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List of publications of AIIMS, New Delhi for the month of June, 2015
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1: Acharya SK, Paul SB. Editorial: hepatocellular carcinoma--a rare complication of hepatic venous outflow tract obstruction---authors' reply. Aliment Pharmacol Ther. 2015 Jun;41(11):1213-4. doi: 10.1111/apt.13209. PubMed PMID: 25939465.

2: Agarwal B, Gagnani S, Roychoudhury A, Bhutia O. Optimum use of platelet-rich fibrin: technical note. Br J Oral Maxillofac Surg. 2015 Sep;53(7):664-5. doi: 10.1016/j.bjoms.2015.04.016. Epub 2015 Jun 3. PubMed PMID: 26050132.

3: Agarwal T, Bandivadekar P, Sharma N, Sagar P, Titiyal JS. Sutureless anterior lamellar keratoplasty with phacoemulsification. Cornea. 2015 Jun;34(6):615-20. doi: 10.1097/ICO.0000000000000432. PubMed PMID: 25850707.

PURPOSE: To compare the results of microkeratome-assisted sutureless anterior lamellar keratoplasty (SALK) with and without phacoemulsification.
METHODS: In this retrospective comparative interventional case series, patients with superficial anterior corneal opacity were divided into 2 groups. Eyes in group 1 (n = 6) had associated cataract and underwent SALK with phacoemulsification surgery (SALK triple). Eyes in group 2 (n = 6) did not have cataract and underwent only anterior lamellar keratoplasty. A 200-μm microkeratome head was used for host and donor cut. Fibrin glue was applied at the graft-host junction. Visual acuity, refractive error, topographic changes, and pachymetry were noted.

RESULTS: Mean follow-up was 9 ± 2.7 months. The best spectacle-corrected visual acuity (BSCVA) improved significantly over the preoperative value in both the groups at 1 month, 6 months, and the last follow-up (P = 0.028). The mean gain in BSCVA was 8.8 ± 3.4 lines and 6.8 ± 5.2 lines, respectively, for groups 1 and 2 at the last follow-up, with no statistically significant difference in the BSCVA of both groups at the last follow-up (P = 0.80). There was no statistical difference at the last follow-up between the 2 groups with respect to spherical equivalent (P = 0.6), cylinder (P = 0.81), topographic astigmatism (P = 0.75), and graft thickness (P = 0.81). One patient in group 1 underwent graft rejection, which completely reversed with treatment. No cases of graft dislocation, infection, epithelial ingrowth, vascularization, or recurrence of primary pathology were noted in either group.

CONCLUSIONS: SALK triple is an effective surgery for early visual rehabilitation of patients with superficial anterior corneal opacity and concomitant cataract.

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

5: Arjuman A, Chandra NC. Differential pro-inflammatory responses of TNF-α receptors (TNFR1 and TNFR2) on LOX-1 signalling. Mol Biol Rep. 2015 Jun;42(6):1039-47. doi: 10.1007/s11033-014-3841-y. Epub 2014 Nov 23. PubMed PMID: 25416967.

TNF-α potently induces LOX-1 expression in THP-1 macrophages at concentrations between 1.25-50 ng/mL. The interplay between the two TNF receptors (TNFR1 and TNFR2) was apparent in the expression pattern of LOX-1 in response to TNF-α. Interestingly, R1 signal abrogation depleted both TNFR2 as well as LOX-1 transcript expression, suggesting that TNFR1 holds priority in the relative

signaling mechanism between TNFR1 and TNFR2. TNF-α was also found to abrogate the oxidized-LDL (ox-LDL) mediated increase in intracellular pool of NO, a known downstream intermediate of LOX-1 pro-inflammatory signaling cascade. At the level of ox-LDL clearance, TNF-α inhibited the uptake (scavenging) of ox-LDL via LOX-1. Our study demonstrates the ability of TNF-α to enhance the signaling propensity of LOX-1 by increasing its expression and inhibiting its scavenging property.

6: Arora S, Soundararajan R, Joshi P, Kumar R, Bal C. Somatostatin receptor expressing bilateral ovarian metastases detected by (68)Ga DOTANOC PET/CT. Clin Nucl Med. 2015 Jun;40(6):496-8. doi: 10.1097/RLU.0000000000000646. PubMed PMID: 25546200.

Bilateral ovarian metastasis from neuroendocrine tumor (NET) is uncommon. Ovarian NET could be primary or metastatic, and if it is bilateral, then the chances of metastatic disease are from 88% to 94%. Proper identification and appropriate management become necessary in such patients. Somatostatin receptor imaging by Ga-labeled DOTANOC ([1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid]-1-NaI3-Octreotide) PET/CT can be used for localization, staging, and restaging of NET, and it also has an impact on appropriate clinical management of patients with NET. We present here a case of somatostatin receptor expressing bilateral ovarian metastases from NET demonstrated by Ga DOTANOC PET/CT imaging.

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

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

8: Bal C, Ballal S. Is There Any True Association Between BRAF V600E Mutation and Recurrence, Particularly in Low-Risk, Papillary Thyroid Cancer? J Clin Oncol. 2015 Aug 1;33(22):2481. doi: 10.1200/JCO.2014.60.0999. Epub 2015 Jun 29. PubMed PMID: 26124490.

9: Ballal S, Soundararajan R, Singh H, Garg A, Chopra S, Bal C. Influence of prior carbimazole on the outcome of radioiodine therapy in pediatric and adolescent Graves' disease. Nucl Med Commun. 2015 Jun;36(6):566-72. doi: 10.1097/MNM.0000000000000291. PubMed PMID: 25757198.

OBJECTIVE OF THE STUDY: Therapeutic options for pediatric Graves' disease (PGD) include antithyroid drug therapy (ATD) as the first line and radioiodine (I-131) therapy as the second line of treatment. To date, controversies persist regarding the true effect of prior ATD in the outcome of I-131 therapy in PGD. This study evaluated the effect of prior carbimazole treatment on the outcome of I-131 therapy in PGD.

METHODS: This is a retrospective study covering the years 1995-2012, with a median follow-up of 75 months. Records of 114 children (84 girls and 30 boys, age range: 5-20 years, mean 24-h radioiodine uptake, 58%) who had clinically and biochemically proven Graves' disease irrespective of prior ATD therapy were included. All patients were treated with fixed doses of 5 mCi (185 MBq) I-131 for Graves' disease; 74 had undergone prior carbimazole treatment (group 1) and 40 were drug naive (group 2). The endpoint of follow-up was stable euthyroid or hypothyroid in patients. The effect of prior carbimazole treatment on the outcome of I-131 therapy in PGD patients was evaluated. The success of radioiodine therapy was defined as the cure of hyperthyroidism. Variables were analyzed to identify the potential predictive factors for euthyroidism/hypothyroidism after treatment.

RESULTS: The cure rate was 70% in group 1 and 83% in group 2 with a single dose of radioiodine (P=0.299). The success rate achieved at the end of 1-year follow-up in group 1 and group 2 was 81 and 87%, respectively (P=0.401). No independent predictor was associated with success or failure of treatment. At the median follow-up of 75 months (range: 12-216 months), 76% of patients were hypothyroid on replacement doses of levothyroxine and 24% still continued to be euthyroid.

CONCLUSION: Prior carbimazole treatment does not alter the outcome of radioiodine therapy in PGD.

10: Basa S, Das RR, Khan JA. Root-Cause Analytical Survey for Measles Outbreak: Vaccination or Vaccine?- A Study From Madhepura District, Bihar, India. J Clin Diagn Res. 2015 Jun;9(6):SC04-7. doi: 10.7860/JCDR/2015/12032.6004. Epub 2015 Jun 1. PubMed PMID: 26266177; PubMed Central PMCID: PMC4525566.

INTRODUCTION: Though measles is a vaccine preventable disease, outbreaks still continue to occur because of poor immunization coverage rate at the national level.
OBJECTIVE: To report the survey results of an outbreak of measles in Puraini village of Madhepura district in Bihar, India.

MATERIALS AND METHODS: This cross-sectional survey was conducted among children aged 6 months to 12 years during an outbreak of measles in December 2008. WHO case definition criteria was used to define active measles cases. Demographic data, immunization status, and disease outcome among the cases was obtained by pre-structured questionnaires. Blood samples from 5 cases were sent for

laboratory confirmation.

RESULTS: A total of 52 cases and 8 deaths were reported with an attack rate of 28% and case fatality rate of 15.4%. Out of 35% cases of post-measles complications, dysentery with pneumonia was the most common. Anti-measles IgM antibody tested positive in all the 5 serum samples sent for confirmation. No child had received measles vaccination in the past, and the reasons were lack of awareness, lack of faith on vaccination, and unavailability of health workers.

CONCLUSION: This survey calls for strengthening of disease surveillance and routine immunization coverage to achieve measles control in these communities. This has important public health implication for the whole country regarding measles elimination in near-future.

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

12: Batra A, Bakhshi S. Aprepitant for paediatric chemotherapy-induced nausea and vomiting. Lancet Oncol. 2015 Jun;16(6):e259-60. doi: 10.1016/S1470-2045(15)70244-5. Epub 2015 May 27. PubMed PMID: 26065606.

13: Batra P, Mathur P, Misra MC. Aeromonas spp as a causative agent for nosocomial infection in trauma patients. J Infect. 2015 Jun;70(6):687-9. doi: 10.1016/j.jinf.2014.12.004. Epub 2014 Dec 18. PubMed PMID: 25530470.

14: Bava EP, Sharma A, Chumber S, Anand RK. Gastrointestinal Stromal Tumour in a Patient with Multiple Cutaneous and Uterine Leiomyomatosis- Implications and Anaesthetic Management. Indian J Surg Oncol. 2015 Jun;6(2):106-9. doi: 10.1007/s13193-014-0366-8. Epub 2014 Dec 19. PubMed PMID: 26405414; PubMed Central PMCID: PMC4577480.

Multiple cutaneous leiomyomatosis have been associated with uterine leiomyomatosis and known as Reed's syndrome or Multiple Cutaneous and Uterine Leiomyomatosis (MCUL). Gastrointestinal Stromal Tumours (GIST) have been reported to be associated with this syndrome only once previously in literature to the best of our knowledge. Here we report a rare case of GIST and multiple uterine leiomyomatosis in a middle aged patient with longstanding cutaneous leiomyomatosis who underwent GIST excision and hysterectomy. A 35 year old female patient with multiple cutaneous leiomyomatosis for the past 20 years was diagnosed to have gastrointestinal stromal tumour and multiple uterine leiomyomatosis for which she underwent laparotomy for GIST excision and hysterectomy. In the report we have elaborated the clinical and pathological observations as well as the anaesthetic management. This case report further substantiates the association of GIST with multiple cutaneous and uterine leiomyomatosis and also reminds us that cutaneous lesions can be clues to the diagnosis of underlying malignancy.

15: Benson R, Mallick S, Bhanu Prasad V, Haresh KP, Gupta S, Julka PK, Rath GK. Medullomyoblastoma treated with craniospinal radiation and adjuvant chemotherapy: Report of 4 cases and review of the literature. J Egypt Natl Canc Inst. 2015 Jun;27(2):109-11. doi: 10.1016/j.jnci.2015.03.001. Epub 2015 Apr 27. PubMed PMID: 25936510.

Medullomyoblastoma (MMB) is a rare primitive neuro-epithelial tumor and seen in mainly pediatric age group1. There have been about 50 cases reported so far in the literature. In this report, we describe the clinical features and treatment of 4 cases of MMB.

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

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

17: Bhari N, Xess I, Pandey M, Arava S, Ramam M. Primary Cutaneous Trichosporonosis Responsive to Voriconazole. JAMA Dermatol. 2015 Jun 10. doi: 10.1001/jamadermatol.2015.1354. [Epub ahead of print] PubMed PMID: 26061448.

18: 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.

19: Biswas A, Mallick S, Purkait S, Gandhi A, Sarkar C, Singh M, Julka PK, Rath GK. Treatment outcome and patterns of failure in patients of pinealoblastoma: review of literature and clinical experience from a regional cancer centre in north India. Childs Nerv Syst. 2015 Aug;31(8):1291-304. doi: 10.1007/s00381-015-2751-1. Epub 2015 Jun 4. PubMed PMID: 26040934.

PURPOSE: Pinealoblastoma is a highly malignant embryonal tumour of the pineal region affecting children and young adults. We herein intend to report the clinical features and treatment outcome of patients of pinealoblastoma treated at our institute.

METHODS: Clinical data was collected by retrospective chart review from 2003-2012. Histopathology slides were reviewed, and relevant immunohistochemistry stains were done. Overall survival (OS) and recurrence-free survival (RFS) were analysed by Kaplan-Meier product-limit method. Univariate and multivariate analyses of prognostic factors were done by log rank test and Cox proportional hazard regression model, respectively.

RESULTS: Seventeen patients met the study criterion (male:female = 11:6). Median age at presentation was 14 years (range 4-47 years). Surgical resection was gross total in 6 (35.29%), near-total in 2 (11.76%), sub-total in 2 (11.76%), and limited to biopsy in 7 (41.18 %) patients. At presentation, 4 patients had leptomeningeal dissemination. Radiation therapy was delivered in all patients-craniospinal irradiation in 15 (88.24%), whole brain irradiation in 1 (5.88%), and whole ventricular irradiation followed by boost in 1 (5.88%) patient. Systemic chemotherapy (median 6 cycles) was given in 14 (82.35%) patients. The most common regimen was a combination of carboplatin and etoposide, used in 10 (58.82%) patients. After a median follow-up of 30.3 months (mean 32.01 months), death and disease recurrences were noted in 3 (17.65%) and 7 (41.18%) patients. Amongst the patients with recurrent disease, 4 had spinal drop metastases and 3 had local recurrence along with spinal drop metastases. Median OS was not reached, and estimated median RFS was noted to be 5.49 years. The actuarial rates of OS and RFS at 2 years were 85.6 and 73.1%, respectively. On univariate analysis, age more than 8 years (P=0.0071) and M0 stage (P=0.0483) were significant predictors of improved RFS. Age retained significance on multivariate analysis of RFS (P=0.02932).

