2015 Jul-Aug;44(4):321-336. doi: 10.1067/j.cpradiol.2015.02.005. Epub 2015 Feb 12. Review. PubMed PMID: 25801463.

Interventional radiology, particularly percutaneous angioembolization, plays an important role in the management of blunt abdominal trauma involving solid organs and pelvic fractures. The traumatic injuries of the central nervous system, heart, and great vessels often lead to death at the site of trauma. Although patients with visceral organ injuries can also die at the site of trauma, these patients often reach the hospital thus giving us an opportunity to treat them with surgical or radiological intervention depending on the clinical condition of the patient. The management of these patients with trauma is now well codified-patients who remain unstable despite resuscitation should be shifted either to an operating room for laparotomy if the ultrasound (US) revealed hemoperitoneum or to a interventional room for angioembolization in cases of pelvic fractures. In all other cases, computed tomography is essential. Currently, multidetector computed tomography with contrast is the gold standard imaging modality for the diagnosis of traumatic abdominal injuries; it helps in assessing the extent of injuries, and further management can be planned.

25: Ghosh S, Gupta B, Singh M, Bhattacharya I, Gahlot GP, Paul VK, Das P. A Diagnostic Conundrum: A Rare Cause of Abdominal Distension in a Preterm Neonate. Indian J Pediatr. 2015 Feb 15. [Epub ahead of print] PubMed PMID: 25680782.

26: Goyal S, Puri T, Julka PK. Holocord low grade astrocytoma - Role of radical irradiation and chemotherapy. J Egypt Natl Canc Inst. 2015 Jun;27(2):105-8. doi: 10.1016/j.jnci.2015.01.001. Epub 2015 Feb 21. PubMed PMID: 25708303.

Spinal intradural tumors, especially those extending along the entire length of the spinal cord, termed as 'holocord' tumors are uncommon. Most of these are gliomas, with astrocytomas (low grade) predominating in children and ependymomas in adults. Other histologies, though reported, are even rarer. Management is debatable, with both surgery and radiotherapy of such extensive tumors posing challenges. We describe a case of a 14-year-old girl with holocord astrocytoma

extending from cervicomedullary junction till lumbar spine, who recovered full neurological function following radical irradiation of entire spine followed by temozolomide-based chemotherapy. No grade 3/4 bone marrow morbidity was seen. Five years following treatment, she maintained normal neurological function and apparently normal pubertal and skeletal growth despite residual disease visible on imaging. Literature review of existing reports of holocord astrocytomas highlighting management and outcome is presented.

27: 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 Feb 23. pii: 0883073815569304. [Epub ahead of print] 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.

28: Gupta N, Jain P, Kabra M, Gulati S, Sethuraman G. Acrodermatitis Dysmetabolica - Report of Two Cases. Indian J Pediatr. 2015 Feb 15. [Epub ahead of print] PubMed PMID: 25680786.

29: Gupta N, Vashist P, Tandon R, Gupta SK, Dwivedi S, Mani K. Prevalence of corneal diseases in the rural Indian population: the Corneal Opacity Rural Epidemiological (CORE) study. Br J Ophthalmol. 2015 Feb;99(2):147-52. doi: 10.1136/bjophthalmol-2014-305945. Epub 2014 Nov 13. PubMed PMID: 25395684.

OBJECTIVE: The present population-based study was undertaken to estimate the prevalence, determinants and causes of corneal morbidity and blindness in a rural North Indian population.

DESIGN: Population-based study in India with 12 899 participants of all ages.
METHODS: Participants were recruited from 25 village clusters of district Gurgaon, Haryana, India using random cluster sampling strategy. All individuals were examined in detail with a portable slit lamp for evidence of any corneal disease during the door-to-door examination. Comprehensive ocular examination including logMar visual acuity, slit lamp biomicroscopy, non-contact tonometry and dilated retinal evaluation was performed at a central clinic site in the respective villages.

RESULTS: Overall, 12 113 of 12 899 people (93.9% response rate) were examined during the household visits. Prevalence of corneal disease was 3.7% (95% CI 3.4% to 4.1%) and that of corneal blindness was 0.12% (95% CI 0.05% to 0.17%). Multivariable analysis demonstrated that corneal disease was significantly higher in the elderly (p<0.0001) and illiterates (p<0.0001). Common causes of corneal opacity in the study population were pterygium (34.5%), ocular trauma (22.3%) and infectious keratitis (14.9%). Corneal diseases contributing to blindness were

post-surgical bullous keratopathy (46.2%) and corneal degenerations (23.1%).

CONCLUSIONS: The study findings demonstrate that currently ocular trauma, infectious keratitis, post-surgical bullous keratopathy, and corneal degenerations are responsible for the major burden of corneal blindness and morbidity in the Indian population. The prevalence of corneal morbidity due to vitamin A deficiency and trachoma was low in this rural population.

30: Gupta S, Sah S, Som T, Saksena M, Yadav CP, Sankar MJ, Thakar A, Agarwal R, Deorari AK, Paul VK. Challenges of Implementing Universal Newborn Hearing Screening at a Tertiary Care Centre from India. Indian J Pediatr. 2015 Feb 6. [Epub ahead of print] PubMed PMID: 25652547.

OBJECTIVES: To report experience of implementing universal newborn hearing screening (UNHS) in a tertiary care neonatal unit, identify risk factors associated with failed two-step automated acoustic brainstem response (AABR) screen and evaluate cost of AABR.

METHODS: This was a prospective study of UNHS outcomes of all live births with two step AABR using BERAphone MB11®. Outcome measures were screening coverage, refer, pass and lost to follow up rates and cost of AABR using micro-costing method. To identify risk factors for failed screening, authors performed multivariate logistic regression with failed two-step AABR screen as dependent variable and baseline risk factors significant on univariate analysis as predictors.

RESULTS: Screening coverage was moderate (84 %), with 2265 of total 2700 eligible infants screened with initial AABR (mean gestation 37.2±2.3 wk; birth weight 2694±588 g; 305 received nursery care). A total of 273 of 2265 infants were "refer" on first screen. Second screen was done on 233, of which 58 were "refer". Of these, 35 underwent conventional ABR, of which 5 were diagnosed to have hearing impairment. Only 2 could get hearing aid. Overall, a total of 2197 (81.4 %) infants passed, 496 (18.4 %; excluding 2 deaths) were lost to follow up at various stages, and 5 (0.2 %) were diagnosed with hearing impairment, all of whom were high risk. Average cost of AABR was INR 276 per test. No factor emerged as significant on multivariate analysis.

CONCLUSIONS: UNHS is feasible to implement, but significant lost to follow up and non-linkage with appropriate rehabilitation services limit its utility. Cost effectiveness of UNHS compared to high risk based screening needs to be determined.

PMID: 25652547 [PubMed - as supplied by publisher]

31: Gupta S, Gogia V, T R, Sen S, Venkatesh P. Posterior lens capsular neovascularization of young: management using endodiathermy assisted biopsy. Can J Ophthalmol. 2015 Feb;50(1):e4-7. doi: 10.1016/j.jcjo.2014.10.011. PubMed PMID: 25677299.

32: Gupta S, Sahni K, Tembhre MK, Mathur S, Sharma VK. A novel point-of-care in vivo technique for preparation of epidermal cell suspension for transplantation in vitiligo. J Am Acad Dermatol. 2015 Feb;72(2):e65-6. doi: 10.1016/j.jaad.2014.10.042. PubMed PMID: 25592367.

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

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

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

RESULTS: One hundred and two eyes of 54 patients were included in the study. Mean age at the time of baseline visual field was 26.6 ± 9.8 years (15-40 years). The average visual field index change per year was -0.9% (range -6.4 to +2.0% per year) and 18 eyes (17%) showed a progression greater than -2% per year. The cumulative risk of an eye losing 50% and 100% of its visual field index was 30% and 22% respectively over the patients' lifetime. The projected risk of bilateral blindness among JOAG patients over their lifetime was 10%. Long term IOP fluctuation was significantly associated with faster rates of progression (Odds ratio = 2.74; p = 0.012).

CONCLUSIONS: Though the rate of visual field deterioration with treatment, among juvenile glaucoma patients is lower compared to that among other types of primary glaucoma, the projected lifetime risk of perimetric blindness in these eyes is similar, despite the longer duration of disease in this age group.

34: Hirve S, Krishnan A, Dawood FS, Lele P, Saha S, Rai S, Gupta V, Lafond KE, Juvekar S, Potdar V, Broor S, Lal RB, Chadha M. Incidence of influenza-associated hospitalization in rural communities in western and northern India, 2010-2012: a multi-site population-based study. J Infect. 2015 Feb;70(2):160-70. doi: 10.1016/j.jinf.2014.08.015. Epub 2014 Sep 9. PubMed PMID: 25218056.

BACKGROUND: The global burden of influenza is increasingly recognized, but data from India remain sparse. We conducted a multi-site population-based surveillance study to estimate and compare rates of influenza-associated hospitalization at two rural Indian health and demographic surveillance system (HDSS) sites at Ballabgarh and Vadu during 2010-2012.

METHODS: Prospective facility-based surveillance for all hospitalizations (excluding those for trauma, elective surgery and obstetric, ophthalmic or psychiatric reasons) was conducted at 72 health facilities. After collection of clinical details, patients had nasopharyngeal swabs taken and tested by reverse transcription polymerase chain reaction for influenza viruses. Annual healthcare utilization surveys (HUS) were conducted in HDSS households to identify proportion of hospitalizations occurring at non-study facilities to adjust for hospitalizations missed through facility-based surveillance.

RESULTS: HUS showed that 69% and 67% of hospitalizations occurred at study facilities at Ballabgarh and Vadu, respectively. Overall, 6004 patients hospitalized with acute medical illness at participating facilities were enrolled (1717 from Ballabgarh; 4287 from Vadu). The proportion of patients with influenza was higher at Vadu than Ballabgarh annually (2010: 21% vs. 5%, $p < 0.05$; 2011: 18% vs. 5%, $p < 0.05$; 2012: 23% vs. 5%, $p < 0.05$). Annual adjusted influenza-associated hospitalization rates were 5-11 fold higher in Vadu (20.3-51.6 per 10,000) vs Ballabgarh (4.4-6.3 per 10,000). At both sites, influenza A/H1N1pdm09 and B predominated during 2010, A/H3N2 and B during 2011, and A/H1N1pdm09 and B during 2012.

CONCLUSION: The markedly different influenza hospitalization rates by season and across communities in India highlight the need for sustained multi-site surveillance system for estimating national influenza disease burden. That would be the first step for initiating discussions around Influenza prevention and control strategies in the country.

35: Jain D, Arava S, Mishra B, Sharma S, Sharma R, Parshad R. Soft tissue giant cell tumor of low malignant potential of mediastinum: a rare case report. Int J Surg Pathol. 2015 Feb;23(1):71-4. doi: 10.1177/1066896914540937. Epub 2014 Jun 25. PubMed PMID: 24965215.

Giant cell tumor (GCT) is primarily a bone neoplasm. Rare origin of the tumor from soft tissues has been reported. Involvement of mediastinum by GCT is even rarer. We herein describe an interesting case of huge mediastinal tumor in a young man. Radiologically, no primary osseous lesion was present throughout the body. Morphologically, tumor resembles osseous GCT with increased mitotic activity. Hence, the case was diagnosed as soft tissue GCT of low malignant potential at the rare site of mediastinum. To the best of our knowledge, the present case is the fourth reported case. Pathologists and clinicians need to be aware of the rare diagnosis of GCT in mediastinum and should carefully evaluate the clinical and radiological findings.

36: Jena MK, Janjanam J, Naru J, Kumar S, Kumar S, Singh S, Mohapatra SK, Kola S, Anand V, Jaswal S, Verma AK, Malakar D, Dang AK, Kaushik JK, Reddy VS, Mohanty AK. DIGE based proteome analysis of mammary gland tissue in water buffalo (Bubalus bubalis): lactating vis-a-vis heifer. J Proteomics. 2015 Apr 24;119:100-11. doi: 10.1016/j.jprot.2015.01.018. Epub 2015 Feb 7. PubMed PMID: 25661041.