CONCLUSION: Maximal safe resection followed by craniospinal irradiation and systemic chemotherapy with 6 cycles of carboplatin-etoposide regimen is a reasonable treatment strategy in patients of pinealoblastoma more than 8 years of age in a developing nation. However, the same strategy is less effective in younger children and innovative study designs of intensification of post-operative treatment must be explored in this age group.

20: Castinetti F, Kroiss A, Kumar R, Pacak K, Taieb D. 15 YEARS OF PARAGANGLIOMA: Imaging and imaging-based treatment of pheochromocytoma and paraganglioma. Endocr Relat Cancer. 2015 Aug;22(4):T135-45. doi: 10.1530/ERC-15-0175. Epub 2015 Jun 4. Review. PubMed PMID: 26045470.

Although anatomic imaging to assess the precise localization of pheochromocytomas/paragangliomas (PHEOs/PGLs) is unavoidable before any surgical intervention on these tumors, functional imaging is becoming an inseparable

portion of the imaging algorithm for these tumors. This review article presents applications of the most up-to-date functional imaging modalities and image-based treatment to PHEOs/PGLs patients. Functional imaging techniques provide whole-body localization (number of tumors present along with metastatic deposits) together with genetic-specific imaging approaches to PHEOs/PGLs, thus enabling highly specific and sensitive PHEO/PGL detection and delineation that now greatly impact the management of patients. Radionuclide imaging techniques also play a crucial role in the prediction of possible radioactive treatment options for PHEO/PGL. In contrast to previous imaging algorithms used for either assessement of these patients or their follow-up, endocrinologists, surgeons, oncologists, pediatricians, and other specialists require functional imaging before any therapeutic plan is outlined to the patient, and follow-up, especially in patients with metastatic disease, is based on the periodic use of functional imaging, often reducing or substituting for anatomical imaging. In similar specific indications, this will be further powered by using PET/MR in the assessment of these tumors. In the near future, it is expected that PHEO/PGL patients will benefit even more from an assessement of the functional characteristics of these tumors and new imaging-based treatment options. Finally, due to the use of new targeting moieties, gene-targeted radiotherapeutics and nanobodies-based theranostic approaches are expected to become a reality in the near future.

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

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

22: Chawla B, Hasan F, Azad R, Seth R, Upadhyay AD, Pathy S, Pandey RM. Clinical presentation and survival of retinoblastoma in Indian children. Br J Ophthalmol. 2015 Jun 10. pii: bjophthalmol-2015-306672. doi:

10.1136/bjophthalmol-2015-306672. [Epub ahead of print] PubMed PMID: 26061162.

OBJECTIVE: To study the clinical presentation and survival among Indian children with retinoblastoma (RB) and to determine factors predictive of poor outcome.
METHODS: A retrospective review of children newly diagnosed with RB at a tertiary referral centre was undertaken. Demographic and clinical characteristics and treatment outcomes were studied.

RESULTS: A total of 600 patients (unilateral 67.6%, bilateral 32.4%) was studied. 61% was boys. The median age at presentation was 29 months (18 months vs 36 months in bilateral and unilateral cases, respectively, p<0.001). leukocoria was most common (83%), followed by proptosis (17%). Tumours were intraocular in 72.3% and extraocular in 27.7% cases. In the intraocular group, 78% were advanced Group D or E disease. Metastasis to the central nervous system was noted in 15.7% of extraocular cases. A statistically significant difference was seen between intraocular and extraocular groups in the median age (24 months vs 37.5 months, p<0.001) and median lag period (2.5 months vs 7 months, p<0.001). The Kaplan-Meier survival probability was 83%, 73% and 65% at 1 year, 2 years and 5 years, respectively. On univariate analysis, age >2 years (p=0.002), lag period >6 months (p=0.004) and extraocular stage (p<0.001) were associated with poor outcome. On multivariate analysis, extraocular invasion was predictive of low survival (HR 5.04, p<0.001).

CONCLUSIONS: Delayed presentation is a matter of concern. Improving awareness about the early signs and creating facilities for diagnosing and treating RB at the primary and secondary levels of healthcare are required to reduce mortality and morbidity, and lead to improved outcomes that are comparable with the developed nations.

23: Das P, Gahlot GP. A unique anal hepatoid adenoma in a human. Histopathology. 2015 Jun;66(7):1049-51. doi: 10.1111/his.12571. Epub 2015 Jan 21. PubMed PMID: 25284737.

24: Das RR, Sankar J, Dev N. High-dose versus low-dose antivenom in the treatment of poisonous snake bites: A systematic review. Indian J Crit Care Med. 2015 Jun;19(6):340-9. doi: 10.4103/0972-5229.158275. Review. PubMed PMID: 26195860; PubMed Central PMCID: PMC4478675.

Though snake antivenom (SAV) is the mainstay of therapy for poisonous snake bites, there is no universally accepted standard regimen regarding the optimum dose (low vs. high). We therefore, undertook this systematic review to address this important research question. We searched all the published literature through the major electronic databases till August 2014. Randomized clinical trials (RCTs) were included. Eligible trials compared low versus high dose SAV in poisonous snake bite. The review has been registered at PROSPERO (Registration number: CRD42014009700). Of 36 citations retrieved, a total of 5 RCTs (n = 473) were included in the final analyses. Three trials were open-label, 4 conducted in Indian sub-continent and 1 in Brazil. The doses of SAV varied in the high dose group from 40 ml to 550 ml, and in the low dose group from 20 ml to 220 ml. There was no significant difference between the two groups for any of the outcomes except duration of hospital stay, which was lower in the low dose group. The GRADE evidence generated was of "very low quality." Low-dose SAV is equivalent or may be superior to high-dose SAV in management of poisonous snake bite. Low dose

is also highly cost-effective as compared to the high dose. But the GRADE evidence generated was of "very low quality" as most were open label trials. Further trials are needed to make definitive recommendations regarding the dose and these should also include children <9 years of age.

25: Dasgupta A, Mahapatra M, Saxena R. A study for proposal of use of regulatory T cells as a prognostic marker and establishing an optimal threshold level for their expression in chronic lymphocytic leukemia. Leuk Lymphoma. 2015 Jun;56(6):1831-8. doi: 10.3109/10428194.2014.966245. Epub 2014 Oct 28. PubMed PMID: 25263321.

Although regulatory T cells (Tregs) have been extensively studied in chronic lymphocytic leukemia, there is no uniform guideline or consensus regarding their use as a prognostic marker. This study describes the methodology used to develop an optimal threshold level for Tregs in these patients. Treg levels were assessed in the peripheral blood of 130 patients and 150 controls. Treg frequencies were linked to established prognostic markers as well as overall survival and time to first treatment. The cut-offs for Treg positivity were assessed by receiver operating characteristic (ROC) analysis. A cut-off of 5.7% for Treg cell percentage and of 35 cells/µL for absolute Treg cell count were determined as optimal in patients with CLL along with a median Treg percentage of 15.5% used to separate patients with low- and high-risk disease. The experiments presented here will possibly aid in the use of Treg frequencies as a potential prognostic marker in CLL.

26: Dasgupta A. The realm of auditory hallucinations. Lancet Psychiatry. 2015 Jul;2(7):585. doi: 10.1016/S2215-0366(15)00181-9. Epub 2015 Jun 30. PubMed PMID: 26303543.

27: Denny L, Bhatla N. Preface for Best Practice and Research Clinical Obstetrics and Gynaecology - issue 29.6. Best Pract Res Clin Obstet Gynaecol. 2015 Aug;29(6):765-6. doi: 10.1016/j.bpobgyn.2015.06.003. Epub 2015 Jun 24. PubMed PMID: 26169797.

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

To report a case of bandage contact lens induced infectious keratitis caused by Pseudomonas aeruginosa following DSAEK.CASE REPORT: A 56-year-old female who underwent DSAEK at our institute for pseudophakic bullous keratopathy, developed contact lens induced keratitis in the fifth post operative week. Best corrected visual acuity (BCVA) reduced to perception of light in the left eye. Slit lamp examination revealed an epithelial ulcer measuring 4.7mm×6mm with surrounding infiltrates in the anterior stroma with hypopyon. The interface was clear. The corneoscleral rim culture of the donor tissue showed no growth on bacterial and fungal culture ruling out the possibility of donor-to-host transmission of infection. Microbiological evaluation identified the causative agent to be Pseudomonas aeruginosa. Based on culture and sensitivity report patient was started on hourly instillation of topical polymyxin B 20,000IU and fortified ceftazidime 5%. A response to treatment was noted and there was a complete resolution of keratitis with residual scarring.

DISCUSSION: There have been case reports suggesting a host to donor transmission

of infection which manifests during the postoperative period. To the best of our knowledge there are no reports of bandage contact lens associated Pseudomonas keratitis in a case that has undergone DSAEK. The prolonged use of bandage contact lens, lens contamination, stagnation of tear film behind the lens, compromised ocular surface and post operative use of topical steroids can contribute to infectious keratitis in DSAEK cases.

29: Dhiman R, Pillay G, Kashyap S, Vanathi M. Anterior segment optical coherence tomography of intrastromal corneal donor lenticule for recurrent intrastromal epithelial inclusion cyst in a corneal graft. BMJ Case Rep. 2015 Jun 11;2015. pii: bcr2014209273. doi: 10.1136/bcr-2014-209273. PubMed PMID: 26065547.

Intracorneal cysts are uncommon lesions that occur either due to congenital or traumatic pathology. Treatments described include cyst excision, drainage or intracyst injection of chemical solutions, such as ethanol. Recurrences commonly occur with these modalities and there is no clear consensus on the best approach to take. In this article, the authors present a rare case of a recurrent intrastromal epithelial corneal cyst following suture removal in an 11-year-old boy who had undergone optical penetrating keratoplasty in his left eye. It was managed effectively with an innovative technique of lamellar excision and donor corneal stromal lenticule lamellar placement to prevent recurrence. Serial postoperative anterior segment optical coherence tomography (ASOCT) was performed to monitor for cyst recurrence. No recurrence was observed for one and a half years with clear corneal graft. ASOCT is an effective tool in the diagnosis and follow-up of a recurrent intrastromal epithelial inclusion cyst.

30: Garg PK. Oncologists as Role Models for Anti-tobacco Campaign. Indian J Surg Oncol. 2015 Jun;6(2):138. doi: 10.1007/s13193-014-0365-9. Epub 2014 Dec 19. PubMed PMID: 26405423; PubMed Central PMCID: PMC4577487.

31: Giridhar P, Mallick S, Laviraj MA, Bhasker S. Esthesioneuroblastoma with large intracranial extension treated with Induction chemotherapy, de-bulking surgery and image guided intensity modulated radiotherapy. Eur Arch Otorhinolaryngol. 2015 Jun 4. [Epub ahead of print] PubMed PMID: 26041440.

INTRODUCTION: Esthesioneuroblastoma is a rare tumour of the sino-nasal tract. One-third cases present with intracranial extension. However, treatment options are limited for such cases.
METHODOLOGY: We herein report a case with large intracranial extension treated with Induction chemotherapy, de-bulking surgery, and image guided intensity modulated radiotherapy.

RESULTS: The patient was treated with IGIMRT technique to a dose of 64 Gy in 32 fractions. Cone bean CT verification was done twice a week to eliminate set up error. The patient achieved complete resolution of the disease and was disease free 6 months after completion of treatment.

CONCLUSION: IGIMRT even after a de-bulking surgery may help to achieve long-term disease control for patients with large intracranial extension with minimal morbidity.

32: Giridhar P, Mallick S, Damodara Kumaran, George A, Kaushal S, Julka PK. Primitive neuro-ectodermal tumour of kidney in adult: Report of four consecutive cases and review of the literature. J Egypt Natl Canc Inst. 2015 Jun 12. pii: S1110-0362(15)00050-3. doi: 10.1016/j.jnci.2015.05.001. [Epub ahead of print] PubMed PMID: 26077932.

BACKGROUND: PNET of kidney is a rare entity and its diagnosis is complicated by the presence of a number of differential diagnoses. The disease is most commonly seen in young adults. Radical nephrectomy and adjuvant chemotherapy is the standard treatment. However, the patients have a modest survival and often develop distant metastasis. We herein report four cases of renal PNET (rPNET).

METHODOLOGY: We retrospectively retrieved treatment chart of four cases of rPNET.
RESULTS: Median age was 29years. Radical nephrectomy was performed in three cases. All four cases received multiagent chemotherapy. VAC alternating with IE was the commonest regimen. Compliance and tolerance to treatment was excellent. At the last follow up two patients were in complete remission whereas the remaining two cases had systemic metastasis and alive with disease.

CONCLUSION: Multimodality approach is required in rPNET. Patient with localized disease appears to have better disease control and survival.

33: Goswami D, Seetharamaiah S, Kedia SK, Nayak BK, Akshat S. Anesthetic dilemma in planning bilateral cataract surgery for an infant associated with congenital cardiac anomaly. Indian J Ophthalmol. 2015 Jun;63(6):548-9. doi: 10.4103/0301-4738.162630. PubMed PMID: 26265652; PubMed Central PMCID: PMC4550995.

In a patient with tetralogy of Fallot (TOF) and pulmonary atresia, treating the cardiac problem or the associated congenital illness is always a challenge. We describe the challenges and successful initial management of bilateral cataract to prevent visual loss in an infant with TOF with pulmonary atresia.

34: 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.