Mammary gland is an exocrine and sebaceous gland made up of branching network of ducts that end in alveoli. Milk is synthesized in the alveoli and secreted into alveolar lumen. Mammary gland represents an ideal system for the study of organogenesis that undergoes successive cycles of pregnancy, lactation and involution. To gain insights on the molecular events that take place in pubertal and lactating mammary gland, we have identified 43 differentially expressed proteins in mammary tissue of heifer (non-lactating representing a virgin mammary gland), and lactating buffaloes (Bubalus bubalis) by 2D-difference gel electrophoresis (2D-DIGE) and mass spectrometry. Twenty one proteins were upregulated during lactation whereas 8 proteins were upregulated in heifer mammary gland significantly ($p<0.05$). Bioinformatics analyses of the identified proteins showed that a majority of the proteins are involved in metabolic processes. The differentially expressed proteins were validated by real-time PCR and Western blotting. We observed differential expressions of certain new proteins including EEF1D, HSPA5, HSPD1 and PRDX6 during lactation which have not been reported before. The differentially expressed proteins were mapped to available biological pathways and networks involved in lactation. This study signifies the importance of some proteins which are preferentially expressed during lactation and in heifer mammary gland.BIOLOGICAL SIGNIFICANCE: This work is important because we have generated information in water buffalo (B. bubalis) for the first time which is the major milk producing animal in Indian Subcontinent. Out of a present production of 133milliontons of milk produced in India, contribution of buffalo milk is around 54%. Its physiology is somewhat different from the lactating cows. Buffalo milk composition varies from cow milk in terms of higher fat and total solid content, which confers an advantage in preparation of specialized cheese, curd and other dairy products. Being a major milk producing animal in India it is highly essential to understand the lactation associated proteins in the mammary gland of buffalo. In the present investigation our attempt has been to identify new protein evidences which are expressed in

lactating buffalo mammary gland and have not been reported before. The findings reported in the present study will help in understanding the lactation biology of buffalo mammary gland in particular and the mammary gland biology in general.

37: Kapil A. Publishing supplement of a Journal. Indian J Med Microbiol. 2015 Feb;33 Suppl:1. doi: 10.4103/0255-0857.150857. PubMed PMID: 25657122.

38: Kapoor PM, Subramanian A, Malik V, Kiran U, Velayoudham D. B-type natriuretic peptide as prognostic marker in tetralogy of Fallot surgery. Asian Cardiovasc Thorac Ann. 2015 Feb;23(2):146-52. doi: 10.1177/0218492314534247. Epub 2014 May 13. PubMed PMID: 24823381.

BACKGROUND: B-type natriuretic peptide has been extensively studied in patients with cardiovascular disease, but its impact on the perioperative outcome of patients with cyanotic congenital heart defects is still unclear. We assessed the perioperative changes in B-type natriuretic peptide levels and their correlation with preoperative factors and clinical outcomes in a large homogenous group of patients with tetralogy of Fallot undergoing definitive repair at a tertiary care center.

METHODS: A prospective study was undertaken in the cardiac operating room and intensive care unit at a single institution; 250 patients with tetralogy of Fallot undergoing intracardiac repair under cardiopulmonary bypass were studied. B-type natriuretic peptide levels were taken at 3 time points and correlated with clinical variables.

RESULTS: Baseline B-type natriuretic peptide levels correlated with the degree of cyanosis in all 4 groups. B-type natriuretic peptide levels at 24 h after admission to the intensive care unit correlated with mortality in the adult subset of patients. B-type natriuretic peptide levels > 290 pg mL(-1) in the intensive care unit predicted an increased probability of adverse clinical outcomes.

CONCLUSIONS: We demonstrated a rise in serum B-type natriuretic peptide levels in patients with tetralogy of Fallot undergoing definitive repair on cardiopulmonary bypass. B-type natriuretic peptide levels may be monitored to identify patients with cyanosis at increased risk of an augmented inflammatory response to cardiopulmonary bypass.
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39: Karunanithi S, Jain TK, Singh A, Bal C, Kumar R. 18F-FDG PET/CT in a seldom case of primary duodenal dermatofibrosarcoma protuberans with lung and skeletal metastases. Clin Nucl Med. 2015 Feb;40(2):e140-2. doi: 10.1097/RLU.0000000000000455. PubMed PMID: 24999683.

Dermatofibrosarcoma protuberans (DFSP) is an uncommon cutaneous soft tissue sarcoma tumor that arises from the dermis of the skin. Sarcomas of the intestines are rare, and a DFSP arising from the small intestine is a very rare occurrence. Here we present F-FDG PET/CT imaging findings of a 60-year-old man with DFSP in the duodenum with metastases to the lung, mesentery, and skeleton.

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

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

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

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

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

41: Kothari SS, Gupta SK, Ramakrishnan S. Staged pulmonary valve balloon dilatation in patients with severe pulmonary valve stenosis and heart failure. Catheter Cardiovasc Interv. 2015 Feb 1;85(2):332-3. doi: 10.1002/ccd.25426. Epub 2014 Feb 27. PubMed PMID: 24677571.

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

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

43: Kumar A, Krishna G, Singh PK, Garg A, Sharma BS. Spontaneously disappearing pineal region mass: a rare manifestation of vein of galen malformation. Indian J Pediatr. 2015 Feb;82(2):201-2. doi: 10.1007/s12098-014-1537-x. Epub 2014 Aug 8. PubMed PMID: 25103014.

44: Kumar H, Katyal J, Gupta YK. Low dose zinc supplementation beneficially affects seizure development in experimental seizure models in rats. Biol Trace Elem Res. 2015 Feb;163(1-2):208-16. doi: 10.1007/s12011-014-0181-7. Epub 2014 Nov 25. PubMed PMID: 25422092.

The role of zinc in seizure models and with antiepileptic drugs sodium valproate (SV) and phenytoin (PHT) was studied using experimental models of seizures in rats. Male Wistar rats, 150-250 g were administered zinc 2, 20, and 200 mg/kg, orally for 14 days. Sixty minutes after the last dose of zinc, rats were challenged with pentylenetetrazole (PTZ, 60 mg/kg, ip) or maximal electroshock (MES, 70 mA, 0.2 s duration). In another group, SV (150/300 mg/kg, ip) or PHT (40 mg/kg, ip) was administered after 30 min of zinc administration followed by seizure challenge. Zinc pretreatment at all doses had no effect on MES seizures. In PTZ seizures, with the lowest dose used, i.e., 2 mg/kg, a protective effect was observed. Neither the protection offered by the 100 % anticonvulsant dose of SV (300 mg/kg) in PTZ seizures was affected by pre-treatment with zinc nor a combination of subanticonvulsant dose of SV (150 mg/kg) and zinc offer any statistically significant advantage over either drug alone. The combination of phenytoin with zinc had no effect on any of the parameters tested. Apart from this, chronic zinc administration hampered development of chemically (PTZ)-kindled seizures in rats. Zinc supplementation is unlikely to have any undesirable effect when used in epileptics rather it may offer advantage in epileptic and seizure prone patients.

45: Kumar N, Yadav C, Singh S, Kumar A, Vaithlingam A, Yadav S. Evaluation of pain in bilateral total knee replacement with and without tourniquet; a prospective randomized control trial. J Clin Orthop Trauma. 2015 Jun;6(2):85-8. doi: 10.1016/j.jcot.2015.01.095. Epub 2015 Feb 24. PubMed PMID: 25983513; PubMed Central PMCID: PMC4411338.

AIM: Thigh pain following tourniquet application is a common complaint in early post operative period following total knee arthroplasty.
METHOD: Post operative Thigh pain was evaluated in 30 consecutive simultaneous bilateral total knee arthroplasty patients between July 2013 and January 2014. Patient thigh pain was evaluated with the VAS score. The scale was applied on first, second, third day & second and six weeks after surgery.
RESULT: There were statistically significant difference in VAS score in non-tourniquet group on first, second, third post operative day. We did not find statistically significant difference at Second and Six weeks post operatively.
CONCLUSION: This Randomized trial demonstrates that non-tourniquet use in TKA has less early postoperative pain and leads to better recovery.

46: Kumar N, Khunger M, Gupta A, Garg N. A content analysis of smartphone-based applications for hypertension management. J Am Soc Hypertens. 2015 Feb;9(2):130-6. doi: 10.1016/j.jash.2014.12.001. Epub 2014 Dec 11. PubMed PMID: 25660364.

Smartphone-based medical applications (apps) can facilitate self-management of hypertension (HTN). The content and consumer interaction metrics of HTN-related apps are unknown. In this cross-sectional study to ascertain the content of medical apps designed for HTN management, we queried Google Play and Apple iTunes using the search terms "hypertension" and "high blood pressure." The top 107 apps were analyzed. Major app functionalities including tracking (for blood pressure [BP], pulse, weight, body mass index), medical device (to measure pulse or BP),

general information on HTN, and medication adherence tools were recorded along with consumer engagement parameters. Data were collected from May 28 to May 30, 2014. A total of 72% of the apps had tracking function, 22% had tools to enhance medication adherence, 37% contained general information on HTN, and 8% contained information on Dietary Approaches to Stop Hypertension (DASH) diet. These data showed that a majority of apps for HTN are designed primarily for health management functions. However, 14% of Google Android apps could transform the smartphone into a medical device to measure BP. None of these apps employed the use of a BP cuff or had any documentation of validation against a gold standard. Only 3% of the apps were developed by healthcare agencies such as universities or professional organizations. In regression models. the medical device function was highly predictive of greater number of downloads (odds ratio, 97.08; P < .001) and positive consumer reviews (Incidence rate ratios, 1204.39; P < .001). A large majority of medical apps designed for HTN serve health management functions such as tracking blood pressure, weight, or body mass index. Consumers have a strong tendency to download and favorably rate apps that are advertised to measure blood pressure and heart rate, despite a lack of validation for these apps. There is a need for greater oversight in medical app development for HTN, especially when they qualify as a medical device.

47: Kumar VL, Sharma N, Souza IC, Ramos MV, Carvalho CP. Proteins derived from in vitro culture of the callus and roots of Calotropis procera ameliorate acute inflammation in the rat paw. Appl Biochem Biotechnol. 2015 Feb;175(3):1724-31. doi: 10.1007/s12010-014-1361-9. Epub 2014 Nov 26. PubMed PMID: 25424282.

The callus and roots developed from the hypocotyl and cotyledon explants of the germinating seeds of Calotropis procera were grown in culture, and the proteins isolated from them (CP and RP) were evaluated for their efficacy in inhibiting edema formation induced by sub-plantar injection of carrageenan in the hind paw of rat. Intravenous administration of both CP and RP 30 min before inducing inflammation produced a dose-dependent inhibition of edema formation at 1 and 5 mg/kg doses. The extents of inhibition with these proteins ranged between 40 and 70 % at the doses included while the anti-inflammatory drug diclofenac produced 50 to 60 % inhibition at 5 mg/kg dose. The inhibitory effect with these proteins was accompanied by a dose-dependent reduction in the tissue levels of inflammatory mediators, tumor necrosis factor alpha (TNF-α) and prostaglandin E2 (PGE2), and oxidative stress markers namely glutathione and thiobarbituric acid-reactive substances and maintenance of tissue architecture. The present study shows that the proteins isolated from the differentiated and undifferentiated tissues derived from the germinating seeds have therapeutic application in the treatment of inflammatory conditions, and these tissues could be used as an alternative source to minimize variability of plant-derived formulations.

48: Kumari N, Tajmul M, Yadav S. Proteomic analysis of mature Lagenaria siceraria seed. Appl Biochem Biotechnol. 2015 Apr;175(8):3643-56. doi: 10.1007/s12010-015-1532-3. Epub 2015 Feb 12. PubMed PMID: 25672325.

Lagenaria siceraria (bottle gourd) class belongs to Magnoliopsida family curcurbitaceae that is a traditionally used medicinal plant. Fruit of this plant are widely used as a therapeutic vegetable in various diseases, all over the Asia and Africa. Various parts of this plant like fruit, seed, leaf and root are used as alternative medicine. In the present study, primarily, we have focused on proteomic analysis of L. siceraria seed using phenol extraction method for protein isolation. Twenty-four colloidal coomassie blue stained protein spots were identified by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF/MS) after resolving on two-dimensional gel electrophoresis. Out of 24 identified protein spots, four were grouped as unidentified proteins which clearly suggest that less work has been done in the

direction of plant seed proteomics. These proteins have been found to implicate in various functions such as biosynthesis of plant cell wall polysaccharides and glycoproteins, serine/threonine kinase activity, plant disease resistance and transferase activity against insects by means of insecticidal and larval growth inhibitory, anti-HIV, antihelmintic and antimicrobial properties. By Blast2GO annotation analysis, amongst the identified proteins of L. siceraria, molecular function for majority of proteins has indispensable role in catalytic activity, few in binding activity and antioxidant activity; it is mostly distributed in cell, organelle, membrane and macromolecular complex. Most of them involved in biological process such as metabolic process, cellular process, response to stimulus, single organism process, signalling, biological recognition, cellular component organization or biogenesis and localization.

49: Kundu R, Baidya DK, Arora MK, Maitra S, Darlong V, Goswami D, Mohanaselvi S, Bajpai M. Caudal bupivacaine and morphine provides effective postoperative analgesia but does not prevent hemodynamic response to pneumoperitoneum for major laparoscopic surgeries in children. J Anesth. 2015 Feb 17. [Epub ahead of print] PubMed PMID: 25686563.

The use of a caudal block in laparoscopic surgery in children is limited to minor procedures like inguinal hernia repair, and intravenous opioids remain the analgesic modality of choice in major laparoscopic surgery. However, a caudal block is frequently performed at our institute even for laparoscopic surgery. Therefore, we planned to evaluate the analgesic efficacy of caudal bupivacaine and morphine in major laparoscopic surgery as compared to intravenous opioids. Our hypothesis was that a single-shot caudal block would increase the duration of analgesia and minimize the hemodynamic response to pneumoperitoneum. After institutional ethics committee clearance, data were collected for 65 ASA I-II children aged 6 months to 12 years who underwent laparoscopic surgery in the last 14 months. Demographic, surgical, and perioperative anesthetic and analgesic data were noted and analyzed. Twenty-four children received a caudal block with 0.25 % bupivacaine (1-1.25 ml/kg) with morphine (30-50 mcg/kg). In the caudal group, the time to first analgesic request was increased (165 vs. 45 min; p = 0.00) and tachycardia response to port site incision was less observed (33 vs. 63 % children; p = 0.019). Hemodynamic response to pneumoperitoneum was equal in both of the groups. Single-shot caudal injection of local anesthetic with morphine reduces port site skin incision response and increases the duration of postoperative analgesia but fails to prevent hemodynamic response to pneumoperitoneum.

50: Kurwale NS, Chandra SP, Chouksey P, Arora A, Garg A, Sarkar C, Bal C, Tripathi M. Impact of intraoperative MRI on outcomes in epilepsy surgery: preliminary experience of two years. Br J Neurosurg. 2015 Feb 7:1-6. [Epub ahead of print] PubMed PMID: 25659959.

Purpose. To determine the impact of intraoperative magnetic resonance imaging (iMRI) in epilepsy surgeries on the extent of surgical resection and seizure outcome along with its feasibility and limitations. Methods. Patients with pharmacoresistant epilepsy (PRE), who underwent surgeries in operating theater equipped with high-field 1.5-Tesla MRI, were evaluated for extent of resection, operative time, scanning time, pathologies, resultant extra resection, and seizure outcomes. Results. Thirty-nine patients with mean age of 18 (range: 3-65) years with PRE underwent surgical intervention. Mean duration of epilepsy was 10.2 years. Surgical interventions included tumor resection (31%), resection of focal cortical dysplasia (28%), mesial temporal lobe surgeries (18%), and disconnection surgeries (23%). iMRI alone, apart from navigation and electrophysiology, improved resection rates in 13% (5 out of 39) of these patients. In lesional group, iMRI modified operative strategy resulting in increased resections in 21% (5/23) patients. Complete resection was observed in 87% of patients. iMRI scanning time constituted 25% (mean: 72 ± 21 min) of time spent under anesthesia by the patient. Major and minor complications were observed in 2.5% and 7.5% of patients, respectively. The mean follow-up was 14

months. Favorable postoperative seizure control (Engel Classes I and II) was achieved in 85% and complete seizure freedom was achieved in 77% of patients (Engel Class IA) at 1-year follow-up. Conclusions. iMRI increases the extent of resection mainly in lesional epilepsy surgeries translating into good seizure outcomes but not found to be much beneficial in prototype mesial temporal sclerosis surgeries and disconnection surgeries.

51: Lalwani S, Rajkumari N, Mathur P, Sharma V, Trikha V. Sepsis in fatal pelvic trauma patients: report from a level-1 Indian Trauma Centre. Eur J Trauma Emerg Surg. 2015 Feb 20. [Epub ahead of print] PubMed PMID: 26038017.

52: Lalwani S, Rajkumari N, Bindra A, Mathur P. Profile of fatal patients admitted to a neuro trauma critical care unit. Eur J Trauma Emerg Surg. 2015 Feb;41(1):65-7. doi: 10.1007/s00068-014-0407-6. Epub 2014 May 27. PubMed PMID: 26038167.

53: Loying P, Manhas J, Sen S, Bose B. Autoregulation and heterogeneity in expression of human Cripto-1. PLoS One. 2015 Feb 6;10(2):e0116748. doi: 10.1371/journal.pone.0116748. eCollection 2015. PubMed PMID: 25658584; PubMed Central PMCID: PMC4319928.

Cripto-1 (CR-1) is involved in various processes in embryonic development and cancer. Multiple pathways regulate CR-1 expression. Our present work demonstrates a possible positive feedback circuit where CR-1 induces its own expression. Using U-87 MG cells treated with exogenous CR-1, we show that such induction involves ALK4/SMAD2/3 pathway. Stochasticity in gene expression gives rise to heterogeneity in expression in genetically identical cells. Positive feedback increases such heterogeneity and often gives rise to two subpopulations of cells, having higher and lower expression of a gene. Using flow cytometry, we show that U-87 MG cells have a minuscule subpopulation with detectable expression of CR-1. Induction of CR-1 expression, by exogenous CR-1, increases the size of this CR-1 positive subpopulation. However, even at very high dose, most of the cells remain CR-1 negative. We show that population behavior of CR-1 induction has a signature similar to bimodal expression expected in a transcriptional circuit with positive feedback. We further show that treatment of U-87 MG cells with CR-1 leads to higher expression of drug efflux protein MDR-1 in the CR-1 positive subpopulation, indicating correlated induction of these two proteins. Positive feedback driven heterogeneity in expression of CR-1 may play crucial role in phenotypic diversification of cancer cells.

54: Madhusudhan KS, Gamanagatti S, Gupta AK. Imaging and interventions in hilar cholangiocarcinoma: A review. World J Radiol. 2015 Feb 28;7(2):28-44. doi: 10.4329/wjr.v7.i2.28. Review. PubMed PMID: 25729485; PubMed Central PMCID: PMC4326732.

Hilar cholangiocarcinoma is a common malignant tumor of the biliary tree. It has poor prognosis with very low 5-year survival rates. Various imaging modalities are available for detection and staging of the hilar cholangiocarcinoma. Although ultrasonography is the initial investigation of choice, imaging with contrast enhanced computed tomography scan or magnetic resonance imaging is needed prior to management. Surgery is curative wherever possible. Radiological interventions play a role in operable patients in the form of biliary drainage and/or portal vein embolization. In inoperable cases, palliative interventions include biliary drainage, biliary stenting and intra-biliary palliative treatment techniques. Complete knowledge of application of various imaging modalities available and about the possible radiological interventions is important for a radiologist to play a critical role in appropriate management of such patients.We review the various imaging techniques and appearances of hilar cholangiocarcinoma and the possible radiological interventions.

55: Majumdar A, Kar SS, S GK, Palanivel C, Misra P. mHealth in the Prevention and Control of Non-Communicable Diseases in India: Current Possibilities and the Way Forward. J Clin Diagn Res. 2015 Feb;9(2):LE06-10. doi: 10.7860/JCDR/2015/11555.5573. Epub 2015 Feb 1. Review. PubMed PMID: 25859473; PubMed Central PMCID: PMC4378755.

Mobile health technology has been used effectively for healthcare delivery in many developing countries. India is currently facing an epidemic of Non-Communicable Diseases (NCDs). With greater availability of cheaper phones in the market, the user base of mobile phones in India is increasing rapidly. The present review was thus conducted to explore the current possibilities and future scope of mobile health for NCD prevention and control in India. Literature search was conducted using MEDLINE, EMBASE, and Cochrane Library to collect information regarding mobile health interventions. Two authors extracted the data and included studies if at least the abstract was available. Information from key reports and government websites were also included. We examined information from domains such as need for mobile health in NCDs in India, and the advantages, scope and challenges of mobile health for healthcare delivery in India. Existing mobile health systems in India, current evidence of mobile health use in NCDs, and the recent mobile health related initiatives taken by Government of India were also assessed. Though we found some examples of current mobile phone usage in many health related programmes in India, data from mobile health research is scarce, particularly for NCDs. The current evidence base needs to be strengthened. There is also a need for identifying various opportunities in the recent initiatives taken by Government of India. It can be concluded that though mobile health has many advantages, there are numerous challenges which need to be addressed before scaling it up at the national level.

56: Malhotra AK, Lis JA, Ramam M. Cydnidae (burrowing bug) pigmentation: a novel arthropod dermatosis. JAMA Dermatol. 2015 Feb;151(2):232-3. doi: 10.1001/jamadermatol.2014.2715. PubMed PMID: 25353259.

57: Malik S, Suchal K, Gamad N, Dinda AK, Arya DS, Bhatia J. Telmisartan ameliorates cisplatin-induced nephrotoxicity by inhibiting MAPK mediated inflammation and apoptosis. Eur J Pharmacol. 2015 Feb 5;748:54-60. doi: 10.1016/j.ejphar.2014.12.008. Epub 2014 Dec 13. PubMed PMID: 25510231.

Nephrotoxicity is a major adverse effect of the widely used anticancer drug cisplatin. Oxidative stress, inflammation and apoptosis are implicated in the pathophysiology of cisplatin-induced acute renal injury. Moreover, cisplatin activates many signal transduction pathways involved in cell injury and death, particularly mitogen activated protein kinase (MAPK) pathway. With this background, we aimed to investigate the protective effect of telmisartan, a widely used antihypertensive drug, in cisplatin-induced nephrotoxicity model in rats. To accomplish this, male albino wistar rats (150-200 g) were divided into 6 groups: Normal, cisplatin-control, telmisartan (2.5, 5 and 10 mg/kg) and telmisartan per se treatment groups. Normal saline or telmisartan was administered orally to rats for 10 days and cisplatin was given on 7th day (8 mg/kg; i.p.) to induce nephrotoxicity. On 10th day, rats were killed and both the kidneys were harvested for biochemical, histopathological and molecular studies. Cisplatin injected rats showed depressed renal function, altered proxidant-antioxidant balance and acute tubular necrosis which was significantly normalized by telmisartan co-treatment. Furthermore, cisplatin administration activated MAPK pathway that caused tubular inflammation and apoptosis in rats. Telmisartan treatment significantly prevented MAPK mediated inflammation and apoptosis. Among the three doses studied telmisartan at 10 mg/kg dose showed maximum nephroprotective effect which could be due to maintenance of cellular redox status and inhibition of MAPK activation.

58: Mandal A, Kabra SK. Sweat chloride levels in asthma. Indian J Pediatr. 2015 Feb;82(2):103-4. doi: 10.1007/s12098-014-1650-x. Epub 2014 Dec 28. PubMed PMID: 25543184.

59: Mathew N, Khakha DC, Qureshi A, Sagar R, Khakha CC. Stress and Coping among Adolescents in Selected Schools in the Capital City of India. Indian J Pediatr. 2015 Feb 19. [Epub ahead of print] PubMed PMID: 25689960.

OBJECTIVE: To find out various life stressors of adolescents, coping strategies adopted by them and the impact of stress on adolescent mental health.

METHODS: A descriptive, cross sectional study was conducted in the schools in south zone of Delhi, capital city of the country. Data was collected on 360 adolescents between the age group of 13-17 y on socio-demographic profile, Adolescent Life Event Stress Scale, Brief Cope and Youth Self Report for ages 11-18 y.