35: Gupta S, Mittal S, Nayak N, Satpathy G, Khokhar S, Agarwal T. In Vitro Antibiotic Susceptibility of Pseudomonas aeruginosa Corneal Ulcer Isolates. Ocul Immunol Inflamm. 2015 Jun;23(3):252-5. doi: 10.3109/09273948.2014.883545. Epub 2014 Feb 24. PubMed PMID: 24564536.

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

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

37: Gupta SK, Chopra A, Singh S, Kumar R, Bakhshi S, Kumar L, Sharma A. Absence of CD9 expression in acute myeloid leukemia: possible correlation with t(8;21). Int J Lab Hematol. 2015 Jun;37(3):e56-8. doi: 10.1111/ijlh.12296. Epub 2014 Sep 26. PubMed PMID: 25263263.

38: Gupta Y, Marwaha RK, Kukreja S, Bhadra K, Narang A, Mani K, Mithal A, Tandon N. Relationship Between BMD and Prevalent Vertebral Fractures in Indian Women Older Than 50 Yr. J Clin Densitom. 2015 Jun 5. pii: S1094-6950(15)00045-1. doi: 10.1016/j.jocd.2015.04.007. [Epub ahead of print] PubMed PMID: 26050877.

The purpose of the study was to study the relationship of morphometric vertebral fractures with bone mineral density (BMD) in Indian women older than 50 yr. Four hundred fifteen healthy Indian women older than 50 yr (mean age: 62.8 yr) underwent lateral X-rays of the lumbar and thoracic spine. Genant's semiquantitative method was used to diagnose and classify morphometric vertebral fractures. BMD was measured by DXA at lumbar spine and total hip. Recruited subjects underwent anthropometric, biochemical, and hormonal evaluation. Vertebral fractures were present in 17.1% (95% confidence interval: 13.5, 20.8) subjects. Prevalence of osteoporosis based on BMD was 35.7%. By adding those with prevalent fractures, the number of women requiring therapy for osteoporosis would increase to 46.5%. The BMD measured at femur neck, total hip, and lumbar spine (L1eL4) was not found to be lower in women with vertebral fractures as compared with those without fractures. BMD was not found to be lower in women with vertebral fractures as compared with those without fractures. Significant number of additional subjects with BMD in the normal or osteopenic range become eligible for osteoporosis treatment when presence of vertebral fracture is used as an independent indication for such treatment.

39: Guruprasad B, Chaudhary P, Choedon T, Kumar VL. Artesunate Ameliorates Functional Limitations in Freund's Complete Adjuvant-Induced Monoarthritis in Rat by Maintaining Oxidative Homeostasis and Inhibiting COX-2 Expression. Inflammation. 2015 Jun;38(3):1028-35. doi: 10.1007/s10753-014-0067-z. PubMed PMID: 25425049.

Drugs exhibiting anti-inflammatory and analgesic properties have been clinically used in the management of pain and impairment of joint functions in arthritis. In view of available studies on the beneficial effect of artesunate in various inflammatory conditions, the present study was carried out to evaluate its efficacy in ameliorating functional limitations of arthritis and to understand the underlying mechanisms. The study was carried out in rat model of Freund's complete adjuvant-induced monoarthritis where artesunate was found to produce a dose-dependent reduction in joint inflammation, improvement in functional parameters like stair climbing ability, motility, and suppression of mechanical allodynia at the doses of 50 and 150 mg/kg. Our study shows that protection afforded by artesunate was brought about by decreasing the levels of nitric oxide, influx of neutrophils, maintenance of oxidative homeostasis, inhibition of COX-2 expression, and apoptosis. Further, histological analysis of the arthritic joints also substantiated the anti-inflammatory property of artesunate. Thus, our study shows that artesunate has a potential for use in the treatment of arthritis.

40: Hota A, Sarkar C, Gupta SD, Kumar R, Bhalla AS, Thakar A. Expression of vascular endothelial growth factor in Juvenile Angiofibroma. Int J Pediatr Otorhinolaryngol. 2015 Jun;79(6):900-2. doi: 10.1016/j.ijporl.2015.03.033. Epub 2015 Apr 11. PubMed PMID: 25890396.

OBJECTIVE: To examine Juvenile Angiofibroma (JA) tissue for expression of vascular endothelial growth factor (VEGF), and to explore its relationship with puberty status, stage, recurrence and the intraoperative blood loss.
METHODS: Retrospective cohort study of 36 histologically proven cases of JA. Minimum follow up period was 3 years. VEGF expression on tumor cells assessed by immunohistochemistry and graded on two criteria--percentage of cells expressing positivity and the intensity of positivity. These two parameters assessed for impact on puberty status, stage, recurrence, and blood loss.

RESULTS: VEGF expression noted on the tumor endothelial cells in 36/36, and on the tumor stromal cells in 34/36. The percentage of cells expressing VEGF and the intensity of expression were not significantly related to puberty status, tumor stage, recurrence, or intra-operative blood loss (p values 0.3-1.0).

CONCLUSION: VEGF expression is near universal in JA. Such expression is independent of puberty status and stage, and does not impact on intra operative blood loss and recurrence.

41: Iqbal S, Vishnubhatla S, Raina V, Sharma S, Gogia A, Deo SS, Mathur S, Shukla NK. Circulating cell-free DNA and its integrity as a prognostic marker for breast cancer. Springerplus. 2015 Jun 17;4:265. doi: 10.1186/s40064-015-1071-y. eCollection 2015. PubMed PMID: 26090312; PubMed Central PMCID: PMC4469592.

The aim of our study was to look for alternative predictive biomarkers for breast cancer management in limited resource setup. A comprehensive analysis of circulating cell-free DNA (CCFD) in serum at baseline was performed to assess its prognostic potential. Quantitative polymerase chain reaction (qPCR) of ALU sequences using ALU115 and ALU247 primers was carried out in patients (N: baseline 148, postoperative 47) and 51 healthy controls. Mean serum DNA integrity, levels of ALU 247 and levels of ALU 115 were significantly higher in patients than in healthy females. No significant differences were observed in the levels ALU 247 and ALU 115 between stage IV and earlier stages of the disease. The DNA integrity was significantly higher in stage IV than earlier stages. A significant decrease in DNA integrity was observed after surgery (pre: 0.55 ± 0.23 vs post: 0.43 ± 0.30; P = 0.002) while no such change could be observed for ALU 247 and ALU 115. Baseline DNA integrity was significantly higher in relapsed patients than in patients who were free of disease (P = 0.005). Higher baseline DNA integrity was also indicated, though statistically not significant, in patients who died (P = 0.14). In contrast, ALU 247 and ALU 115 levels were decreased in died patients as compared to survivors (24.8 ± 34.80 vs 73.5 ± 170.83, P = 0.02 for ALU 247 and 41.0 ± 47.99 vs 159.5 ± 299.54, P = 0.005 for ALU 115). Baseline levels of ALU 115 and ALU 247 were lower in relapsed patients, though statistically not significant. In univariate analysis, the only clinic-pathological parameter associated with disease prognosis was tumor size. The hazards of 5-year overall mortality was 3.60 (95 % CI: 1.03 12.53, P = 0.03) among patients with lower baseline serum levels of CCFD (ALU 247 < 21 and ALU 115 < 41). Similarly the 4 year hazards for recurrence was 2.30 (95 % CI: 0.96 5.52, P = 0.05) among patients with higher DNA integrity. Baseline serum levels of CCFD and its integrity were found to be potential prognostic biomarkers in patients of primary breast cancer at our centre.

42: Ismail J, Sankar J. Systemic Inflammatory Response Syndrome (SIRS) and Sepsis - An Ever-evolving Paradigm. Indian J Pediatr. 2015 Aug;82(8):675-6. doi: 10.1007/s12098-015-1810-7. Epub 2015 Jun 19. PubMed PMID: 26084550.

43: Jain D, Mathur SR, Sharma MC, Iyer VK. Cytomorphology of sebaceous carcinoma with analysis of p40 antibody expression. Diagn Cytopathol. 2015 Jun;43(6):456-61. doi: 10.1002/dc.23250. Epub 2015 Jan 22. PubMed PMID: 25611456.

BACKGROUND: Sebaceous carcinomas (SBCs) are aggressive tumors with the potential to cause great morbidity and mortality. Poorly-differentiated tumors may at times pose challenges for the correct diagnosis. p40, a new antibody that targets a short isoform of p63 has been shown as a promising squamous cell marker. In this study, we sought to evaluate cytomorphological features of SBC and p40 expression analysis.

METHODS: A total of 29 previously diagnosed cases of SBCs including fine-needle aspirates and histopathology specimens from various sites were reviewed and studied for p40 expression. p40 nuclear expression was semi-quantitatively assessed. Adequate positive and negative controls of non-small cell lung carcinoma were taken for comparison. Expression pattern of normal sebaceous glands was also analyzed.

RESULTS: Of the 29 cases, 13 (44.8%) were from the periocular region. The most common extraocular site was parotid gland. Morphologically tumors were categorized into well- and poorly-differentiated varieties based on extent of sebaceous differentiation. p40 positivity was seen in all cases of cytology aspirates and histology sections with similar intensity. No difference in percentage positivity of cells was recorded in well- and poorly-differentiated tumors.

CONCLUSION: p40 can be a valuable marker when evaluating tumors with possible sebaceous differentiation. Although p40 expression in SBCs is not as useful for the differential diagnosis that includes poorly-differentiated squamous cell carcinoma, this study, for the first time in the literature, highlights an important observation that p40 can be utilized as a marker for sebaceous lineage.

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

Pediatric high-grade gliomas (HGGs) are highly malignant tumors that remain incurable and relatively understudied. The crucial role of noncoding RNAs (ncRNAs) has been reported in various cancers. However, the study on miRNAs in pediatric HGGs is scant and there is no report till date on the status of other small ncRNAs. Genome-wide microarray analysis was performed to investigate small ncRNA expression in pediatric HGG (n = 14) and compared to adult glioblastoma (GBM) signature. The validation of miRNAs and small nucleolar RNAs (snoRNAs) was done by real-time polymerase chain reaction. TP53 and H3F3A mutation-specific miRNA and snoRNA profiles were generated and analyzed. Pediatric HGGs showed upregulation of miR-17/92 and its paralog clusters (miR106b/25 and miR-106a/363), whereas majority of downregulated miRNAs belonged to miR379/656 cluster (14q32). Unsupervised hierarchical clustering identified two distinct groups. Interestingly, Group 2 with downregulated 14q32 cluster showed better overall survival. The miRNAs unique to pediatric HGG as compared to adult GBM were predicted to affect PDGFR and SMAD2/3 pathways. Similarities were seen between pediatric HGG and TP53 mutant miRNA profiles as compared to wild types. Several of H3F3A mutation-regulated genes were found to be the targets of H3F3A mutant-specific miRNAs. Remarkably, a significant downregulation of HBII-52 snoRNA cluster was found in pediatric HGGs, and was specific to H3F3A nonmutants. This is the first genome-wide profiling study on miRNAs and snoRNAs in pediatric

HGGs with respect to H3F3A and TP53 mutations. The comparison of miRNA profiles of pediatric HGGs and adult GBM reiterates the overlaps and differences as also seen with their gene expression and methylation signatures.

45: Jhanjee S, Pant S, Girdhar NK, Sethi H, Gunasekaran Rengaswamy R, Jain R, Sarangi J. Opioid substitution treatment in Tihar prisons, India: Process of implementation. Int J Drug Policy. 2015 Sep;26(9):890-1. doi: 10.1016/j.drugpo.2015.05.016. Epub 2015 Jun 6. PubMed PMID: 26123894.

46: Kakkar A, Jain D, Mathur SR, Iyer VK, Sarkar C, Ranjan Dash N. Atypical cytological features of a solid pseudopapillary neoplasm of the pancreas metastatic to the liver. Cytopathology. 2015 Jun 24. doi: 10.1111/cyt.12256. [Epub ahead of print] PubMed PMID: 26104297.

47: Kamran F, Kavin K, Vijay S, Shivanand G. Bilateral lipoma arborescens with osteoarthritis knee: Case report and literature review. J Clin Orthop Trauma. 2015 Jun;6(2):131-6. doi: 10.1016/j.jcot.2014.12.006. Epub 2015 Jan 6. PubMed PMID: 25983521; PubMed Central PMCID: PMC4411376.

Lipoma arborescens is villous proliferation of synovium and is often unilateral in the absence of any systemic disease. We report a case of 54 year old male presenting with bilateral lipoma arborescens associated with osteoarthritis. The diagnosis is often difficult due to similar symptomatology of lipoma arborescens and osteoarthritis.

48: Kapoor R, Pati HP, Mahapatra M, Monga A. Presence of Essential Hypertension or Diabetes Mellitus Is a Predictor of Intracranial Bleeding in Elderly Patients: A Study of 108 Patients with Isolated Thrombocytopenia from a Single Reference Center. Turk J Haematol. 2015 Jun 5;32(2):158-162. doi: 10.4274/tjh.2013.0161. PubMed PMID: 26316484.

OBJECTIVE: Thrombocytopenia poses a significant problem in the elderly. Not only are there varied causes, but it is also associated with significant morbidity and mortality. We carried out a study to learn the causes of isolated thrombocytopenia in elderly patients and to correlate the severity of thrombocytopenia and bleeding manifestations with various etiologic factors and comorbidities.

MATERIALS AND METHODS: A total of 108 patients above 50 years of age presenting with isolated thrombocytopenia (platelet counts of <100x109/L with normal hemoglobin and total leukocyte counts) were enrolled in the study. Detailed history and clinical examinations were carried out for each patient. Complete blood counts were analyzed by automated cell counter. Peripheral smears were examined in all cases. HbsAg, anti-HCV, and anti-HIV testing by enzyme-linked immunosorbent assay was done in all patients. Wherever clinically indicated, bone marrow aspiration biopsy and cytogenetic studies were done.