RESULTS: Stress related to uncontrollable events such as family events, relocation events, accident events, ambiguous events and controllable events such as sexual events, deviance events and autonomy events was significantly higher as compared to distressful events ($p < 0.0$) such as death of a pet, arguments with friends, appearing for exams, failure or low grades. Adolescent stress was significantly correlated with various demographic variables in the study. The most frequently used coping strategies by the adolescents were positive reframing, planning, active coping, and instrumental support. It has also been found that stress has a significant impact on adolescent mental health in the form of either internalizing problems such as anxiety, withdrawal and somatic problems or externalizing problems such as rule breaking and aggressive behaviors.

CONCLUSIONS: A significant correlation was found between most of the stressful life event domains and the syndrome subscale of the youth self report form which indicate that out of the total sample of 360 adolescents 150 were identified as having psycho-social morbidity, including 59 borderline cases and 91 high-risk cases. The study pointed out the need for mental health screening among the adolescents and also indicated the need for mental health inputs in educational institutions.

60: Meel R, Bakhshi S, Pushker N, Vishnubhatla S. Randomized, controlled trial in groups C and D retinoblastoma. Ophthalmology. 2015 Feb;122(2):433-5. doi: 10.1016/j.ophtha.2014.09.013. Epub 2014 Oct 22. PubMed PMID: 25439612.

61: Naik V, Ahmed FU, Gupta A, Garg A, Sarkar C, Sharma B, Mahapatra AK. Intracranial Fungal Granulomas: A Single Institutional Clinicopathologic Study of 66 Patients and Review of the Literature. World Neurosurg. 2015 Jun;83(6):1166-1172. doi: 10.1016/j.wneu.2015.01.053. Epub 2015 Feb 17. Review. PubMed PMID: 25700969.

INTRODUCTION: Fungal granulomas of the central nervous system are rare and have a high rate of mortality and morbidity, irrespective of treatment. The authors report their experience of managing 66 patients during 15 years and discuss the clinical, radiological, surgical, and pathologic findings. This series is among the largest reported.

MATERIAL AND METHODS: A retrospective analysis was performed on patients with intracranial fungal granulomas (ICFGs), treated in the authors' institution, between January 1997 and May 2011. Only mass-forming histopathologically proven ICFGs were included in this study.
RESULTS: The age of the patients ranged from 7 years to 67 years (mean = 32.3 years), and most patients were in the third and fourth decades of life. The study

population comprised 47 male and 19 female patients. The most common symptom was headache (41 patients), followed by vomiting (16 patients) and blurring of vision (16 patients). Only 3 patients presented with fever. The duration of symptoms was less than 6 months in all cases and less than 3 months in 39 cases. Anterior cranial fossa and frontal lobe was involved in 35 cases (54.5%), followed by middle cranial fossa in 20 cases (30.3%). Three cases had granulomas in the cerebellopontine angle. Three cases had multicompartmental involvement, and 4 had multilobar involvement. Nine patients had predisposing factors for fungal infection Based on clinical and imaging data, preoperative diagnosis of a possible fungal lesion was made in 44 (some had only computed tomography imaging) patients. All the patients were treated surgically, followed by antifungal treatment with amphotericin-B and/fluconazole/itraconazole for a period of 6 weeks. Eight patients had symptomatic recurrence of lesions 3-12 weeks after treatment and underwent reoperation. Six patients were lost to follow-up. Nine patients died in the postoperative period (within 30 days postoperatively). Fifteen patients died during follow-up because of recurrent lesions, repeat surgery, renal failure, and unrelated causes. Overall mortality was 24 (36.3%). Poor neurologic status before surgery, emergency craniotomy, severe brain edema with mass effect, and opening of ventricles during surgery were associated with poor outcome. Aspergillus species were the causative organism in an overwhelming majority of patients (n = 52) followed by Mucor in 7 cases, Cladosporium in 3 cases, eumycetoma in 2 cases, and maduramycosis and blastomycosis in 1 case each.

CONCLUSION: ICFGs have high rates of morbidity and mortality. Early diagnosis, radical surgery, and antifungal treatment for 6 weeks may improve outcome. Poor neurologic status of patients at the time of presentation, immunocompromised state, contamination of ventricular cerebrospinal during surgery, and renal failure (attributable to amphotericin-B) are associated with poor outcome.

62: Ojha SK, Sharma C, Golechha MJ, Bhatia J, Kumari S, Arya DS. Licorice treatment prevents oxidative stress, restores cardiac function, and salvages myocardium in rat model of myocardial injury. Toxicol Ind Health. 2015 Feb;31(2):140-52. doi: 10.1177/0748233713491800. Epub 2013 Jun 14. PubMed PMID: 23771872.

The present study examined the effects of licorice on antioxidant defense, functional impairment, histopathology, and ultrastructural alterations in isoproterenol (ISP)-induced myocardial injury in rats. Myocardial necrosis was induced by two subcutaneous injection of ISP (85 mg/kg) at an interval of 24 h. Licorice was administered orally for 30 days in the doses of 100, 200, 400, or 800 mg/kg. ISP-treated rats showed impaired hemodynamics, left ventricular dysfunction, and caused depletion of antioxidants and marker enzymes along with lipid peroxidation from myocardium. ISP also induced histopathological and ultrastructural alterations in myocardium. Pretreatment with licorice prevented the depletion of endogenous antioxidants and myocyte injury marker enzymes, inhibited lipid peroxidation, and showed recovery of hemodynamic and ventricular functions. Licorice treatment also reduced myonecrosis, edema, and infiltration of inflammatory cells and showed preservation of subcellular and ultrastructural components. Our results demonstrate that licorice exerts cardioprotection by reducing oxidative stress, augmenting endogenous antioxidants, and restoring functional parameters as well as maintaining structural integrity.

63: Panda A, Ghosh AK, Mirdha BR, Xess I, Paul S, Samantaray JC, Srinivasan A, Khalil S, Rastogi N, Dabas Y. MALDI-TOF mass spectrometry for rapid identification of clinical fungal isolates based on ribosomal protein biomarkers. J Microbiol Methods. 2015 Feb;109:93-105. doi: 10.1016/j.mimet.2014.12.014. Epub 2014 Dec 23. PubMed PMID: 25541362.

This study aimed to evaluate the identification of clinical fungal isolates (yeast and molds) by protein profiling using Matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF/MS). A total of 125 clinical fungal culture isolates (yeast and filamentous fungi) were collected. The test set included 88 yeast isolates (Candida albicans, Candida glabrata, Candida guilliermondii, Candida kefyr, Candida krusei, Candida parapsilosis, Candida rugosa, Candida tropicalis and Cryptococcus neoformans) and 37 isolates of molds (Alternaria spp., Aspergillus flavus, Aspergillus fumigatus, Aspergillus niger, Cunninghamella spp., Histoplasma capsulatum, Microsporum gypseum, Microsporum nanum, Rhizomucor spp. and Trichophyton spp.). The correlation between MALDI TOF MS and conventional identification for all these 125 fungal isolates included in the study was 87.2% at the species level and 90.4% at the genus level. MALDI TOF MS results revealed that the correlation in yeast (n=88) identification was 100% both at the genus and species levels whereas, the correlation in mold (n=37) identification was more heterogeneous i.e. 10.81% isolates had correct identification up to the genus level, 56.7% isolates had correct identification both at the genus and species levels, whereas 32.42% isolates were deemed Not Reliable Identification (NRI). But, with the modification in sample preparation protocol for molds, there was a significant improvement in identification. 86.4% isolates had correct identification till the genus and species levels whereas, only 2.7% isolates had Not Reliable Identification. In conclusion, this study demonstrates that MALDI-TOF MS could be a possible alternative to conventional techniques both for the identification and differentiation of clinical fungal isolates. However, the main limitation of this technique is that MS identification could be more precise only if the reference spectrum of the fungal species is available in the database.

64: Pandey D, Pandey R, Garg PK. Neoadjuvant Therapy and Lymphadenectomy in Esophageal Cancer: Both Are Essential to Maximize Survival Benefit. Ann Surg. 2015 Feb 14. [Epub ahead of print] PubMed PMID: 25692359.

65: Pathak P, Jha P, Purkait S, Sharma V, Suri V, Sharma MC, Faruq M, Suri A, Sarkar C. Altered global histone-trimethylation code and H3F3A-ATRX mutation in pediatric GBM. J Neurooncol. 2015 Feb;121(3):489-97. doi: 10.1007/s11060-014-1675-z. Epub 2014 Dec 6. PubMed PMID: 25479829.

Mutations in H3.3-ATRX-DAXX chromatin remodeling pathway have been reported in pediatric GBMs. H3.3 (H3F3A) mutations may affect transcriptional regulation by altered global histone-methylation. Therefore, we analyzed yet partly understood global histone code (H3K-4/9/27/36) trimethylation pattern in H3F3A-ATRX mutants and wild-type. H3F3A, HIST1H3B, IDH1, ATRX, DAXX and Tp53 mutations were identified by sequencing/immunohistochemistry in 27 pediatric GBMs. Global histone-methylation H3K-4/9/27/36me3 and Polycomb-protein EZH2 expression were evaluated by immunohistochemistry. H3F3A-ATRX mutation was observed in 66.7 % (18/27) of pediatric GBMs. K27M and G34R-H3F3A mutations were found in 37 % (10/27) and 14.8 % (4/27) patients respectively. G34V-H3F3A, HIST1H3B and IDH1 mutations were absent. Notably, commonest global histone-methylation mark lost was H3K27me3 (17/25, 68 %) followed by H3K4me3 (45.5 %, 10/22) and H3K9me3 (18.2 %, 4/22). Global H3K36me3 showed no loss. Most significant observation was loss of one or more histone-trimethylation mark in 80 % (20/25) pediatric GBMs. Notably, simultaneous loss of H3K27me3 and H3K4me3 were present in 7/22 (31.8 %) of pediatric GBMs. Low expression of EZH2 was found in 12/24 (50 %) of cases. However no significant correlation of loss of histone-marks or EZH2 expression with H3F3A-ATRX mutants (loss of at least one histone-marks in 87.5 % (14/16) cases) versus wild-types (loss of at least one histone-marks in 75 % (6/8) cases) was seen. The present study highlights for the first time combinatorial loss of one or more histone-trimethylation marks associated with majority of pediatric GBMs and the finding suggests significant role of histone-code in the molecular biology that underlies pediatric GBMs. Hence therapies for patients with

particular combinations of histone modifications present opportunity to design innovative patient-tailored treatment protocols.

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

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

67: Prakash S, Mandal P. Etiology-based classification - the way forward for psychiatry. Acta Psychiatr Scand. 2015 Feb 20. doi: 10.1111/acps.12404. [Epub ahead of print] PubMed PMID: 25702902.

68: Prakash S, Mandal P. Psychiatry's dilemma: a poorly valid symptom based classification versus a yet infantile neuroscience based classification. Asian J Psychiatr. 2015 Feb;13:83-4. doi: 10.1016/j.ajp.2014.12.003. Epub 2014 Dec 10. PubMed PMID: 25548096.

69: Prasad GL, Gupta DK, Mahapatra AK, Borkar SA, Sharma BS. Surgical results of growing skull fractures in children: a single centre study of 43 cases. Childs Nerv Syst. 2015 Feb;31(2):269-77. doi: 10.1007/s00381-014-2529-x. Epub 2014 Sep 17. PubMed PMID: 25227164.

PURPOSE: Growing skull fractures are rare complications of traumatic skull fractures in children. The authors aim to share their experience in management of such lesions and analyse clinicoradiological features, surgical management and outcome in addition to prognostication factors.

MATERIALS AND METHODS: Retrospective study performed to include patients ≤18 years operated for growing skull fractures at our trauma centre from December 2007 to February 2014.
RESULTS: Forty-three children were operated. Mean age at presentation was 4.57 years (range 7 months-18 years). Mean duration of onset of symptoms from initial trauma was 3.34 months (2 days-24 months). Mean interval from symptom onset to surgical repair was 11.6 months (1 week-15 years). Progressive non-tender scalp swelling was the most common symptom and parietal, the most common location. Duraplasty alone was performed in four patients while combined duro-cranioplasty was performed in the rest. Mean follow-up duration was 31 months (4-72 months). Subdural hygroma was associated in six cases. Two patients expired; rest all survivors had good-to-excellent cosmetic outcomes.

CONCLUSIONS: Being the second largest series to date, it adds significant valuable contribution to this topic. Poor prognostic factors were age >8 years,

females, large defects (>7 cm), severe head injury at initial trauma, defects crossing midline and delayed repair (>8 months). Delayed onset seizures and new onset/progression of pre-existing deficits can be indirect markers of evolution. Surgical repair with water-tight dural closure is the standard treatment. Emphasis on early treatment is highlighted which is probably beneficial in improving neurological deficits. Good-to-excellent outcomes are noted in majority, even in cases with delayed presentations.

70: Prasoon P, Kumar R, Gautam M, Sebastian EK, Reeta KH, Ray SB. Role of somatostatin and somatostatin receptor type 2 in postincisional nociception in rats. Neuropeptides. 2015 Feb;49:47-54. doi: 10.1016/j.npep.2014.12.002. Epub 2014 Dec 30. PubMed PMID: 25599867.

Somatostatin (SST) and the somatostatin receptor type 2 (sstr2) are expressed in the superficial part (Laminae I-III) of the dorsal horn of the spinal cord. Since the neurons in these laminae also receive nociceptive sensation from the periphery, it was hypothesized that both SST and sstr2 could be involved in the modulation of nociceptive transmission. To the best of knowledge, there are no studies on the involvement of SST and sstr2 in hind paw incision model in rats, which mimics postoperative pain in humans. Sprague-Dawley rats were subjected to hind paw incision under isoflurane anaesthesia and the resulting mechanical allodynia and thermal hyperalgesia were evaluated for 5 days. In another set of animals, the spinal cord was isolated at specified time intervals after incision and examined for SST and sstr2 expression using immunohistochemistry and immunoblotting procedures. Finally, nociceptive parameters were again evaluated in incised rats, which had received SST (400 μg/kg i.p. three times per day). Blood glucose level and locomotor activity were determined after SST treatment. Both allodynia and hyperalgesia were highest immediately after incision. Spinal SST expression increased at 2 h. A further increase was noted on day 3. Expression of sstr2 increased initially but decreased at day 1. These changes could be due to exocytosis of SST and internalization of the ligand-receptor complex. SST injection significantly attenuated mechanical allodynia but not thermal hyperalgesia. Significant change in blood glucose level or locomotor activity was absent. SST appears to contribute to postincisional pain. This finding could be of clinical relevance.

71: Praveen PA, Kumar SR, Tandon N. Type 2 diabetes in youth in South Asia. Curr Diab Rep. 2015 Feb;15(2):571. doi: 10.1007/s11892-014-0571-4. PubMed PMID: 25620404.

People of South Asian origin are at a high risk of developing diabetes compared to that of other ethnic groups. Recent evidence suggests an emerging epidemic of youth-onset type 2 diabetes (T2DM) in the region, in parallel with the childhood obesity epidemic. Many risk factors such as foetal and early-life influences, the South Asian phenotype, family history of diabetes and environment factors are responsible for the early occurrence of T2DM in South Asia. The high risk supports the need for the opportunistic screening of children and adolescents for diabetes in South Asian countries. Early detection, lifestyle modification, weight reduction and drugs are central to the care of children with T2DM. Both population-based preventive strategies and interventions targeting children and adolescents with obesity and impaired glucose tolerance are required to combat the epidemic of youth-onset T2DM in South Asia.

72: Pushker N, Batra J, Meel R, Bajaj MS, Chawla B, Ghose S. Lateral eyelid rotation flap: a novel technique for reconstruction of full thickness eyelid defect. Int Ophthalmol. 2015 Feb 12. [Epub ahead of print] PubMed PMID: 25673519.

The purpose of this study was to study anatomical, functional, and cosmetic outcomes of a novel technique, 'Lateral Eyelid Rotation Flap' for reconstruction of full thickness eyelid defect. In this prospective interventional study, 10

patients with full thickness eyelid defect measuring 1/2-2/3rd of eyelid width were included. Eyelid reconstruction was performed by single surgeon, using lateral eyelid rotation flap. Anatomic outcome was assessed by analyzing horizontal and vertical palpebral apertures (HPA and VPA), eyelid contour, and lateral canthus. Functional outcome was assessed by measuring tear film break-up time (TBUT) and Schirmer's test in both the eyes. Cosmetic outcome was evaluated by patients. Median age of patients was 56 years. Nine cases had full thickness defect following the excision of eyelid malignancy. The mean horizontal defect size was 17 ± 4.2 mm. HPA did not change significantly after surgery. VPA was statistically comparable to contralateral eye at 1-month follow-up. Lateral canthus angle recovered by 3rd month after surgery. TBUT and Schirmer's tests were comparable to contralateral eye. Eight patients graded cosmetic outcome as good to excellent. This is a new, single-stage technique for reconstruction of full thickness eyelid defects, with full thickness eyelid tissue including margin.

73: Ramanujam B, Dash D, Dabla S, Tripathi M, Srivastava MV. Epilepsia Partialis Continua as Presenting Manifestation of AIDS: A Rarity. J Int Assoc Provid AIDS Care. 2015 Feb 9. pii: 2325957415570743. [Epub ahead of print] PubMed PMID: 25667167.

Seizures, most commonly generalized tonic-clonic, are common in known human immune deficiency virus (HIV) sero-positive patients, and they usually have a focal lesion on brain imaging. However, it is very unusual to see a patient with no premorbid illness presenting with epilepsia partialis continua (EPC) and then being detected HIV seropositive with an Acquired Immune Deficiency Syndrome (AIDS)-defining illness. We report the case of a teenaged boy with no past significant history or known high-risk behavior who presented with recurrent focal seizures of 5 days' duration, EPC, and encephalopathy. His electroencephalogram showed periodic lateralized epileptiform discharges (PLEDS), and magnetic resonance imaging (MRI) of the brain showed abnormal signal changes in the right parieto-occipital cortex and thalamus, both as yet unreported in cytomegalovirus (CMV) encephalitis, which was diagnosed by the cerebrospinal fluid (CSF) analysis.

74: Ramkumar M, Sharma S, Jacob TG, Bhardwaj DN, Nag TC, Roy TS. The human trochlear and abducens nerves at different ages - a morphometric study. Aging Dis. 2014 Mar 18;6(1):6-16. doi: 10.14336/AD.2014.0310. eCollection 2015 Feb. PubMed PMID: 25657848; PubMed Central PMCID: PMC4306475.

The trochlear and abducens nerves (TN and AN) control the movement of the superior oblique and lateral rectus muscles of the eyeball, respectively. Despite their immense clinical and radiological importance no morphometric data was available from a wide spectrum of age groups for comparison with either pathological or other conditions involving these nerves. In the present study, morphometry of the TN and AN was performed on twenty post-mortem samples ranging from 12-90 years of age. The nerve samples were processed for resin embedding and toluidine blue stained thin (1µm) sections were used for estimating the total number of myelinated axons by fractionator and the cross sectional area of the nerve and the axons by point counting methods. We observed that the TN was covered by a well-defined epineurium and had ill-defined fascicles, whereas the AN had multiple fascicles with scanty epineurium. Both nerves contained myelinated and unmyelinated fibers of various sizes intermingled with each other. Out of the four age groups (12-20y, 21-40y, 41-60y and >61y) the younger groups revealed isolated bundles of small thinly myelinated axons. The total number of myelinated fibers in the TN and AN at various ages ranged from 1100-3000 and 1600-7000, respectively. There was no significant change in the cross-sectional area of the nerves or the axonal area of the myelinated nerves across the age groups. However, myelin thickness increased significantly in the AN with aging (one way ANOVA). The present study provides baseline morphometric data on the

human TN and AN at various ages.

75: Roy A, Roe MT, Neely ML, Cyr DD, Zamoryakhin D, Fox KA, White HD, Armstrong PW, Ohman EM, Prabhakaran D. Impact of Human Development Index on the profile and outcomes of patients with acute coronary syndrome. Heart. 2015 Feb;101(4):279-86. doi: 10.1136/heartjnl-2014-306389. Epub 2014 Dec 23. PubMed PMID: 25538134; PubMed Central PMCID: PMC4345920.

OBJECTIVE: To study the impact of national economic and human development status on patient profiles and outcomes in the setting of acute coronary syndrome (ACS). METHODS: We conducted a retrospective analysis of the Targeted Platelet Inhibition to Clarify the Optimal Strategy to Medically Manage Acute Coronary Syndromes trial (TRILOGY ACS) population (51 countries; 9301 patients). Outcome measures compared baseline characteristics and clinical outcomes through 30 months by 2010 country-level United Nations Human Development Indices (HDIs) and per-capita gross national income.

RESULTS: TRILOGY ACS enrolled 3659 patients from 27 very-high HDI countries, 3744 from 18 high-HDI countries and 1898 from 6 medium-HDI countries. Baseline characteristics of groups varied significantly, with the medium-HDI group having a lower mean age (63.0 years, vs 65.0 and 68.0 years for high-HDI and very-high HDI, respectively; p<0.001), lower baseline Global Registry of Acute Coronary Events risk score and lower rate of non-ST-segment elevation myocardial infarction (58.0%, vs 62.2% and 83.9% among high-HDI and very-high HDI, respectively). Medium-HDI and high-HDI patients had lower unadjusted 30-month rates for the composite of cardiovascular death/myocardial infarction/stroke (17.6%, 16.9% and 23.1% for medium-HDI, high-HDI and very-high HDI, respectively); this difference disappeared after adjusting for baseline characteristics. Adjusted HRs for the composite endpoint were lower in lower-income/middle-income countries vs upper-income/middle-income (0.791(95% CI 0.632 to 0.990)) and high-income countries (0.756 (95% CI 0.616 to 0.928)), with differences largely attributable to myocardial infarction rates.

CONCLUSIONS: Clinical patient profiles differed substantially by country HDI groupings. Lower unadjusted event rates in medium-HDI countries may be explained by younger age and lower comorbidity burden among these countries' patients. This heterogeneity in patient recruitment across country HDI groupings may have important implications for future global ACS trial design.
TRIAL REGISTRATION NUMBER: NCT00699998.

76: Sahai P, Kakkar A, Pathy S, Kumar L, Bhatla N, Chander S. Synchronous malignant mixed Müllerian tumor of the uterus with transitional cell carcinoma of the ovary. J Obstet Gynaecol Res. 2015 Feb;41(2):319-23. doi: 10.1111/jog.12510. Epub 2014 Sep 17. PubMed PMID: 25227514.

A 55-year-old woman presented with a complaint of post-menopausal bleeding per vaginum. Local examination revealed a mass, protruding from the cervical os, which detached spontaneously. An adnexal mass was felt through the pouch of Douglas on per vaginum examination. Histopathological examination of the avulsed specimen revealed a diagnosis of malignant mixed Müllerian tumor. The patient underwent surgical staging with total abdominal hysterectomy, bilateral salpingo-oophorectomy, left pelvic lymphadenectomy, infracolic omentectomy, and peritoneal wash cytology. Pathological examination revealed a second primary tumor, that is, a transitional cell carcinoma of the ovary. Both the uterine malignant mixed Müllerian tumor and the ovarian transitional cell carcinoma were staged as IA. Subsequently, the patient was treated with adjuvant chemotherapy followed by radiotherapy. The patient is in complete remission at 1 year following the treatment. Synchronous genital tract neoplasms constitute a

therapeutic challenge and necessitate an effective multimodality therapeutic approach based on meticulous pathological examination and tumor staging.

77: Sankhyan N, Lodha R, Sharma S, Menon PR, Choudhary A, Kabra SK, Gulati S. Peripheral neuropathy in children on stauvudine therapy. Indian J Pediatr. 2015 Feb;82(2):136-9. doi: 10.1007/s12098-014-1477-5. Epub 2014 May 31. PubMed PMID: 24874810.

OBJECTIVE: To assess the prevalence of peripheral neuropathy in HIV infected children (>5 y) receiving stavudine-based combination anti-retroviral treatment (ART) for more than 3 mo in a cross-sectional study.
METHODS: History, detailed neurological examination and nerve conduction studies were performed.