RESULTS: Out of 108 patients, 102 (94.4%) presented with bleeding tendencies. Twenty-nine (26.8%) presented with serious (World Health Organization grade 3/4) bleedings. Major findings were immune thrombocytopenic purpura in 79 (73.1%), myelodysplastic syndrome in 7 (6.5%), drug-induced thrombocytopenia in 7 (6.5%), and connective tissue disorder in 4 (3.7%) cases. Ten patients presented with intracranial bleedings. Upon logistic regression analysis, comorbidities in the

form of essential hypertension and diabetes mellitus were significantly associated with occurrence of intracranial bleeding. There was no correlation of serious bleedings with platelet counts.

CONCLUSION: Isolated thrombocytopenia in the elderly is associated with significant morbidity. Diligent clinical and laboratory evaluation is required to elucidate the cause of thrombocytopenia in the elderly. Comorbidities in this population are associated with serious bleedings and not low platelet counts as is commonly thought.

49: Kassab MA, Mudassir M, Singh A, N M, Bhagat M, Palanichamy JK, Ramalingam P, Chosdol K, Sinha S, Chattopadhyay P. Gene Silencing and Activation of Human Papillomavirus 18 Is Modulated by Sense Promoter Associated RNA in Bidirectionally Transcribed Long Control Region. PLoS One. 2015 Jun 5;10(6):e0128416. doi: 10.1371/journal.pone.0128416. eCollection 2015. PubMed PMID: 26047143; PubMed Central PMCID: PMC4457724.

BACKGROUND: Recently various studies have demonstrated the role of promoter associated non-coding RNAs (pRNA) in dsRNA induced transcriptional gene silencing and activation. However the exact mechanistic details of these processes with respect to the orientation of pRNAs are poorly defined.

METHODOLOGY/PRINCIPAL FINDINGS: We have identified novel sense and antisense long control region (LCR) associated RNAs (pRNAs) in HPV18 positive cervical cancer cell lines HeLa, C-4 I and C-4 II. Using dsRNAs against these pRNAs, we were able to achieve upregulation or downregulation of the sense and antisense pRNAs and the downstream E6 and E7 oncogenes. We present evidence that knockdown of the sense pRNA is associated with reduction in E6 and E7 oncogenes and an upregulation of antisense pRNA. Conversely upregulation of sense pRNA is accompanied by an induction of the oncogenes and a concomitant reduction in antisense pRNA. Moreover, the exact role of sense and antisense pRNAs in dsRNA mediated gene modulation was confirmed by their selective degradation using antisense phosphorothioate oligodeoxynucleotides (ODN). Degradation of sense pRNA with antisense ODN led to loss of dsRNA induced silencing and activation, suggesting that dsRNA mediated gene modulation requires sense pRNA. Both processes were accompanied with congruent changes in the methylation pattern of activating and repressive histones.

CONCLUSION/SIGNIFICANCE: Thus this data identifies and demonstrates the role of previously unknown important regulatory transcripts in HPV18 gene expression which can prove valuable targets in cervical cancer therapeutics. This mode of gene regulation by bidirectional transcription could be operational in other promoters as well and serve as a mechanism of regulating gene expression.

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

51: 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.

52: Kumar S, Jitendra K, Singh K, Kapoor V, Sinha M, Xess I, Das SN, Sharma S, Singh TP, Dey S. Biological Properties and Characterization of ASL50 Protein from Aged Allium sativum Bulbs. Appl Biochem Biotechnol. 2015 Aug;176(7):1914-27. doi: 10.1007/s12010-015-1687-y. Epub 2015 Jun 5. PubMed PMID: 26043852.

Allium sativum is well known for its medicinal properties. The A. sativum lectin 50 (ASL50, 50 kDa) was isolated from aged A. sativum bulbs and purified by gel filtration chromatography on Sephacryl S-200 column. Agar well diffusion assay were used to evaluate the antimicrobial activity of ASL50 against Candida species and bacteria then minimal inhibitory concentration (MIC) was determined. The lipid A binding to ASL50 was determined by surface plasmon resonance (SPR) technology with varying concentrations. Electron microscopic studies were done to see the mode of action of ASL50 on microbes. It exerted antimicrobial activity against clinical Candida isolates with a MIC of 10-40 μg/ml and clinical Pseudomonas aeruginosa isolates with a MIC of 10-80 μg/ml. The electron microscopic study illustrates that it disrupts the cell membrane of the bacteria and cell wall of fungi. It exhibited antiproliferative activity on oral carcinoma KB cells with an IC50 of 36 μg/ml after treatment for 48 h and induces the apoptosis of cancer cells by inducing 2.5-fold higher caspase enzyme activity than untreated cells. However, it has no cytotoxic effects towards HEK 293 cells as well as human erythrocytes even at higher concentration of ASL50. Biological properties of ASL50 may have its therapeutic significance in aiding infection and cancer treatments.

53: Kumar SB, Yadav R, Yadav RK, Tolahunase M, Dada R. Telomerase activity and cellular aging might be positively modified by a yoga-based lifestyle intervention. J Altern Complement Med. 2015 Jun;21(6):370-2. doi: 10.1089/acm.2014.0298. Epub 2015 May 12. PubMed PMID: 25964984.

OBJECTIVES: Recent studies showed that a brief yoga-based lifestyle intervention was efficacious in reducing levels of oxidative stress and cellular aging in obese men. The objective of this case report was to assess the efficacy of this intervention in reducing the levels of biochemical markers of cellular ageing, oxidative stress, and inflammation at baseline (day 0), at the end of active intervention (day 10), and follow-up at day 90.
DESIGN: Single case report from a prospective ongoing study with pre-post design assessing the level of various markers of cellular aging.
SETTING: Integral Health Clinic, an outpatient facility conducting meditation and yoga-based lifestyle intervention programs for management of chronic diseases.
PATIENT: A 31-year-old man with class I obesity (body-mass index, 29.5 kg/m(2)) who presented to the medicine outpatient department at All India Institute of Medical Sciences, New Delhi, India, with a history of fatigue, difficulty losing weight, and lack of motivation. He noted a marked decrease in his energy level, particularly in the afternoon.

INTERVENTION: A pretested intervention program included asanas (postures), pranayama (breathing exercises), stress management, group discussions, lectures, and individualized advice.
RESULTS: From baseline (day 0) to day 90, the activity of telomerase and levels of β-endorphins, plasma cortisol, and interleukin-6 increased, and a sustained reduction in oxidative stress markers, such as reactive oxygen species and 8-hydroxy-2-deoxy-guanosine levels.

CONCLUSIONS: Adopting yoga/meditation-based lifestyle modification causes reversal of markers of aging, mainly oxidative stress, telomerase activity, and oxidative DNA damage. This may not only delay aging and prolong a youthful healthy life but also delay or prevent onset of several lifestyle-related diseases, of which oxidative stress and inflammation are the chief cause. This report suggests this simple lifestyle intervention may be therapeutic for oxidative DNA damage and oxidative stress.

54: 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 Jun;29(3):380-5. doi: 10.3109/02688697.2014.1003034. Epub 2015 Feb 7. 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.

55: Lale SV, Kumar A, Prasad S, Bharti AC, Koul V. Folic Acid and Trastuzumab Functionalized Redox Responsive Polymersomes for Intracellular Doxorubicin Delivery in Breast Cancer. Biomacromolecules. 2015 Jun 8;16(6):1736-52. doi: 10.1021/acs.biomac.5b00244. Epub 2015 May 15. PubMed PMID: 25918899.

Redox responsive biodegradable polymersomes comprising of poly(ethylene glycol)-polylactic acid-poly(ethylene glycol) [PEG-s-s-PLA-s-s-PLA-s-s-PEG] triblock copolymer with multiple disulfide linkages were developed to improve intracellular delivery and to enhance chemotherapeutic efficacy of doxorubicin in breast cancer with minimal cardiotoxicity. Folic acid and trastuzumab functionalized monodispersed polymersomes of size ~150 nm were prepared by nanoprecipitation method while achieving enhanced doxorubicin loading of ~32% in the polymersomes. Multiple redox responsive disulfide linkages were incorporated in the polymer in order to achieve complete disintegration of polymersomes in redox rich environment of cancer cells resulting in enhanced doxorubicin release as observed in in vitro release studies, where ~90% doxorubicin release was achieved in pH 5.0 in the presence of 10 mM glutathione (GSH) as compared to ~20% drug release in pH 7.4. Folic acid and trastuzumab mediated active targeting resulted in improved cellular uptake and enhanced apoptosis in in vitro studies in breast cancer cell lines. In vivo studies in Ehrlich ascites tumor bearing Swiss albino mice showed enhanced antitumor efficacy and minimal cardiotoxicity of polymersomes with ~90% tumor regression as compared to ~38% tumor regression observed with free doxorubicin. The results highlight therapeutic potential of the polymersomes as doxorubicin delivery nanocarrier in breast cancer therapy with its superior antitumor efficacy and minimal cardiotoxicity.

56: Maitra S, Aftab S, Agarwal A, Vasudevan B. Subcutaneous abscess at epidural catheter insertion site in a patient with intestinal tuberculosis. J Clin Anesth. 2015 Jun 22. pii: S0952-8180(15)00152-X. doi: 10.1016/j.jclinane.2015.05.005. [Epub ahead of print] PubMed PMID: 26111664.

57: Malhotra R, Singla A, Lekha C, Kumar V, Karthikeyan G, Malik V, Mridha AR. A prospective randomized study to compare systemic emboli using the computer-assisted and conventional techniques of total knee arthroplasty. J Bone Joint Surg Am. 2015 Jun 3;97(11):889-94. doi: 10.2106/JBJS.N.00783. PubMed PMID: 26041849.

BACKGROUND: Conventional total knee arthroplasty is performed with use of an intramedullary alignment guide, which produces elevated intramedullary pressure that can create fat emboli. Total knee arthroplasty performed via computer-assisted surgery does not require an intramedullary femoral rod, raising the question of whether computer-assisted surgery generates less embolic material than conventional total knee arthroplasty. The purpose of this study was to compare the emboli produced in the two techniques.

METHODS: Fifty-seven patients were randomized into two groups: the computer-assisted surgery group (n = 29) and the conventional total knee arthroplasty group (n = 28). An intramedullary femoral alignment jig was used in the conventional total knee arthroplasty group but not in the computer-assisted surgery group. Intraoperative invasive monitoring was performed with use of transesophageal echocardiography and a pulmonary artery catheter.
RESULTS: The mean embolic score was 6.21 points for the conventional technique group and 5.48 points for the computer-assisted surgery group (p = 0.0161). After tourniquet deflation, fat emboli were observed in the blood of five patients in the conventional surgery group and one patient in the computer-assisted surgery group.

CONCLUSIONS: The patients in the computer-assisted surgery group had lower embolic loads compared with the patients in the conventional total knee arthroplasty group. In patients with an uncompromised cardiopulmonary system, the embolic load difference between the techniques was not clinically relevant.
LEVEL OF EVIDENCE: Therapeutic Level I. See Instructions for Authors for a

complete description of levels of evidence.

58: Malik A, Bhilwar M, Rustagi N, Taneja DK. An assessment of facilities and services at Anganwadi centers under the Integrated Child Development Service scheme in Northeast District of Delhi, India. Int J Qual Health Care. 2015 Jun;27(3):201-6. doi: 10.1093/intqhc/mzv028. Epub 2015 May 9. PubMed PMID: 25958416.

OBJECTIVE: The current study was aimed to assess the facilities and services being provided at the Anganwadi Centres (AWCs) by the Anganwadi workers with regards to the norms laid down by Integrated Child development Service (ICDS) scheme, with special emphasis on the children of 0-6 years of age.
DESIGN: Cross-sectional study.
SETTING: A resettlement colony of North-West District of Delhi, having a population of hundred thousand.
PARTICIPANTS: A total of 41 AWCs were present in the study area and were included in our study. The Anganwadi workers at these AWCs were interviewed.
MAIN OUTCOME MEASURES: The outcome measures were the facilities present at the AWCs and knowledge of Anganwadi workers regarding the services to be provided and revised supplementary nutrition norms laid down by ICDS.

RESULTS: The AWCs in the area were covered under three projects namely Project A, B and C consisting of 18, 9 and 14 AWCs, respectively. The mean room size for all the AWCs was 108.97 ± 62.18 square feet. A weighing machine was present in 29 (70.7%) of the AWCs. Growth charts for growth monitoring of children were present in 28 (68.3%) of AWCs. A drug kit was not present in 14 (34.1%) of the 41 AWCs. The mean number of children of 0-3 years enrolled per AWC was 45.78 ± 14.07. However, the mean number of children present at the time of the visit at the AWCs was 6.24 ± 5.39. Knowledge of Anganwadi workers regarding revised norms for calorie and protein for beneficiaries was found to be poor.

CONCLUSION: This study showed a lack of facilities at the AWCs and poor knowledge of Anganwadi workers. Thus a regular training and supportive supervision of the Anganwadi workers is recommended along with the availability of adequate facilities and infrastructures.

59: Mallick S, Benson R, Rath GK. Radiation induced oral mucositis: a review of current literature on prevention and management. Eur Arch Otorhinolaryngol. 2015 Jun 27. [Epub ahead of print] PubMed PMID: 26116012.

Oral mucositis (OM) is a major limiting acute side effect of radiotherapy for head and neck cancer. The spectrum of problems associated with mucositis includes oral pain, odynophagia, reduced oral intake, and secondary infections. Incidence of mucositis is increased with addition of concurrent chemotherapy as well as altered fractionation schedules. This leads to treatment interruption and suboptimal disease control. Hence, prevention as well as timely management of OM is necessary for optimum tumor control. We reviewed the English literature with key words "Radiation induced mucositis, Mucositis, Oral Mucositis" to find relevant articles describing incidence, pathophysiology, prophylaxis, and treatment of oral mucositis. Prevention and treatment of OM is an active area of research. Maintenance of oral hygiene is an important part in prevention of OM. A battery of agents including normal saline and alkali (soda bicarbonate) mouth washes, low level laser therapy, and benzydamine (non-steroidal analgesic and anti-inflammatory) have effectiveness in the prevention and treatment of radiation induced oral mucositis. Chlorhexidine mouth gargles are recommended for

prevention of chemotherapy induced oral mucositis but is not recommended for radiotherapy associated mucositis. Treatment of co-existing infection is also important and both topical (povidone iodine) and systemic anti fungals should be used judiciously. Radiation induced oral mucositis is a common problem limiting the efficacy of radiation by increasing treatment breaks. Adequate prophylaxis and treatment may limit the severity of radiation mucositis and improve compliance to radiation which may translate in better disease control and survival.

60: Mallick S, Benson R, Haresh KP, Rath GK. Neoadjuvant treatment intensification or adjuvant chemotherapy for locally advanced carcinoma rectum: The optimum treatment approach remains unresolved. J Egypt Natl Canc Inst. 2015 Jun 10. pii: S1110-0362(15)00052-7. doi: 10.1016/j.jnci.2015.05.003. [Epub ahead of print] Review. PubMed PMID: 26071798.

BACKGROUND: Rectal carcinoma [RC] is often managed with preoperative radiotherapy or radio-chemotherapy followed by total mesorectal excision (TME). Efforts are being made to improve outcome by intensifying the preoperative treatment. However, the optimum therapy remains unclear. There is ongoing controversy regarding the optimum radiation dose, chemotherapy regimen and schedule. In addition there exists growing disagreement regarding the role of adjuvant chemotherapy after neoadjuvant radiation or chemoradiation.
METHODOLOGY: We reviewed the recent land mark trials to find a road map in the management of locally advanced rectal carcinoma.

RESULTS: Preoperative short course radiotherapy has long been proven to improve local disease control. The initial trials with long course chemoradiotherapy, comparing short course radiotherapy have shown to increase local control and pathological complete response rates. Since then treatment intensification of this neoadjuvant schedule has been tried by many researchers. But initial results of these treatment intensification trials, show no significant benefit and are associated with increased toxicity. There is an unmet need to stratify patients depending on risk to assign them to long course chemoradiotherapy or short course radiotherapy. Current evidence does not support the use of adjuvant chemotherapy in patients who were treated with preoperative (chemo)radiotherapy.

CONCLUSION: Preoperative radiotherapy appears to improve disease control with favorable toxicity profile and there is very little to choose between long course chemoradiotherapy and short course radiotherapy. However, long course chemoradiotherapy may be beneficial for patients with high risk features like positive circumferential resection margin [CRM] and extramural spread of >5mm. There is no role for adjuvant chemotherapy in patients who were treated preoperative (chemo)radiotherapy.

61: Mallick S, Giridhar P, Prasad Venkatesulu B. In regard to "Risk of second non-breast cancer after radiotherapy for breast cancer: A systematic review and meta-analysis of 762,468 patients". Radiother Oncol. 2015 Jun;115(3):431. doi: 10.1016/j.radonc.2015.03.025. Epub 2015 Apr 3. PubMed PMID: 25847871.

62: Mandal A, Kabra SK, Lodha R. Upper Airway Obstruction in Children. Indian J Pediatr. 2015 Aug;82(8):737-44. doi: 10.1007/s12098-015-1811-6. Epub 2015 Jun 25. PubMed PMID: 26104110.

Children with upper airway obstruction are both unique and variable in their presentation and management, often posing a challenge to the pediatrician. Several anatomical and physiologic peculiarities make a child vulnerable to develop an obstruction of upper airways. The characteristic finding in upper airway obstruction is stridor-inspiratory, biphasic or expiratory. The etiologies vary widely throughout the age groups and according to the mode of presentation. The approach starts with suspicion, mandates careful clinical evaluation of the degree of obstruction and many a times emergency measures precede any investigation or even precise diagnosis. Maintaining an open and stable airway is of the utmost importance, often requiring a team approach of emergency physician, pediatrician, otorhinolaryngologist and pediatric pulmonologist. The commonest condition presenting with upper airway obstruction in pediatric population is viral croup. Croup is a clinical diagnosis in a febrile child, with barking cough and stridor preceded by upper respiratory infection. It is treated with systemic or inhaled steroids and nebulized epinephrine. Epiglottitis and bacterial tracheitis are acute bacterial infections of upper airways, presenting as true airway emergencies. Though the mainstay of therapy is IV antibiotics, the prime concern is maintenance of airway, which frequently requires endotracheal intubation. Rigid bronchoscopy is the procedure of choice for airway foreign bodies, a common cause of upper airway obstruction in children below 3 y of age. Airway malacias are the commonest cause of chronic stridor and are mostly managed conservatively.

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

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

OBJECT Spondyloptosis represents the most severe form of spondylolisthesis, which usually follows high-energy trauma. Few reports exist on this specific condition, and the largest series published to date consists of only 5 patients. In the present study the authors report the clinical observations and outcomes in a cohort of 20 patients admitted to a regional trauma center for severe injuries including spondyloptosis. METHODS The authors performed a retrospective chart review of patients admitted with spondyloptosis at their department over a 5-year period (March 2008-March 2013). Clinical, radiological, and operative details were reviewed for all patients. RESULTS In total, 20 patients with spondyloptosis were treated during the period reviewed. The mean age of the patients was 27 years (range 12-45 years), and 17 patients were male (2 boys and 15 men) and 3 were women. Fall from height (45%) and road traffic accidents (35%) were the most common causes of the spinal injuries. The grading of the American Spinal Injury Association (ASIA) was used to assess the severity of spinal cord injury, which for all patients was ASIA Grade A at the time of admission. In 11 patients (55%), the thoracolumbar junction (T10-L2) was involved in the injury, followed by the dorsal region (T1-9) in 7 patients (35%); 1 patient (5%) had lumbar and 1 patient (5%) sacral spondyloptosis. In 19 patients (95%), spondyloptosis was treated surgically, involving the posterior route in all cases. In 7 patients (37%), corpectomy was performed. None of the patients showed improvement in neurological deficits. The mean follow-up length was 37.5 months (range 3-60 months), and 5 patients died in the follow-up period from complications due to formation of bedsores (decubitus ulcers). CONCLUSIONS To the authors' best knowledge, this study was the largest of its kind on traumatic spondyloptosis. Its results illustrate the challenges of treating patients with this condition. Despite

deformity correction of the spine and early mobilization of patients, traumatic spondyloptosis led to high morbidity and mortality rates because the patients lacked access to rehabilitation facilities postoperatively.

65: Mittal D, Agarwala S, Yadav DK, Pramanik DD, Sharma MC, Bagga D. Testicular Tumors in Undescended Testes in Children Below 5 y of Age. Indian J Pediatr. 2015 Jun;82(6):549-52. doi: 10.1007/s12098-014-1667-1. Epub 2015 Jan 11. PubMed PMID: 25575910.

OBJECTIVE: To evaluate the presentation, treatment and outcome of testicular tumors in undescended testes (UDT) in boys below 5 y of age.
METHODS: Case records of boys below 5 y of age, diagnosed to have germ cell tumors (GCT) in the UDT were reviewed.

RESULTS: Seven children in the age range of 05-54 mo (mean 26 mo) were included. While five of these 7 (71 %) presented with abdominal mass [one antenatally detected], 2 (29 %) were detected to have a GCT during orchiopexy. In three of these five with abdominal mass, the alpha-fetoprotein (αFP) was markedly elevated. Two of these three with elevated αFP were endodermal sinus tumors while the third was embryonal carcinoma. The 4th patient with an abdominal mass was diagnosed to have an immature teratoma (IMT) while the patient with antenatally diagnosed mass had a mature cystic teratoma (MT). Both the patients with incidentally detected mass during the orchiopexy had mature teratoma (MT). All the seven children are alive and disease free at last follow-up.

CONCLUSIONS: Though rare, boys with impalpable undescended testes may develop germ cell tumors early in childhood. These can be managed with chemotherapy and resection and have a good disease free outcome.

66: Motwani R, Jhajhria SK. Variant Branching Pattern of Superior Thyroid Artery and Its Clinical Relevance: A Case Report. J Clin Diagn Res. 2015 Jun;9(6):AD05-6. doi: 10.7860/JCDR/2015/12956.6065. Epub 2015 Jun 1. PubMed PMID: 26266110; PubMed Central PMCID: PMC4525499.

Thyroid surgeries are most common neck surgeries; hence thorough knowledge of the blood supply of this gland to the surgeons is of immense importance to prevent any alarming haemorrhage. We report a rare unilateral branching pattern of superior thyroid artery (STA) on right side during routine dissection on an adult male cadaver in the Department of Anatomy, A.I.I.M.S, New Delhi. Left superior thyroid artery was normal. The common trunk (CT) arose from anterior surface of right external carotid artery (ECA) just above the bifurcation of common carotid artery (CCA) soon dividing into five branches i.e., infrahyoid, superior laryngeal, superior thyroid, cricothyroid and sternocleidomastoid artery. This variant branching pattern of STA is very rare. The inferior thyroid arteries did not show any unusual distribution. Knowledge of such arterial variations related to the thyroid gland is immensely helpful to the surgeons to avoid damage of the vital organs in this region.

67: Mukherjee A, Patel CD, Naik N, Sharma G, Roy A. Quantitative assessment of cardiac mechanical dyssynchrony and prediction of response to cardiac resynchronization therapy in patients with non-ischaemic dilated cardiomyopathy using equilibrium radionuclide angiography. Europace. 2015 Jun 7. pii: euv145. [Epub ahead of print] PubMed PMID: 26056184.

AIMS: The aim of this study was to evaluate equilibrium radionuclide angiography (ERNA) in prediction of response to cardiac resynchronization therapy (CRT) in non-ischaemic dilated cardiomyopathy (DCM) patients.

METHODS AND RESULTS: Thirty-two patients (23 males, 57.5 ± 12.1 years) were prospectively included. Equilibrium radionuclide angiography and clinical evaluation were performed before and 3 months after CRT implantation. Standard deviation of left ventricle mean phase angle (SD LVmPA) and difference between LV and right ventricle mPA (LV-RVmPA) expressed in degrees (°) were used to quantify left intraventricular synchrony and interventricular synchrony, respectively. Left ventricular ejection fraction (LVEF) was also evaluated. At the baseline, mean NYHA class was 3.3 ± 0.5, LVEF 22.5 ± 5.6%, mean QRS duration 150.3 ± 18.2 ms, SD LVmPA 43.5 ± 18°, and LV-RVmPA 30.4 ± 15.6°. At 3-month follow-up, 22 patients responded to CRT with improvement in NYHA class ≥1 and EF >5%. Responders had significantly larger SD LVmPA (51.2 ± 13.9 vs. 26.5 ± 14°) and LV-RVmPA (35.8 ± 13.7 vs. 18.4 ± 13°) than non-responders. Receiver-operating characteristic curve analysis demonstrated 95% sensitivity and 80% specificity at a cut-off value of 30° for SD LVmPA, and 81% sensitivity and 80% specificity at a cut-off value of 23° for LV-RVmPA in prediction of response to CRT.

CONCLUSION: Baseline SD LVmPA and LV-RVmPA derived from ERNA are useful for prediction of response to CRT in non-ischaemic DCM patients.

68: Nagpal R, Sharma N, Vasavada V, Maharana PK, Titiyal JS, Sinha R, Upadhyay AD, Vajpayee RB. Toric Intraocular Lens Versus Monofocal Intraocular Lens Implantation and Photorefractive Keratectomy: A Randomized Controlled Trial. Am J Ophthalmol. 2015 Sep;160(3):479-486.e2. doi: 10.1016/j.ajo.2015.06.007. Epub 2015 Jun 19. PubMed PMID: 26095261.

PURPOSE: To compare the outcomes of phacoemulsification with toric intraocular lens implantation vs phacoemulsification with monofocal intraocular lens implantation followed by photorefractive keratectomy (PRK) for correction of pre-existing astigmatism.
DESIGN: Randomized controlled trial, 6-month study.

METHODS: setting: Institutional.
STUDY POPULATION: Sixty eyes of 52 patients with age-related senile cataract and regular corneal astigmatism ranging from 1.50 to 3.00 diopters, enrolled and randomly allocated in 2 groups based on computer-generated random number table.
INTERVENTION: Group 1 patients underwent phacoemulsification with toric intraocular lens (IOL) implantation and Group 2 patients underwent phacoemulsification with monofocal IOL implantation followed by PRK 3 months later.
MAIN OUTCOME MEASURES: The main outcome measures were uncorrected distance visual acuity (UDVA), corrected distance visual acuity (CDVA), residual cylinder, contrast sensitivity, glare acuity, pain score, and higher-order aberrations.
RESULTS: At 6 months 53.3% of eyes in the toric IOL and 60% eyes in the monofocal IOL with PRK group attained UDVA of 20/20. Median residual refractive cylinder value was higher in the toric IOL group (toric IOL = -0.5, monofocal IOL with PRK = 0; P = .02). Mean root mean square value of total aberrations (5 mm pupil) was higher in monofocal IOL with PRK eyes (toric IOL= 1.02 ± 0.44, monofocal IOL with PRK = 1.28 ± 0.5; P = .04). Mean contrast sensitivity values were comparable. Mean toric IOL rotation was 1.3 ± 2.1 degrees. Mean glare acuity was better in toric IOL eyes (toric IOL = 0.46 ± 0.16, monofocal IOL with PRK = 0.73 ± 0.12; P < .001). Median postoperative pain scores were higher in monofocal IOL

with PRK eyes.
CONCLUSION: PRK yields lesser residual cylinder compared to toric IOL. However, it causes greater postoperative pain and corneal aberrations, and poor glare acuity.