RESULTS: Forty children [26 boys; median age - 11.75 y, Inter quartile range (IQR): 9-16 y] were enrolled. The median duration of ART was 43 mo [IQR: 18-69 mo]. The nerve conduction studies were abnormal in four children (10 %). Symptomatic distal sensory polyneuropathy was present in two children, asymptomatic distal sensory polyneuropathy and subclinical distal sensory polyneuropathy was present in one child each.
CONCLUSIONS: Distal sensory polyneuropathy is a potential problem in children on stavudine based ART. Children on stavudine based ART need periodic clinical and electrophysiological screening for its early detection.

78: Saxena R, Vashist P, Tandon R, Pandey RM, Bhardawaj A, Menon V, Mani K. Prevalence of myopia and its risk factors in urban school children in Delhi: the North India Myopia Study (NIM Study). PLoS One. 2015 Feb 26;10(2):e0117349. doi: 10.1371/journal.pone.0117349. eCollection 2015. PubMed PMID: 25719391; PubMed Central PMCID: PMC4342249.

PURPOSE: Assess prevalence of myopia and identify associated risk factors in urban school children.
METHODS: This was a cross-sectional study screening children for sub-normal vision and refractive errors in Delhi. Vision was tested by trained health workers using ETDRS charts. Risk factor questionnaire was filled for children with vision <6/9.5, wearing spectacles and for a subset (10%) of randomly selected children with normal vision. All children with vision <6/9.5 underwent cycloplegic refraction. The prevalence of myopia <-0.5 diopters was assessed. Association of risk factors and prevalence of myopia was analyzed for children with myopia and randomly selected non myopic children and adjusted odds ratio values for all risk factors were estimated.
RESULTS: A total number of 9884 children were screened with mean age of 11.6 + 2.2 years and 66.8% boys. Prevalence of myopia was 13.1% with only 320 children (24.7%) wearing appropriate spectacles. Mean myopic spherical error was -1.86 + 1.4 diopters. Prevalence of myopia was higher in private schools compared to government schools ($p<0.001$), in girls vs. boys ($p = 0.004$) and among older (> 11 years) children ($p<0.001$). There was a positive association of myopia with studying in private schools vs. government schools ($p<0.001$), positive family history ($p< 0.001$) and higher socio-economic status ($p = 0.037$). Positive association of presence of myopia was observed with children studying/reading > 5 hours per day ($p < 0.001$), watching television > 2 hours / day ($p < 0.001$) and with playing computer/video/mobile games ($p < 0.001$). An inverse association with outdoor activities/playing was observed with children playing > 2 hours in a day.
CONCLUSION: Myopia is a major health problem in Indian school children. It is important to identify modifiable risk factors associated with its development and try to develop cost effective intervention strategies.

79: Sen S, Lyngdoh AD, Pushker N, Meel R, Bajaj MS, Chawla B. Impression cytology diagnosis of ulcerative eyelid malignancy. Cytopathology. 2015 Feb;26(1):26-30.

doi: 10.1111/cyt.12133. Epub 2014 Feb 7. PubMed PMID: 24750348.

OBJECTIVE: The utility of impression cytology in ocular diseases has predominantly been restricted to the diagnosis of dry eye, limbal stem cell deficiency and conjunctival neoplasias. Its role in malignant eyelid lesions remains largely unexplored. Although scrape cytology is more popular for cutaneous lesions, impression cytology, being non-traumatic, has an advantage in small and delicate areas such as the eyelid. The present study has been designed to evaluate its role in the diagnosis and management of malignant eyelid lesions.
METHODS: Thirty-two histopathologically proven malignant eyelid lesions diagnosed over a 2-year period, including 13 basal cell carcinomas, 11 sebaceous carcinomas, four squamous cell carcinomas, two malignant melanomas and two poorly differentiated carcinomas, formed the study group.
RESULTS: The results of impression cytology were compared with those of histopathology in the study group and with an age- and sex-matched group of benign cases as controls. The sensitivity of impression cytology was 84% (27/32) for the diagnosis of malignancy and 28% (9/32) for categorization of the type of malignancy.
CONCLUSIONS: Impression cytology is a simple, useful, non-invasive technique for the detection of malignant ulcerative eyelid lesions. It is especially useful as a follow-up technique for the detection of recurrences.

80: Seth R, Singh A. Leukemias in Children. Indian J Pediatr. 2015 Feb 15. [Epub ahead of print] PubMed PMID: 25680783.

Childhood cancers are rare but an important cause of morbidity and mortality in children younger than 15y of age. Common childhood malignancies include leukemias (commonest, 30-40%), brain tumors (20%) and lymphoma (12%) followed by neuroblastoma, retinoblastoma and tumors arising from soft tissues, bones and gonads. Leukemias, the commonest childhood cancer, arise from clonal proliferation of abnormal hematopoietic cells leading to disruption of normal marrow function and marrow failure. The various clinical manifestations of leukemia result from unregulated proliferation of the malignant clone and bone marrow failure. There are two main subtypes, the commoner, acute lymphoblastic leukemia (ALL) and acute myeloid leukemia (AML). A small proportion may have chronic myeloid leukemia (CML) and juvenile myelomonocytic leukemia (JMML). A systematic approach is necessary for diagnosis. Treatment should be initiated as early as possible to avoid complications. A timely referral to a cancer center must be done if facilities for diagnosis/treatment, management of complications and provision for supportive care are not available at the treating center.

PMID: 25680783 [PubMed - as supplied by publisher]

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

82: Sharma A, Prasad K, Padma MV, Tripathi M, Bhatia R, Singh MB, Sharma A. Prevalence of triggering factors in acute stroke: hospital-based observational cross-sectional study. J Stroke Cerebrovasc Dis. 2015 Feb;24(2):337-47. doi: 10.1016/j.jstrokecerebrovasdis.2014.08.033. Epub 2014 Nov 22. PubMed PMID: 25444031.

BACKGROUND: Although chronic risk factors for stroke are reasonably well understood, the acute precipitants, or triggers, of stroke relatively remain understudied. Identification of particular time periods during which stroke risk is elevated could prove a valuable strategy to reduce stroke incidence through the introduction of appropriate prevention strategies during a period of vulnerability. The aim of this study was to determine the prevalence of trigger

factors in acute stroke patients and to investigate the association of the presence of trigger factors with initial stroke severity at presentation (National Institutes of Health Stroke Scale (NIHSS) score in ischemic stroke patients and volume of hematoma in hemorrhagic stroke patients).

METHODS: This was a hospital-based observational cross-sectional study. All consecutive patients of recent stroke (reporting within 1 week of stroke onset) were included in the study. This study examined the prevalence of 11 predefined triggers (including both well-established and potential triggers) in predefined hazard periods.

RESULTS: In total, 290 patients participated in the study. Presence of any trigger factor out of 11 trigger factors studied was seen in 128 (44.2%) of 290 patients, 104 (46.4%) of 224 ischemic stroke patients and 24 (36.4%) of 66 hemorrhagic stroke patients. Psychological stress was present in 51 (17.6%) patients, among psychological stress: stressful life event in 34 (11.7%), negative affect in 17 (5.9%), acute alcohol abuse in 31 (10.7%), clinical infections in 24 (8.3%), and anger and coffee intake in 12 (4.1%) each. Sexual activity, trauma, and surgery were present in 5 (1.7%), 4 (1.4%), and 5 (1.7%) patients, respectively. None of the patients reported exposure to recreational drug abuse, startling event, and unusual vigorous physical exertion in hazard periods. Two or more trigger factors were present in 16 (5.5%) patients. Clinical variables independently associated with the presence of trigger factors in acute stroke after multivariate analysis were younger age (<60 years) and stroke severity at initial presentation (ie, higher NIHSS score and higher hematoma volume).

CONCLUSIONS: Trigger factors were present in 44.2% of acute stroke patients. Psychological stress (17.6%), acute alcohol abuse (10.7%), and clinical infections (8.3%) were the most common triggers. Younger age (<60 years) and stroke severity at initial presentation were independently associated with the presence of trigger factors in acute stroke patients. However, these associations need to be further explored in community-based studies.

83: Sharma N, Suri K, Sehra SV, Titiyal JS, Sinha R, Tandon R, Vajpayee RB. Collagen cross-linking in keratoconus in Asian eyes: visual, refractive and confocal microscopy outcomes in a prospective randomized controlled trial. Int Ophthalmol. 2015 Feb 24. [Epub ahead of print] PubMed PMID: 25708282.

To evaluate the safety and efficacy of collagen cross-linking (CXL) in the treatment of keratoconus. A prospective randomized sham-controlled clinical trial was undertaken and 43 eyes with moderate to severe keratoconus were randomized into two groups that is the treatment (n = 23) and the sham (n = 20) group. CXL was performed with riboflavin (0.1 in 20 % dextran) followed by UVA radiation (365 nm, 3 mW/cm(2), 30 min). In the sham group, only riboflavin was administered without UVA radiation. Uncorrected distance visual acuity (UDVA), corrected distance visual acuity, intraocular pressure, corneal thickness, keratometry, endothelial count, confocal microscopy were evaluated at baseline and at 1 week, 1, 3, and 6 months. In cases where CXL was done, UDVA improved by mean 0.11 ± 0.06 logMAR units at 6 months (P = 0.01). The refractive cylinder and spherical equivalent decreased by mean of 0.62 D (P = 0.01) and 0.5 D (P = 0.19), respectively. Ultrasonic central corneal thickness decreased by mean 22.7 ± 10.3 μm (P = 0.01). The maximum and minimum keratometry decreased by mean of 1.2 ± 0.8 D (P = 0.01) and 0.83 ± 1.2 D (P = 0.39), respectively. The specular count and intraocular pressure did not show any significant change. In the sham group, no significant change was observed in any parameter. Confocal analysis showed that the epithelial healing was complete at 1 week after crosslinking. The sub-epithelial plexus showed loss of nerve plexus at 1 month, regeneration of nerve fibers which started at 3 months and was complete at 6 months. The anterior

stroma showed loss of keratocytes with honeycomb oedema and apoptotic bodies till 3 months. The regeneration of keratocytes started at 3 months and was complete at 6 months of follow-up. Collagen cross-linking is an effective procedure to halt progression in keratoconus. The confocal microscopic changes correlate with the outcomes in the treatment and the sham groups.

PMID: 25708282 [PubMed - as supplied by publisher]

84: Sharma S, Gogia V, Garg P, Venkatesh P, Gupta S, Sharma Y. INNOVATIVE MULTIPLANAR RECONSTRUCTION AND VOLUME-RENDERED COMPUTED TOMOGRAPHY IN THE ASSESSMENT OF SCLERAL BUCKLE-RELATED COMPLICATIONS. Retina. 2015 Feb 24. [Epub ahead of print] PubMed PMID: 25719983.

PURPOSE:: To describe the role of multiplanar reconstruction and three-dimensional volume-rendered imaging in the assessment of silicon-based scleral buckle (SB)-related complications.

METHODS:: Five eyes of five patients with SB-related complications where the history, surgical notes, and clinical examination proved inconclusive were included. Unenhanced axial orbital computed tomography images of all patients were acquired parallel to orbitomeatal line, and images were reviewed in orthogonal planes. The volume rendition of the imaged volume was evaluated in various tilts, with special reference to the spatial relationship of the band-buckle to the globe and bony orbit. All patients underwent imaging-assisted SB removal.

RESULTS:: Imaging assisted in in vivo localization of the obscure band or buckle in all five eyes. Band was seen as hyperdense structure encircling whole of the globe, whereas buckle was seen as segmental, broad, hyperdense structure with scleral indentation. Presence of SB was identified in three patients, and globe integrity was shown in the other two. Abnormal anterior displacement of band and buckle was demonstrated in three cases on volume-rendered imaging in relation to lateral orbital rim. Focal exuberant soft-tissue proliferation around the buckle was present in all patients, suggesting chronic inflammation and infection. Successful removal of band and buckle could be achieved, and all patients were relieved of their preoperative complaints. No complication occurred during intraoperative and postoperative period.

CONCLUSION:: Use of multiplanar reconstruction and three-dimensional volume-rendered computed tomography imaging played a pivotal role in surgical success.