69: 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):1166-72. 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.

70: Netam R, Yadav RK, Khadgawat R, Sarvottam K, Yadav R. Interleukin-6, vitamin D & diabetes risk-factors modified by a short-term yoga-based lifestyle intervention in overweight/obese individuals. Indian J Med Res. 2015 Jun;141(6):775-82. doi: 10.4103/0971-5916.160698. PubMed PMID: 26205020; PubMed Central PMCID: PMC4525402.

BACKGROUND & OBJECTIVES: Several diabetes prevention programmes have demonstrated a reduction in incidence of diabetes in individuals with prediabetes through weight loss. Short-term yoga-based lifestyle intervention programmes have also been shown to be efficacious in weight loss. This study was undertaken to investigate if interleukin (IL)-6, vitamin D, neopterin, vaspin, and diabetes risk factors can be modified by a short-term yoga-based lifestyle intervention in overweight/obese subjects.
METHODS: In this pilot study, 34 overweight/obese [body mass index (BMI) ≥ 23 to <35 kg/m [2] per Asian cut-off values] individuals were enrolled, and received directly supervised intervention for 10 days. Thereafter, they were advised to follow this yoga-based lifestyle at home for one month, and were reassessed for study variables at day 30.
RESULTS: There was a reduction from baseline to day 10 in weight (p <0.001), BMI (P <0.001), waist/hip-ratio (P <0.05), blood glucose (P <0.01), and a significant improvement in lipid profile. There was a decrease in median fasting insulin (P <0.05), homeostatic model assessment-insulin resistance (P <0.01), and IL-6 (Pp <0.05). A non-significant increase in 25-OH-vitamin D, and a decrease in neopterin and vaspin were observed. Twenty subjects returned for follow up assessments. At day 30, weight loss was sustained while systolic blood pressure also showed reduction (P <0.05). Changes in vitamin D levels were significantly and negatively correlated with changes in weight, BMI and fasting blood glucose, and positively with change in high density lipoprotein. Changes in body weight and BMI significantly and positively correlated with insulin. Changes in IL-6 levels positively and significantly correlated with change in neopterin levels.

INTERPRETATION & CONCLUSIONS: The findings showed that IL-6, vitamin D, and diabetes risk factors were favourably modified by a short-term yoga-based lifestyle intervention in obesity. This study also highlighted the challenges in compliance associated with the follow up of subjects following an aggressive supervised intervention of 10 days.

71: Pallavi P, Sagar R, Mehta M, Sharma S, Subramanium A, Shamshi F, Sengupta U, Pandey RM, Mukhopadhyay AK. Serum cytokines and anxiety in adolescent depression patients: Gender effect. Psychiatry Res. 2015 Sep 30;229(1-2):374-80. doi: 10.1016/j.psychres.2015.06.036. Epub 2015 Jun 27. PubMed PMID: 26163725.

The present study compares the serum cytokine levels between adolescent depression patients and healthy controls and assesses correlation between depression, anxiety scores and serum levels of eight cytokines. Study also checked the variation in serum levels with medication status (medication free/naïve vs. patients on medication). Following clinical and psychometric assessment of 77 adolescent (aged 13-18 years) depression patients (49 males and 28 females; 56 medication free/naïve) and 54 healthy controls (25 males, 29 females), eight cytokines (IL-1β, IL-2, IL-6, IL-10, TNF-α, IFN-γ, TGF-β1 and IL-17A {denoted IL-17 throughout}) were measured in serum using ELISA. Depressed adolescents had significantly high levels of IL-2 (p<0.001) and IL-6 (p=0.03) as compared to controls. The female population skewed the result of one cytokine (IL-6) in patients. Anxiety scores showed positive correlation (only in female patients) with IL-1β, IL-10 and negative correlation with TGF-β1 and IL-17. The gender effect in relationship between anxiety and cytokines was not straightforward. On comparing study groups on the medication/naïve status, IL-2

and TGF-β1 showed significant difference between the groups (p<0.001, p=0.007 higher in medicated). Depression in adolescents was associated with elevation of proinflammatory serum cytokines with a gender bias for females. Anxiety scores correlated negatively with TGF-β1 and IL-17.

72: Panda SK, Kapur N, Paliwal D, Durgapal H. Recombinant Hepatitis E virus like particles can function as RNA nanocarriers. J Nanobiotechnology. 2015 Jun 24;13:44. doi: 10.1186/s12951-015-0101-9. PubMed PMID: 26104584; PubMed Central PMCID: PMC4479061.

BACKGROUND: Assembled virus-like particles (VLPs) without genetic material, with structure similar to infectious virions, have been successfully used as vaccines. We earlier described in vitro assembly, characterisation and tissue specific receptor dependent Clathrin mediated entry of empty HEV VLPs, produced from Escherichia coli expressed HEV capsid protein (pORF2). Similar VLP's have been described as a potential candidate vaccine (Hecolin) against HEV.
FINDINGS: We have attempted to use such recombinant assembled Hepatitis E virus (HEV) VLPs as a carrier for heterologous RNA with protein coding sequence fused in-frame with HEV 5' region (containing cap and encapsidation signal) and investigated, if the relevant protein could be expressed and elicit an immune response in vivo. In vitro transcribed red fluorescent protein (RFP)/Hepatitis B virus surface antigen (HBsAg) RNA, fused to 5'-HEV sequence with cap and encapsidation signal (1-249 nt), was packaged into the recombinant HEV-VLPs and incubated with five different cell lines (Huh7, A549, Vero, HeLa and SiHa). The pORF2-VLPs could specifically transfer exogenous coding RNA into Huh7 and A549 cells. In vivo, Balb/c mice were immunized (intramuscular injections) with 100 μg pORF2-VLP encapsidated with 5'-methyl-G-HEV (1-249 nt)-HBsAg RNA, blood samples were collected and screened by ELISA for anti-pORF2 and anti-HBsAg antibodies. Humoral immune response could be elicited in Balb/c mice against both HEV capsid protein and cargo RNA encoded HBsAg protein.

CONCLUSIONS: These findings suggest that other than being a possible vaccine, HEV pORF2-VLPs can be used as a promising non-replicative tissue specific gene delivery system.

73: Pati HP. Editorial. Indian J Hematol Blood Transfus. 2015 Jun;31(2):161. doi: 10.1007/s12288-015-0525-2. PubMed PMID: 25825552; PubMed Central PMCID: PMC4375144.

74: Pattan V, Seth S, Jehangir W, Bhargava B, Maulik SK. Effect of Atorvastatin and Pioglitazone on Plasma Levels of Adhesion Molecules in Non-Diabetic Patients With Hypertension or Stable Angina or Both. J Clin Med Res. 2015 Aug;7(8):613-9. doi: 10.14740/jocmr2178e. Epub 2015 Jun 9. PubMed PMID: 26124907; PubMed Central PMCID: PMC4471748.
BACKGROUND: It was to study the effect of atorvastatin, pioglitazone and their combination on plasma levels of adhesion molecules in patients with hypertension or stable angina or both.

METHODS: It was an open-label, randomized parallel-group study. Forty-five atorvastatin-naive patients with hypertension or stable angina or both, were randomized to receive either atorvastatin (19 patients; 10 mg OD for 12 weeks) or pioglitazone (26 patients; 30 mg OD for 12 weeks). Another group of 30 patients who were already on atorvastatin were put on add-on pioglitazone therapy (pioglitazone (15 mg OD) + atorvastatin (10 mg OD) for 12 weeks). Plasma

high-sensitivity C-reactive protein (hsCRP), soluble intercellular adhesion molecule-1 (sICAM-1) and soluble vascular cell adhesion molecule-1 (sVCAM-1) levels were measured at baseline and after 12 weeks of therapy.

RESULTS: Atorvastatin monotherapy significantly reduced plasma sICAM-1, but pioglitazone monotherapy did not produce any significant effect. Addition of pioglitazone in patients already receiving atorvastatin also significantly reduced plasma sICAM-1 level. However, there was no significant change in plasma hsCRP and sVCAM-1 levels in any of the groups after 12 weeks of therapy.

CONCLUSION: There is therapeutic advantage of combining pioglitazone and atorvastatin on plasma sICAM-1 levels.

75: Pillai RS, Mathur VP, Jain V, Shah N, Kalra S, Kumar P, Dey AB. Association between dental prosthesis need, nutritional status and quality of life of elderly subjects. Qual Life Res. 2015 Jun 18. [Epub ahead of print] PubMed PMID: 26085327.

PURPOSE: To determine the effect of prosthesis need on nutritional status and oral health-related quality of life (OHrQoL) in elderly and to check the disparity between prosthesis need and prosthesis want in the Indian elderly.
METHODS: A total of 946 geriatric participants reporting to a geriatric medicine clinic were recruited in the study. Mini-nutritional assessment (MNA), geriatric oral health assessment (GOHAI) indices, prosthesis need according to WHO criteria, and prosthesis want was recorded along with age, gender, socioeconomic status and posterior occluding pair.

RESULTS: Significant associations exist between prosthesis need and age ($p = 0.005$), MNA ($p = 0.006$) and GOHAI ($p = 0.000$). Prosthesis demand too was influenced by age ($p = 0.004$), posterior occluding pairs ($p = 0.000$), MNA ($p = 0.012$) and GOHAI ($p = 0.000$). GOHAI was negatively correlated with upper ($r = -0.445$) and lower prosthesis need ($r = -0.460$). Participants with some prosthesis need had significantly lower MNA and GOHAI scores as compared to those with no prosthesis need. Though prosthesis need was high (79.7 %), demand was low (39.3 %).

CONCLUSION: Prosthesis need affects nutritional status and OHrQoL in elderly, and a wide gap exists between need and want of prosthesis.

76: Prabhakar H, Kalaivani M. Propofol versus thiopental sodium for the treatment of refractory status epilepticus. Cochrane Database Syst Rev. 2015 Jun 25;6:CD009202. doi: 10.1002/14651858.CD009202.pub3. PubMed PMID: 26111021.

BACKGROUND: This is an updated version of the original Cochrane review published in Issue 8, 2012.Failure to respond to antiepileptic drugs in patients with uncontrolled seizure activity such as refractory status epilepticus (RSE) has led to the use of anaesthetic drugs. Coma is induced with anaesthetic drugs to achieve complete control of seizure activity. Thiopental sodium and propofol are popularly used for this purpose. Both agents have been found to be effective. However, there is a substantial lack of evidence as to which of the two drugs is better in terms of clinical outcome.
OBJECTIVES: To compare the efficacy, adverse effects, and short- and long-term outcomes of RSE treated with one of the two anaesthetic agents, thiopental sodium or propofol.

SEARCH METHODS: We searched the Cochrane Epilepsy Group Specialized Register (26 March 2015), the Cochrane Central Register of Controlled Trials (CENTRAL, The Cochrane Library Issue 2, February 2015) and MEDLINE (1946 to 26 March 2015). We

also searched ClinicalTrials.gov (26 March 2015), the South Asian Database of Controlled Clinical Trials and IndMED (a bibliographic database of Indian Medical Journals).
SELECTION CRITERIA: All randomised or quasi-randomised controlled studies (regardless of blinding) of control of RSE using either thiopental sodium or propofol in patients of any age and gender.
DATA COLLECTION AND ANALYSIS: Two review authors screened the search results and reviewed the abstracts of relevant and eligible trials before retrieving the full-text publications.

MAIN RESULTS: One study with a total of 24 participants was available for review. This study was a small, single-blind, multicentre trial studying adults with RSE receiving either propofol or thiopental sodium for the control of seizure activity. This study cannot be considered of high methodological quality. This study was terminated early due to recruitment problems. This study showed a wide confidence interval suggesting that the drugs may differ in efficacy up to more than two-fold. Days of mechanical ventilation were more in patients receiving thiopental sodium when compared with propofol. At three months there was no evidence of a difference between the drugs with respect to outcome measures such as control of seizure activity and functional outcome. Adverse events reported in this study were infection, hypotension and intestinal ischaemia.

AUTHORS' CONCLUSIONS: Since the last version of this review we have found no new studies.There is a lack of robust, randomised, controlled evidence that can clarify the efficacy of propofol and thiopental sodium compared to each other in the treatment of RSE. There is a need for large randomised controlled trials for this serious condition.

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

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

78: Purkait S, Jain D, Madan K, Mathur S, Iyer VK. Combined small cell carcinoma of the lung: a case diagnosed on bronchoscopic wash cytology and bronchial biopsy. Cytopathology. 2015 Jun;26(3):197-9. doi: 10.1111/cyt.12145. Epub 2014 Apr 16. PubMed PMID: 24734994.

79: Purohit A, Venkatesan S, Aggarwal M, Singh J, Sharma R, Mahapatra M, Pati HP, Saxena R. Immunophenotypic aberrancy of a case of hairy cell leukemia. Indian J Hematol Blood Transfus. 2015 Jun;31(2):292-4. doi: 10.1007/s12288-014-0433-x. Epub 2014 Jul 20. PubMed PMID: 25825575; PubMed Central PMCID: PMC4375159.

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

BACKGROUND: SLC30A10 mutations cause an autosomal recessive disorder, characterized by hypermanganesaemia, polycythemia, early-onset dystonia, paraparesis, or late-onset parkinsonism, and chronic liver disease. This is the first identified inborn error of Mn metabolism in humans, reported in 10 families thus far.

METHODS: Methods for this study consisted of clinical examination, neuroimaging studies (MRI), serum dosages, and SLC30A10 genetic analysis.
RESULTS: We describe early disease manifestations (including videos) in 5 previously unreported Indian children, carrying novel homozygous SLC30A10 mutations. Gait and speech disturbances, falls, dystonias, and central hypotonia were the presenting neurological features, starting within the first 5 years of life. All children also had severe hypermanganesemia, polycythemia, variable degree of liver disease, and marked brain MRI T1 hyperintensities.