85: Sharma SK, Goel A, Gupta SK, Mohan K, Sreenivas V, Rai SK, Singh UB, Chauhan LS. Prevalence of tuberculosis in Faridabad district, Haryana State, India. Indian J Med Res. 2015 Feb;141(2):228-35. PubMed PMID: 25900959; PubMed Central PMCID: PMC4418160.

BACKGROUND & OBJECTIVES: Epidemiological information on tuberculosis (TB) has always been vital for planning control strategies. It has now gained further importance for monitoring the impact of interventions to control the disease. The present study was done to estimate the prevalence of bacillary tuberculosis in the district of Faridabad in Haryana State of India among persons aged older than 15 years.

METHODS: In this cross-sectional study, residents of Faridabad district were assessed for the prevalence of tuberculosis. Twelve rural and 24 urban clusters with estimated populations of 41,106 and 64,827 individuals were selected for the study. Two sputum samples were collected from individuals found eligible for inclusion. The samples were also cultured by modified Petroff's method and were examined for growth of Mycobacterium tuberculosis once a week for eight weeks. A person found positive by smear and/or culture was identified as sputum-positive pulmonary TB positive.

RESULTS: A total of 105,202 subjects were enumerated in various clusters of the Faridabad district. There were 50,057 (47.58%) females and 55,145 (52.42%) males. Of these 98,599 (93.7%) were examined by the study group (47,976 females; 50,623 males). The overall prevalence of sputum smear or culture positive pulmonary tuberculosis in our study was found to be 101.4 per 100,000 population.

INTERPRETATION & CONCLUSIONS: The present results showed that the prevalence of sputum positive pulmonary tuberculosis was higher in Faridabad district than the notification rates recorded by the World Health Organization for the contemporary period, a disparity that could be explained by a difference in case detection strategy employed for the study.

86: Shivashankar R, Kirk K, Kim WC, Rouse C, Tandon N, Narayan KM, Ali MK. Quality of diabetes care in low- and middle-income Asian and Middle Eastern countries (1993-2012)--20-year systematic review. Diabetes Res Clin Pract. 2015 Feb;107(2):203-23. doi: 10.1016/j.diabres.2014.11.004. Epub 2014 Dec 3. Review. PubMed PMID: 25529849.

OBJECTIVE: To assess the extent to which people with diabetes in low- and middle-income countries (LMIC) of Asia and the Middle East met evidence-based care recommendations through a systematic review of published literature.

METHODS: Electronic searches of Medline and Embase were carried out for studies assessing quality of care among people with diabetes in Asia and the Middle East between 1993 and 2012. Benchmarking against American Diabetes Association guidelines, we reported level and proportions meeting recommended risk factor control (glycated hemoglobin [HbA1c], blood pressure, and low density lipoprotein-cholesterol [LDL]) and preventive care processes across different settings.

RESULTS: One hundred and fifteen publications met eligibility for inclusion (91 reported risk factor control, 7 reported preventive processes, and 17 reported both). Only China, Thailand, Malaysia and Philippines had nationally representative data. Mean HbA1c (6.5-11% or 48-97 mmol/mol), SBP (120-152 mm Hg), and LDL (2.4-3.8 mmol/l) varied greatly. Despite variation in availability of data, studies consistently showed that recommended care goals were not being achieved.

CONCLUSIONS: The practice of auditing and benchmarking against evidence-based guidelines appears to be uncommon in Asia and the Middle East and there was heterogeneity of reporting across studies, populations, and methods used. The available data showed inadequate care.

87: Sikri K, Batra SD, Nandi M, Kumari P, Taneja NK, Tyagi JS. The pleiotropic transcriptional response of Mycobacterium tuberculosis to vitamin C is robust and overlaps with the bacterial response to multiple intracellular stresses. Microbiology. 2015 Apr;161(Pt 4):739-53. doi: 10.1099/mic.0.000049. Epub 2015 Feb 2. PubMed PMID: 25645949.

Mycobacterium tuberculosis (Mtb) owes its success as a pathogen in large measure to its ability to exist in a persistent state of 'dormancy' resulting in a lifelong latent tuberculosis (TB) infection. An understanding of bacterial adaptation during dormancy will help in devising approaches to counter latent TB infection. In vitro models have provided valuable insights into bacterial adaptation; however, they have limitations because they do not disclose the bacterial response to the intracellular environment wherein the bacteria are simultaneously exposed to multiple stresses. We describe the pleiotropic response of Mtb in the vitamin C (vit C) model of dormancy developed in our laboratory. Vit C mediates a rapid regulation of genes representing ~14% of the genome in

Mtb cultures. The upregulated genes were better represented in lipid, intermediary metabolism and regulatory protein categories. The downregulated genes mainly related to virulence, detoxification, information pathways and cell wall processes. A comparison of this response to that in other models indicates that vit C generates a multiple-stress environment for axenic Mtb cultures that resembles a macrophage-like environment. The bacterial response to vit C resembles responses to gaseous stresses such as hypoxia and nitric oxide, oxidative and nitrosative stresses, nutrient starvation and, notably, the activated macrophage environment itself. These responses demonstrate that the influence of vit C on Mtb gene expression extends well beyond the DevR dormancy regulon. A detailed characterization of the response to vit C is expected to disclose useful strategies to counter the adaptive mechanisms essential to Mtb dormancy.

88: Singh B, Kedia S, Konijeti G, Mouli VP, Dhingra R, Kurrey L, Srivastava S, Pradhan R, Makharia G, Ahuja V. Extraintestinal manifestations of inflammatory bowel disease and intestinal tuberculosis: Frequency and relation with disease phenotype. Indian J Gastroenterol. 2015 Jan;34(1):43-50. doi: 10.1007/s12664-015-0538-7. Epub 2015 Feb 7. PubMed PMID: 25663290.

BACKGROUND: Extraintestinal manifestations (EIMs) in inflammatory bowel disease (IBD) including ulcerative colitis (UC) and Crohn's disease (CD), as well as intestinal tuberculosis (ITB) from Asia, are underreported. We, therefore, describe the prevalence of EIMs in Indian IBD and ITB patients and study their relationship with disease extent and severity in IBD.
METHODS: This retrospective single-center study included all IBD and ITB patients evaluated from January 2005 to July 2012. Disease profile and frequencies of arthropathies (peripheral and central) and ocular (episcleritis, iritis/uveitis), oral (aphthous stomatitis), skin (erythema nodosum, pyoderma gangrenosum, psoriasis), hepatobiliary (primary sclerosing cholangitis), and thromboembolic manifestations were analyzed.
RESULTS: Of 1,652 patients (1146 UC, 303 CD, 203 ITB), frequency of any EIM was 33.2 %, 38.3 %, and 14.3 % in UC, CD, and ITB patients, respectively. Thromboembolism was more common among UC patients with pancolitis than proctitis ($p < 0.001$) and left-sided colitis ($p = 0.02$). Primary sclerosing cholangitis was seen in 0.4 % UC patients. Steroid-dependent UC patients had higher frequency of any EIM, peripheral arthropathy, or thromboembolism than patients with no or infrequent steroid requirement ($p < 0.05$). Peripheral arthropathy ($p = 0.02$), erythema nodosum ($p = 0.01$), and aphthous stomatitis ($p = 0.004$) were more common with CD than with UC patients. Patients with colonic CD had higher frequency of peripheral arthropathy, any EIM, and multiple EIMs than ileal or ileocolonic disease ($p < 0.05$). Relative to ITB, CD patients had higher frequencies of peripheral arthropathy ($p < 0.001$), aphthous stomatitis ($p = 0.01$), any EIM ($p < 0.001$), and multiple EIMs ($p < 0.001$).
CONCLUSIONS: In Indian IBD and ITB patients, EIMs appear to be related to disease severity in UC and disease location in CD and are significantly more common in CD than in ITB. Overall prevalence of EIMs in these patients is similar to that of the West.

89: Singh D, Saxena R, Sinha R, Titiyal JS. Stereoacuity changes after laser in situ keratomileusis. Optom Vis Sci. 2015 Feb;92(2):196-200. doi: 10.1097/OPX.0000000000000468. PubMed PMID: 25951479.

PURPOSE: To study changes in near and distance stereoacuity after laser in situ keratomileusis (LASIK).
METHODS: A prospective interventional study was conducted at an apex tertiary care ophthalmology center in India. Near and distance stereoacuity was tested in 40 patients (80 eyes) who underwent LASIK for myopic correction and got unaided vision of 0.67 or better in each eye. Stereoacuity was tested with best spectacle correction before LASIK, and post-LASIK stereoacuity was tested with unaided eye

near and distance Randot tests.

RESULTS: Forty patients (80 eyes) had a mean (±SD) pre-LASIK refractive error of -4.70 (±1.72) DS OD and -4.59 (±1.58) DS OS and a mean (±SD) anisometropia of 0.55 (±0.51) DS. The median pre-LASIK near stereoacuity was 70 arcsec and distance stereoacuity was 200 arcsec, both of which improved after LASIK to 30 and 60 arcsec, respectively ($p < 0.001$, both). Amount of refractive error was not associated with stereoacuity but anisometropia of greater than or equal to 1 diopter had significantly worse distance stereoacuity in both the pre-LASIK and post-LASIK period. The post-LASIK near stereoacuity and distance stereoacuity were strongly associated ($r = 0.706$, $p < 0.001$) unlike the change in stereoacuity.

CONCLUSIONS: Near and distance stereoacuity shows significant improvement after LASIK. Stereoacuity is associated with the degree of anisometropia but not the amount of refractive error corrected.

90: Singh H, Patel CD, Sharma P, Naik N, Singh S, Narang R. Does perfusion pattern influence stress-induced changes in left ventricular mechanical dyssynchrony on thallium-201-gated SPECT myocardial perfusion imaging? J Nucl Cardiol. 2015 Feb;22(1):36-43. doi: 10.1007/s12350-014-9979-0. Epub 2014 Aug 22. PubMed PMID: 25145635.

BACKGROUND: The relationship between perfusion pattern and stress-induced changes in left ventricular mechanical dyssynchrony (LVMD) on stress-rest thallium-201-gated SPECT myocardial perfusion imaging (Tl-201 SPECT MPI) is not clear. The aim of the study is to assess the relation of perfusion pattern with stress-induced changes in LVMD on Tl-201 MPI.

METHODS: Data of 194 patients who underwent exercise-rest Tl-201 MPI between January to December 2012 at our institute was retrospectively evaluated. Institute Ethical committee approval was obtained. Fifty patients who underwent Tl-201 MPI for suspected CAD and had normal LV perfusion and function on MPI were taken as normal group. Patients with perfusion abnormalities (n = 144) were divided into three groups: ischemia (n = 66), infarct (n = 32), and mixed group (n = 46; ischemia and infarct both). Summed stress score, summed rest score, summed difference score (SDS), and LV ejection fraction (EF) were evaluated. Two LVMD parameters, phase standard deviation (PSD) and phase histogram bandwidth (PHB), were assessed in post-stress and rest MPI images. ΔPSD (post-stress PSD - rest PSD) and ΔPHB (post-stress PHB - rest PHB) were calculated to measure stress-induced changes in LVMD.

RESULTS: In all the groups, mean post-stress LVMD parameters were lower as compared to LVMD parameters at rest. Post-stress PSD was significantly lower than rest PSD in all groups. Similar trend was noted with PHB values also, but it was statistically significant in the normal and ischemia group only. Post-stress worsening of at least one of the LVMD parameters was noted in 28 patients and all these patients had perfusion abnormalities. But on subgroup analysis, no difference was found in proportion of patients showing post-stress worsening of LVMD between ischemia (13.6%), infarct (25%), and mixed (23.6%) groups. No significant correlation was found between ΔPSD/ΔPHB and ΔLVEF/SDS in any group.

CONCLUSION: LV mechanical dyssynchrony parameters are smaller in post-exercise stress as compared to rest on Tl-201 MPI, regardless of perfusion pattern. Stress-induced worsening of LV dyssynchrony was observed only in patients with perfusion abnormalities, but this is not related to the type of perfusion abnormality.

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

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

92: Singh S, Rai PK, Chau R, Ravi AK, Neilan BA, Asthana RK. Temporal variations in microcystin-producing cells and microcystin concentrations in two fresh water ponds. Water Res. 2015 Feb 1;69:131-42. doi: 10.1016/j.watres.2014.11.015. Epub 2014 Nov 18. PubMed PMID: 25463934.

The relationship between microcystin production, microcystin-producing cyanobacteria, including Microcystis spp., and various biological and physicochemical parameters in Sankuldhara and Lakshmikund, situated in the same geographical area was studied over a period of 1.5 years. Seasonal variation in cyanobacterial 16S rRNA, Microcystis spp. 16S rRNA, mcyA and mcyB genes were quantitatively determined by real-time PCR. Microcystis was the dominant microcystin producer in both study sites constituting 67% and 97% of the total microcystin-producing cyanobacteria at Sankuldhara and Lakshmikund, respectively. Microcystin concentrations were 2.19-39.60 µg/L and 15.22-128.14 µg/L at Sankuldhara and Lakshmikund, respectively, as determined by LC-MS. Principal component analysis revealed a strong positive correlation between microcystin concentration and the copy number of mcyA and mcyB, chlorophyll a and cyanobacterial biomass at both sites. The higher microcystin concentrations in Lakshmikund pond were attributed to the high copy number of mcy genes present coupled with the pond's eutrophication status, as indicated by high total algal biomass, high chlorophyll a content, high nutrient load and low DO. Therefore, a significant difference in microcystin concentrations, correlating with these various biological and physicochemical parameters, confirms the importance of local environmental variables in the overall regulation of microcystins production.

93: Rajpal, Singh UB, Mohapatra S, Wagh VK, Porwal C, Kaushik A. Association of Mycobacterium tuberculosis in the causation of Eales' disease: an institutional experience. Indian J Med Microbiol. 2015 Feb;33 Suppl:43-5. doi: 10.4103/0255-0857.148829. PubMed PMID: 25657155.

BACKGROUND: Eales' disease is an idiopathic retinal vasculitis characterized by retinal inflammation, ischemia, and neo-vascularisation. It frequently causes massive vitreous haemorrhage and retinal detachment leading to blindness. Although the exact etiology is unknown, this condition is considered to be a consequence of hypersensitivity reaction to tubercular protein due to previous Mycobacterium tuberculosis (M. tuberculosis) infection. This study is aimed at the detection of association of M. tuberculosis in patients with Eales' disease.

MATERIALS AND METHODS: A prospective case-control study was undertaken in 65

clinically diagnosed cases of Eales' disease. Patients with proliferative diabetic retinopathy, neo-vascular proliferation, macular oedema, premacular fibrosis and tractional retinal detachment were taken as controls. M. tuberculosis DNA was detected (MPT64 gene by polymerase chain reaction, PCR) in patients with Eales' disease. Clinical symptoms along with tuberculin skin test (TST) and erythrocyte sedimentation rate (ESR) were used as gold standard for comparing results of PCR.

RESULT: PCR positivity was found in 12 (38.7%) patients with Eales' disease. The PCR positivity was significantly associated with the patients with high TST reading and high ESR values.
CONCLUSION: Patients with a high TST reading and ESR value and a positive PCR in vitreous samples have a high likelihood of having M. tuberculosis as an etiology.

PMID: 25657155 [PubMed - in process]

94: Sinha A, Bagga A. Maintenance dialysis in developing countries. Pediatr Nephrol. 2015 Feb;30(2):211-9. doi: 10.1007/s00467-013-2745-8. Epub 2014 Jan 28. PubMed PMID: 24469439.

Patients with end-stage renal disease require renal replacement therapy with maintenance hemodialysis or chronic peritoneal dialysis while awaiting transplantation. In addition to economic issues and limited state funding for advanced health care, the lack of trained medical personnel contributes to scarce dialysis facilities for children in developing countries. The establishment and operation of a hemodialysis unit with multidisciplinary facilities is both cost- and labor-intensive. Hemodialysis is usually carried out three times a week in a hospital setting and affects the curricular and extracurricular activities of the patient. Chronic ambulatory or cyclic peritoneal dialysis is technically simpler and allows better nutrition and growth, but is expensive for the majority of patients who must pay out of their own pocket. Multiple initiatives to enhance the training of pediatricians and nurses in skills related to initiating and managing patients on maintenance dialysis have resulted in the improved survival of children with end-stage renal disease. Support from state governments and philanthropic institutions have helped in establishing pediatric nephrology units that are equipped to provide renal replacement therapy for children.

95: Tarique M, Naqvi RA, Santosh KV, Kamal VK, Khanna N, Rao DN. Association of TNF-α-(308(GG)), IL-10(-819(TT)), IL-10(-1082(GG)) and IL-1R1(+1970(CC)) genotypes with the susceptibility and progression of leprosy in North Indian population. Cytokine. 2015 May;73(1):61-5. doi: 10.1016/j.cyto.2015.01.014. Epub 2015 Feb 16. PubMed PMID: 25697140.

Leprosy is an infectious disease caused by M. leprae. We analyzed 48 cytokine polymorphisms in 13 (pro as well as anti-inflammatory) cytokine genes using PCR-SSP assay in 102 leprosy patients and 120 healthy controls with intent to find out a link between cytokine polymorphisms and disease susceptibility. TNF-α (-308) GG, IL-10 (-819) TT, IL-10 (-1082) GG and IL1R (+1970) CC genotypes are found to be predominant (p=0.01, p=0.02, p=0.0001 and p=0.001, respectively) in both tuberculoid as well as lepromatous leprosy patients. This observation suggests these genotypes as play the central role(s) in the progression of disease. CBA assay demonstrates the varied serum concentration of these cytokines with respect to their genotypes. The above genotypes appeared as high producer genotypes in our study. Even in presence of high produce genotypes, TNF-α level are found to be affected/masked by the presence of IL-10 in leprosy patients. Expressional masking of TNF-α is associated with the expression of IL-10 in these patients. This is one the negative impact of SNP-SNP interaction in leprosy patients. Therefore, we can conclude that cytokine gene polymorphisms determine the predisposition to the leprosy progression.

96: Tembhre MK, Parihar AS, Sharma VK, Sharma A, Chattopadhyay P, Gupta S. Alteration in regulatory T cells and programmed cell death 1-expressing regulatory T cells in active generalized vitiligo and their clinical correlation. Br J Dermatol. 2015 Apr;172(4):940-50. doi: 10.1111/bjd.13511. Epub 2015 Feb 27. PubMed PMID: 25376752.

BACKGROUND: Vitiligo is an autoimmune depigmentation disease, and defects in regulatory T cells (Tregs) have been proposed in the pathogenesis of generalized vitiligo (GV). However, the role of programmed cell death (PD)1(+) Tregs has not been studied.

OBJECTIVES: To investigate the status of Tregs, PD1(+) Tregs and associated parameters in active GV (aGV) during the first episode of disease attack and to establish the clinical correlation.
METHODS: The percentages of circulating Tregs, PD1(+) Tregs and CD3(+) CD4(+) PD1(+) T cells were evaluated in 50 patients with aGV and 51 controls. Expression levels of FOXP3, TGFB1, CTLA4 and genes for chemokine receptors (CCR4, CCR7) and their ligands (CCL21, CCL22) were quantified in peripheral blood and in lesional, perilesional, nonlesional and normal skin sections. The corresponding proteins were immunolocalized in tissue of aGV.

RESULTS: The percentage of Tregs was decreased (P = 0·001) and that of PD1(+) Tregs increased (P = 0·001) in peripheral blood of patients with aGV compared with controls. The abundance of TGFB1 and CCL21 mRNA was significantly decreased in the peripheral blood of patients with aGV. Significant differences in forkhead box P3, transforming growth factor-β and CCL21 protein expression were found in skin sections.

CONCLUSIONS: Deficiency in Treg frequency and decreased expression of Treg-associated parameters (TGFB and CCL21) suggested a possible defect in Tregs that may alter their suppression function and skin homing in aGV. The increased PD1(+) Tregs suggests that the PD1/PD ligand pathway may be involved in aGV and may have a role in Treg exhaustion. Further study is required to delineate the effect of PD1 in regulating Treg function in aGV.

97: Teo AR, Fetters MD, Stufflebam K, Tateno M, Balhara Y, Choi TY, Kanba S, Mathews CA, Kato TA. Identification of the hikikomori syndrome of social withdrawal: Psychosocial features and treatment preferences in four countries. Int J Soc Psychiatry. 2015 Feb;61(1):64-72. doi: 10.1177/0020764014535758. Epub 2014 May 27. PubMed PMID: 24869848.

BACKGROUND: Hikikomori, a form of social withdrawal first reported in Japan, may exist globally but cross-national studies of cases of hikikomori are lacking.
AIMS: To identify individuals with hikikomori in multiple countries and describe features of the condition.
METHOD: Participants were recruited from sites in India, Japan, Korea and the United States. Hikikomori was defined as a 6-month or longer period of spending almost all time at home and avoiding social situations and social relationships, associated with significant distress/impairment. Additional measures included the University of California, Los Angeles (UCLA) Loneliness Scale, Lubben Social Network Scale (LSNS-6), Sheehan Disability Scale (SDS) and modified Cornell Treatment Preferences Index.
RESULTS: A total of 36 participants with hikikomori were identified, with cases detected in all four countries. These individuals had high levels of loneliness (UCLA Loneliness Scale M = 55.4, SD = 10.5), limited social networks (LSNS-6 M = 9.7, SD = 5.5) and moderate functional impairment (SDS M = 16.5, SD = 7.9). Of them 28 (78%) desired treatment for their social withdrawal, with a significantly higher preference for psychotherapy over pharmacotherapy, in-person over telepsychiatry treatment and mental health specialists over primary care

providers. Across countries, participants with hikikomori had similar generally treatment preferences and psychosocial features.
CONCLUSION: Hikikomori exists cross-nationally and can be assessed with a standardized assessment tool. Individuals with hikikomori have substantial psychosocial impairment and disability, and some may desire treatment.

98: Yadav R, Jain D, Mathur SR, Iyer VK. Cytomorphology of neuroendocrine tumours of the gallbladder. Cytopathology. 2015 Feb 18. doi: 10.1111/cyt.12239. [Epub ahead of print] PubMed PMID: 25689921.

OBJECTIVE: Gallbladder neuroendocrine tumours (GB-NETs) are rare and account for 0.5% of all NETs. GB-NETs have an aggressive behaviour, which depends on the tumour grade. The cytomorphological spectrum of these tumours has never been described in detail. The present study evaluates the cytological features of GB-NETs and grades them according to the World Health Organization (WHO) classification. Furthermore, the expression of thyroid transcription factor-1 (TTF-1) has not been investigated previously in GB-NETs, although found in a subset of extrapulmonary NETs.
METHODS: Twenty cases of GB-NET among 875 gallbladder carcinomas diagnosed by ultrasound-guided fine needle aspiration cytology (FNAC) over a period of nearly 4 years were studied. The following parameters were evaluated: architectural pattern, nuclear chromatin, nucleoli, mitoses, necrosis, moulding, apoptosis and smudge cells. Cases were categorized into well-differentiated (grades 1 and 2), small cell carcinoma (SCC) (grade 3) and mixed adenoneuroendocrine carcinoma. Nuclear positivity for TTF-1 was considered as positive.
RESULTS: Morphologically, tumour cells were mainly arranged in rosettes in the well-differentiated category; sudden anisonucleosis and rare nuclear moulding with or without mitotic figures were other features. Eleven cases of SCC showed prominent nuclear moulding with frequent smudge cells, mitoses, apoptosis and necrosis. Three mixed adenoneuroendocrine carcinomas showed papillary fragments and an acinar arrangement of tumour cells. Four of the nine SCCs in which TTF-1 was evaluated on de-stained smears showed nuclear positivity. Histopathology was available in two SCCs and showed morphology similar to FNAC.
CONCLUSION: Cytology plays an important role in the diagnosis of GB-NETs for appropriate subtype characterization, which is necessary for the prognostication of these tumours. TTF-1 may not be used for the differentiation of gallbladder SCCs from pulmonary SCCs.

99: Yadav S, Dogra S, De D, Saikia UN. Orofacial granulomatosis responding to weekly azithromycin pulse therapy. JAMA Dermatol. 2015 Feb;151(2):219-20. doi: 10.1001/jamadermatol.2014.3730. PubMed PMID: 25494221.