CONCLUSIONS: Our findings expand the mutational and clinical spectra of this recently recognized disorder. An early diagnosis is warranted, because treatment with manganese-chelating agents, iron supplementation, or their combination might improve symptoms and prevent progression of this otherwise potentially fatal disease. © 2015 International Parkinson and Movement Disorder Society.

81: Raheja A, Tandon V, Suri A, Sarat Chandra P, Kale SS, Garg A, Pandey RM, Kalaivani M, Mahapatra AK, Sharma BS. Initial experience of using high field strength intraoperative MRI for neurosurgical procedures. J Clin Neurosci. 2015 Aug;22(8):1326-31. doi: 10.1016/j.jocn.2015.02.027. Epub 2015 Jun 12. PubMed PMID: 26077939.

We report our initial experience to optimize neurosurgical procedures using high field strength intraoperative magnetic resonance imaging (IOMRI) in 300 consecutive patients as high field strength IOMRI rapidly becomes the standard of care for neurosurgical procedures. Three sequential groups (groups A, B, C; n=100 each) were compared with respect to time management, complications and technical difficulties to assess improvement in these parameters with experience. We observed a reduction in the number of technical difficulties ($p<0.001$), time to

induction (p<0.001) and total anesthesia time (p=0.007) in sequential groups. IOMRI was performed for neuronavigation guidance (n=252) and intraoperative validation of extent of resection (EOR; n=67). Performing IOMRI increased the EOR over and beyond the primary surgical attempt in 20.5% (29/141) and 18% (11/61) of patients undergoing glioma and pituitary surgery, respectively. Overall, EOR improved in 59.7% of patients undergoing IOMRI (40/67). Intraoperative tractography and real time navigation using re-uploaded IOMRI images (accounting for brain shift) helps in intraoperative planning to reduce complications. IOMRI is an asset to neurosurgeons, helping to augment the EOR, especially in glioma and pituitary surgery, with no significant increase in morbidity to the patient.

82: Ramanathan A, Immanuel C, Rao DN, Kaliraj P. Dissecting the Immune Response Elicited by WbALT-2, ALT MAP in Clinical Populations and Mouse Model: A Prophylactic Measure Against Lymphatic Filariasis. Lymphat Res Biol. 2015 Jun;13(2):120-5. doi: 10.1089/lrb.2014.0034. Epub 2015 Jun 2. PubMed PMID: 26091407.

BACKGROUND: Abundant Larval Transcript (ALT) is one of the major groups of immune-dominant proteins produced by filarial worms during their larval stage. The major B-cell and T-cell epitopic domains of the ALT-2 antigen were mapped to develop a multiple antigenic peptide (MAP) prophylactic antigen against lymphatic filariasis.

METHODS AND RESULTS: ALT MAP was constructed by solid phase peptide synthesis. The reactivity of whole ALT protein and ALT MAP against clinical sera described a high reactivity of endemic normal sera against ALT MAP compared to WbALT-2 protein. The antibody isotype pattern revealed elevated levels of IgG1 and IgG2 against ALT MAP, followed by IgG3 and IgG4. In this study we also analyzed the immune response pattern elicited by ALT MAP, ALT in mice models, which revealed similar pattern of humoral response, while low T cell proliferation in ALT MAP groups. The low proliferation could be attributed to T/B epitope arrangement on the construct, MHC restriction, and incomplete signal delivery by T cell receptor.

CONCLUSION: The immunodominant epitopes in ALT MAP were found to play a crucial role in inducing high antigen specific proliferation. This revealed the significance of ALT MAP in stimulating innate immunity in offering protective immune response probably through the activation of complement cascade along with stimulation of cellular response. An improved understanding, including the construction of ALT MAP and parasite challenge study in jirds to determine the worm clearance would give a better insight in the characterization ALT MAP construct as a prophylactic vaccine candidate.

83: Rewari V. Further components for the PHASE basic airway checklist. Anaesthesia. 2015 Jun;70(6):751. doi: 10.1111/anae.13074. PubMed PMID: 25959180.

84: Roy KK, Kansal Y, Subbaiah M, Kumar S, Sharma JB, Singh N. Hysteroscopic septal resection using unipolar resectoscope versus bipolar resectoscope: Prospective, randomized study. J Obstet Gynaecol Res. 2015 Jun;41(6):952-6. doi: 10.1111/jog.12646. Epub 2014 Dec 10. PubMed PMID: 25491475.

AIM: To compare the operation and reproductive outcome of hysteroscopic septal resection using unipolar resectoscope verses bipolar resectoscope.
METHODS: In this prospective randomized study, 70 women underwent hysteroscopic

septal resection using either unipolar resectoscope or bipolar resectoscope. Intraoperative parameters (operation time, fluid deficit and complications) and pre- and postoperative serum sodium levels were compared between the two groups. A second-look hysteroscopy was performed after 6 weeks. All pregnancies occurring during the follow-up period were recorded.
RESULTS: There was no statistically significant difference between the two groups in terms of operation parameters and second-look hysteroscopy findings. Six patients in the unipolar group were found to have hyponatremia in the postoperative period compared to none in the bipolar group (P = 0.025). Regarding reproductive outcome, the difference between the two groups was not significant.
CONCLUSION: The use of bipolar resectoscope is associated with lesser risk of hyponatremia compared to unipolar resectoscope. Bipolar resectoscopy is a safe alternative to unipolar resectoscopy with similar reproductive outcome.

85: Roychoudhury S, Nagori SA, Roychoudhury A. Neurosensory disturbance after bilateral sagittal split osteotomy: A retrospective study. J Oral Biol Craniofac Res. 2015 May-Aug;5(2):65-8. doi: 10.1016/j.jobcr.2015.04.006. Epub 2015 Jun 30. PubMed PMID: 26258016; PubMed Central PMCID: PMC4523587.

AIM: To retrospectively evaluate neurosensory disturbance (NSD) after bilateral sagittal split osteotomy (BSSO).

MATERIAL AND METHODS: A retrospective review was carried out to assess inferior alveolar nerve function in patients treated by BSSO from 2010 to 2013. All patients included in the study were assessed using objective (cotton swabs and pin prick testing) and subjective testing (questionnaire) for inferior alveolar nerve function after a minimum of 1 year of follow-up. Medical records of the patients were used to assess the incidence of NSD in the immediate post-operative period.

RESULTS: 15 patients (30 sides) had undergone BSSO during the specified time period. On subjective testing, NSD was reported in 22 operated sides (73.3%) in the immediate post-operative period, while 4 operated sides (13.3%) reported persistent NSD. On objective testing, immediate post-operative NSD was seen in 20 operated sides (66.7%). After a minimum of 1 year follow-up, recovery was seen in 18 operated sides while persistent NSD was seen in 2 operated sides (6.7%).

CONCLUSION: NSD of the inferior alveolar nerve is a common complication after BSSO in the immediate post-operative period. However in a long term, nerve function usually recovers.

86: Saini M, Dhiman R, Dada T, Tandon R, Vanathi M. Topical cyclosporine to control ocular surface disease in patients with chronic glaucoma after long-term usage of topical ocular hypotensive medications. Eye (Lond). 2015 Jun;29(6):808-14. doi: 10.1038/eye.2015.40. Epub 2015 Apr 10. PubMed PMID: 25857609; PubMed Central PMCID: PMC4469670.

PURPOSE: To evaluate changes in ocular surface and central corneal sub-basal nerve fiber layer (SBNFL) after topical cyclosporin therapy in chronic glaucoma patients on long-term topical antiglaucoma therapy.
METHODS: A prospective comparative study of ocular surface evaluation of chronic glaucoma patients on long-term topical therapy treated concurrently with a topical cyclosporine 0.05% twice daily for 6 months and controls was done. The study parameters evaluated at recruitment and at the 6-month follow-up included

details of topical antiglaucoma medications, visual acuity, intraocular pressure, ocular surface evaluation parameters (TBUT, Schirmers I, ocular surface staining scores and ocular surface disease (OSD) index score (OSDI)), central corneal sensation (Cochet Bonnett aesthesiometer), and central confocal microscopy to study the SBNFL density (SBNFLD).

RESULTS: Thirty-two eyes of 16 patients with chronic glaucoma and 30 eyes of 15 normal subjects as controls were studied. Mean TBUT, pre/post CsA treatment was 8.67±3.01/12.24±1.83 s (P=0.007). Mean conjunctival/corneal staining scores pre/post CsA treatment were 3.38±1.93/1.50±0.718 (P=0.00) /5.19±1.82/1.81±0.78 (P=0.098), respectively. Mean OSDI pre/post CsA treatment scores were 30.63±14.61/14.76±6.06 (P=0.007). Mean corneal sensations scores pre/post CsA treatment were 4.64±0.46/4.94±0.39 (P=0.002). Central corneal SBNFLD pre and post CsA treatment was 8811.35±2985.29/10335.13±4092.064 µm/mm(2) (P=0.0001).

CONCLUSIONS: Schirmer's test, ocular surface staining scores, OSDI, corneal sensations, and corneal SBNFLD showed a statistically significant improvement following a 6-month concurrent topical CsA therapy.

87: Sandip S, Das CJ, Khandelwal RK. Leptomeningeal metastases in pineoblastoma. BMJ Case Rep. 2015 Jun 29;2015. pii: bcr2015210343. doi: 10.1136/bcr-2015-210343. PubMed PMID: 26123467.

88: Sankar J, Shukla A, Dubey N, Sankar MJ. Can inferior vena cava saturations be used instead of ScvO2 in children with septic shock? Intensive Care Med. 2015 Jun;41(6):1141-2. doi: 10.1007/s00134-015-3783-4. Epub 2015 Apr 8. PubMed PMID: 25851392.

89: Saxena A, Mehta A, Ramakrishnan S, Sharma M, Salhan S, Kalaivani M, Juneja R. Pulse oximetry as a screening tool for detecting major congenital heart defects in Indian newborns. Arch Dis Child Fetal Neonatal Ed. 2015 Sep;100(5):F416-21. doi: 10.1136/archdischild-2014-307485. Epub 2015 Jun 2. PubMed PMID: 26038347.

OBJECTIVE: To evaluate the use of pulse oximetry as a screening tool for detecting major congenital heart defects (CHDs) in Indian newborns.
DESIGN: Cross-sectional observational study.
PATIENTS: In a community hospital of north India, babies born during a specific 8 h period of the day were recruited over a period of 3 years. Newborns with incomplete documentation were excluded.
INTERVENTION: Routine clinical examination, pulse oximetry and bedside echocardiography.
OUTCOME MEASURES: Any abnormalities in clinical examination and pulse oximetry were recorded. CHDs were diagnosed using bedside echocardiography. Accuracy of pulse oximetry, clinical examination and their combination for detecting major CHDs was calculated.

RESULTS: Among the 19 009 newborns screened, 70 had major CHDs at birth (44 serious, 26 critical). Pulse oximetry detected 39 major (sensitivity 55.7%, 95% CI 44.1% to 66.8%; specificity 68.3%, 67.6% to 68.9%) and 22 critical CHDs (sensitivity 84.6%, 66.5% to 93.9%; specificity 68.3%, 67.6% to 68.9%). Addition of pulse oximetry to clinical examination significantly improved sensitivity for major CHDs (35.7% (25.5% to 47.4%) to 75.7% (64.5% to 85.3%), p<0.01) and critical CHDs (11.5% (4.0% to 29.0%) to 84.6% (66.5% to 93.9%), p<0.01).

CONCLUSIONS: Pulse oximetry is a sensitive screening tool for detecting major CHDs in Indian newborns. It adds significant value to the current practice of using clinical examination as a sole screening tool for detecting major CHDs. However, specificity of pulse oximetry was much lower in our study. Possible reasons for low specificity could be non-repetition of pulse oximetry in newborns with initial lower saturations, high prevalence of infections and respiratory issues in our cohort and use of non-motion tolerant oximeter.

PMID: 26038347 [PubMed - in process]

90: Shalimar. Role of Pentoxifylline and Steroids for Alcoholic Hepatitis - Has the last word been said? J Clin Exp Hepatol. 2015 Jun;5(2):170-2. doi: 10.1016/j.jceh.2015.06.005. Epub 2015 Jun 27. PubMed PMID: 26155046; PubMed Central PMCID: PMC4491637.

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

Phenotypic resistance to APC is a complex mechanism associated with increased risk of venous thrombosis in women with recurrent spontaneous abortions. The primary aim of this prospective case control study was to find out the frequencies of different congenital and acquired thrombophilic factors predisposing to APC resistance and to evaluate the strength of their association with recurrent pregnancy losses. FV Leiden accounted for around 40% of all APCR positive patients and the difference in the group frequencies compared with controls, was found to be statistically significant (p=0.001). 18.33% (11/60) FV Leiden-negative APC-resistant patients hadFVIII: c values exceeding 95th percentile of the control population (145IU/dL), as compared to 3% in the control group (p=0.001). Mean FVIII level in control subjects was 118±14.0IUdL(-), compared with 127.7±31.2IUdL(-) in the patient group (p=0.009). Apart from FVIII, only the anti-phospholipid antibodies showed a statistically significant association with APCR phenotype (p=0.028), unlike other thrombophilic factors such as Protein C, Protein S, FV levels, HR2 haplotype or other rarer FV variants. The strong positive association of FVL mutation, anti-phospholipid antibodies and elevated FVIII levels with APCR phenotype calls for incorporating them as first line investigations in patients with recurrent spontaneous miscarriages with APCR positivity.

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

OBJECTIVE: To determine tumor marker concentrations during normal and high-risk pregnancies.
METHODS: The present cross-sectional study included women attending the gynecology outpatient department at All India Institute of Medical Sciences, New Delhi, India, between November 1, 2012 and March 31, 2013. Their serum was

assayed for carcinoembryonic antigen (CEA), cancer antigen 19-9 (CA19-9), and cancer antigen 15-3 (CA15-3).

RESULTS: A total of 251 pregnant women and 31 nonpregnant women were included. Median CEA value was lower among pregnant women than among nonpregnant women (1.2µg/L vs 1.4µg/L; P=0.006), whereas that of CA15-3 was higher (16.7U/mL vs 12.3U/mL; P=0.03). CA19-9 concentration was higher among pregnant women aged 25-29years (7.0U/mL) or 30-34years (7.2U/mL) than among those aged 20-24years (4.2U/mL; P=0.01 for both). The CA15-3 level was increased during the second (13.0U/mL) and third (60.5U/mL) trimesters compared with the first trimester (9.5U/mL) (P≤0.01 for both comparisons). It was also raised in high-risk pregnancies (33.7U/mL), specifically pregnancies complicated by gestational diabetes mellitus (39.7U/mL), intrahepatic cholestasis of pregnancy (64.3U/mL), or heart disease (54.0U/mL) (P<0.05 for all).

CONCLUSION: CA15-3 concentrations rise during pregnancy, but whether this increase can be attributed to physiological changes in breast tissue needs to be investigated further.

93: Sharma N, Arora T, Kaur M, Titiyal JS, Agarwal T. Surrogate scleral rim with fibrin glue: a novel technique to expand the pool of donor tissues for Descemet stripping automated endothelial keratoplasty. Br J Ophthalmol. 2015 Jun 30. pii: bjophthalmol-2015-306903. doi: 10.1136/bjophthalmol-2015-306903. [Epub ahead of print] PubMed PMID: 26130671.

Descemet stripping automated endothelial keratoplasty is being performed in increasing number of cases each year. An adequate scleral rim on all sides is mandatory for the donor cornea to be mounted on the artificial anterior chamber for microkeratome-assisted dissection. Occasionally, the scleral rim may however be inadequate. The primary cause of inadequate scleral rim is poorly trained technicians in in-situ excision technique. Hence, we devised a novel technique for performing successful microkeratome-assisted dissection in donor corneas with inadequate scleral rim. A surrogate scleral rim was obtained from the donor tissue not fit for optical keratoplasty. It was then glued to the optical grade donor cornea that had an inadequate scleral rim either focally or circumferentially. The combination was then used for a successful microkeratome-assisted dissection followed by endothelial keratoplasty.

94: Sharma SK, Kumar S, Agrawal N, Mishra P, Seth T, Mahapatra M. Oral High Dose Dexamethasone for Pure Red Cell Aplasia Following ABO-Mismatched Allogeneic Peripheral Blood Stem Cell Transplantation: A Case Report. Indian J Hematol Blood Transfus. 2015 Jun;31(2):317-8. doi: 10.1007/s12288-013-0276-x. Epub 2013 Jun 9. PubMed PMID: 25825583; PubMed Central PMCID: PMC4375135.

Management of pure red cell aplasia following major ABO-mismatched hematopoietic stem cell transplantation is a therapeutic challenge. Various therapeutic modalities have been tried with variable responses, and patient remains transfusion dependent for a long time. We report here the use of pulsed oral high dose dexamethasone for pure red cell aplasia following ABO-mismatched allogeneic transplant with complete recovery.

95: Sharma VK, Pai G, Deswarte C, Lodha R, Singh S, Kang LW, Yin CC, Casanova JL, Bustamante J, Kabra SK. Disseminated Mycobacterium avium complex infection in a child with partial dominant interferon gamma receptor 1 deficiency in India. J Clin Immunol. 2015 Jul;35(5):459-62. doi: 10.1007/s10875-015-0173-1. Epub 2015 Jun 9. PubMed PMID: 26054576.

Mendelian susceptibility to mycobacterial disease (MSMD) is a rare condition characterized by clinical disease caused by weakly virulent mycobacteria. All genes mutated in MSMD patients are involved in IFN-γ immunity. Autosomal partial dominant (PD) interferon-γ receptor 1 (IFN-γR1) deficiency is the most frequent abnormality affecting the group of MSMD patients leading to impaired response of IFN-γ. We describe here a patient from India with disseminated infection due to Mycobacterium avium intracellulare (MAC) including multifocal osteomyelitis and BCG disease. A heterozygous mutation in exon 6 of IFNGR1 gene was identified, conferring an autosomal PD IFN-γR1 deficiency. Patient had recurrence of mycobacterial disease during antibiotic therapy for which subcutaneous IFN-γ was added as a modality of treatment for resistant MAC infection.

96: Silan VK, Kant S. Researching stigmatised communities: lessons from a study of MSM in India. Sex Transm Infect. 2015 Jun;91(4):283. doi: 10.1136/sextrans-2014-051845. PubMed PMID: 25990781.

97: Singh HN, Rajeswari MR. Identification of genes containing expanded purine repeats in the human genome and their apparent protective role against cancer. J Biomol Struct Dyn. 2015 Jun 25:1-16. [Epub ahead of print] PubMed PMID: 25990537.

Purine repeat sequences present in a gene are unique as they have high propensity to form unusual DNA-triple helix structures. Friedreich's ataxia is the only human disease that is well known to be associated with DNA-triplexes formed by purine repeats. The purpose of this study was to recognize the expanded purine repeats (EPRs) in human genome and find their correlation with cancer pathogenesis. We developed "PuRepeatFinder.pl" algorithm to identify non-overlapping EPRs without pyrimidine interruptions in the human genome and customized for searching repeat lengths, n ≥ 200. A total of 1158 EPRs were identified in the genome which followed Wakeby distribution. Two hundred and ninety-six EPRs were found in geneic regions of 282 genes (EPR-genes). Gene clustering of EPR-genes was done based on their cellular function and a large number of EPR-genes were found to be enzymes/enzyme modulators. Meta-analysis of 282 EPR-genes identified only 63 EPR-genes in association with cancer, mostly in breast, lung, and blood cancers. Protein-protein interaction network analysis of all 282 EPR-genes identified proteins including those in cadherins and VEGF. The two observations, that EPRs can induce mutations under malignant conditions and that identification of some EPR-gene products in vital cell signaling-mediated pathways, together suggest the crucial role of EPRs in carcinogenesis. The new link between EPR-genes and their functionally interacting proteins throws a new dimension in the present understanding of cancer pathogenesis and can help in planning therapeutic strategies. Validation of present results using techniques like NGS is required to establish the role of the EPR genes in cancer pathology.

98: Singh L, Saini N, Bakhshi S, Pushker N, Sen S, Sharma A, Kaur J, Kashyap S. Prognostic significance of mitochondrial oxidative phosphorylation complexes: Therapeutic target in the treatment of retinoblastoma. Mitochondrion. 2015 Jul;23:55-63. doi: 10.1016/j.mito.2015.06.001. Epub 2015 Jun 10. PubMed PMID: 26071002.

PURPOSE: Altered energy metabolism plays an important role in the development and progression of cancer. The objective of this study was to elucidate the role of mitochondrial oxidative phosphorylation complexes and their prognostic significance in retinoblastoma (Rb).
METHODS: Immunohistochemistry was performed on 109 primary enucleated retinoblastoma tissues for mitochondrial OXPHOS complexes and their expression was confirmed by western blotting.
RESULTS: Histopathological high risk factors (HRFs) were identified in 42.2% cases. Mitochondrial OXPHOS complexes III, IV and V were expressed in more than 50% of primary retinoblastoma cases each whereas mitochondrial complex I was expressed in only 29/109 (26.60%) cases by immunohistochemistry. Loss of mitochondrial complex I correlated well with poor tumor differentiation and tumor invasion ($p < 0.05$) whereas expression of mitochondrial complexes III, IV and V was associated with better survival (Kaplan-Meier method).
CONCLUSIONS: This was the first study predicting a relevant role of mitochondrial OXPHOS complexes and highlights the prognostic significance with patient outcome in retinoblastoma. Loss of mitochondrial complex I immunoexpression could prove to be a useful independent prognostic biomarker to identify high risk retinoblastoma patients. Differential expression of these mitochondrial complexes is a novel finding and may be used as an attractive future anticancer target in primary retinoblastoma tumors.
FINANCIAL DISCLOSURE: The author(s) have no proprietary or commercial interest in any materials discussed in this article.

99: Singh MK, Singh L, Pushker N, Sen S, Sharma A, Chauhan FA, Kashyap S. Correlation of High Mobility Group Box-1 Protein (HMGB1) with Clinicopathological Parameters in Primary Retinoblastoma. Pathol Oncol Res. 2015 Sep;21(4):1237-42. doi: 10.1007/s12253-015-9951-6. Epub 2015 Jun 30. PubMed PMID: 26118980.

HMGB1 is considered to be DNA chaperone as it binds without any specificity. It is the structural protein which alters nuclear homeostasis and genomic stability of chromatin. Its role in retinoblastoma (Rb) remains unclear. The aim of the present study was to evaluate the expression of HMGB1 protein in primary enucleated retinoblastomas. Expression of HMGB1 in 69 prospective cases of primary retinoblastoma were assessed by immunohistochemistry and reverse transcriptase PCR (RT-PCR) technique and correlated with clinicopathological parameters. Immunohistochemical staining revealed expression of HMGB1 in 55.07 % (38/69) cases. Semi-quantitative RT-PCR was performed on 31 fresh tumor tissues. mRNA expression was observed in 77.41 % (24/31) cases. Expression of HMGB1 was statistically significant with poor tumor differentiation ($p=0.0440$) & optic nerve invasion ($p=0.0128$). HMGB1 expression was frequently seen in poorly differentiated tumors and those with histopathological high risk factors. Therefore, HMGB1 may contribute to tumor invasiveness and could serve as a poor prognostic marker in Rb.

100: Singh S, Shariff A, Roy T, Das T, Rani N. Development of myenteric plexus in human foetuses: a quantitative study. Anat Cell Biol. 2015 Jun;48(2):124-9. doi: 10.5115/acb.2015.48.2.124. Epub 2015 Jun 26. PubMed PMID: 26140223; PubMed Central PMCID: PMC4488640.

Maturation of neurons of the myenteric plexus (MP) of human fetal sigmoid colon was studied at various weeks of gestation (WG). There is abundant literature on the development of MP in various segments of the gut but there are fewer reports on the development of MP in human sigmoid colon which is a site of various

disorders. Sigmoid colonic segments from 12 aborted foetuses aged 14-23WG were processed for NADPH histochemistry. Stereologic evaluation of the neuronal cell profiles, numerical density, number of neurons per ganglion and myenteric fraction was conducted using using imageJ software. According to gestational age, foetuses were assigned into two groups (group 1 [n=7], less than <17WG and group 2 [n=5], more than >17WG). The overall size of neuronal cell profiles in the MP was significantly increased (P<0.05). The numerical density of neurons decreased in group 2 in comparison to group 1, the number of neurons per ganglion and myenteric fraction were increased in group 2 but all these were not statistically significant. This study revealed that the maturational event increases after 17WG and extensive innervations is established at 23WG. During prenatal life there is an increase in the neuronal cell size from 14-23WG signifying maturational process. Such studies are essential for clinicians and surgeons to correlate the normal and pathologic development of the enteric nervous system.

101: Singla A, Malhotra R, Kumar V, Lekha C, Karthikeyan G, Malik V. A Randomized Controlled Study to Compare the Total and Hidden Blood Loss in Computer-Assisted Surgery and Conventional Surgical Technique of Total Knee Replacement. Clin Orthop Surg. 2015 Jun;7(2):211-6. doi: 10.4055/cios.2015.7.2.211. Epub 2015 May 18. PubMed PMID: 26217468; PubMed Central PMCID: PMC4515462.

BACKGROUND: Total knee arthroplasty (TKA) is associated with considerable blood loss. Computer-assisted surgery (CAS) is different from conventional TKA as it avoids opening the intramedullary canal. Hence, CAS should be associated with less blood loss.
METHODS: Fifty-seven patients were randomized into two groups of CAS and conventional TKA. In conventional group intramedullary femoral and extramedullary tibial jigs were used whereas in CAS group imageless navigation system was used. All surgeries were done under tourniquet. Total and hidden blood loss was calculated in both groups and compared.

RESULTS: The mean total blood loss was 980 mL in conventional group and 970 mL in CAS group with median of 1,067 mL (range, 59 to 1,791 mL) in conventional group and 863 mL (range, 111 to 2,032 mL) in CAS group. There was no significant difference in total blood loss between the two groups (p = 0.811). We have found significant hidden blood loss in both techniques, which is 54.8% of the total loss in the conventional technique and 59.5% in the computer-assisted navigation technique.

CONCLUSIONS: There is no significant difference in total and hidden blood loss in the TKA in CAS and conventional TKA. However, there is significant hidden blood loss in both techniques. There was no relation of tourniquet time with blood loss.

102: Solanki S, Srinivas M, Sinha A, Mittal D, Mallick S, Agarwala S, Bhatnagar V. Histopathological changes at colonic anastomotic site after ischemia reperfusion injury: role of aminoguanidine in experimental model. Eur J Pediatr Surg. 2015 Jun;25(3):242-9. doi: 10.1055/s-0034-1371714. Epub 2014 Mar 28. PubMed PMID: 24683106.

BACKGROUND: Inducible nitric oxide synthase (iNOS) has a significant role in ischemia reperfusion (I-R) injury. I-R injury impairs the healing at the intestinal anastomotic site. This study was designed to assess the role of aminoguanidine (AG, a selective inhibitor of iNOS), in healing at the colonic anastomotic site after intestinal I-R injury in rats. Methods: Female Wistar rats (n = 60) were divided into three groups. Group I (n = 15): sham operation, Group II (n = 15): I-R injury and anastomosis, and Group III (n = 30): I-R injury +

anastomosis + AG-50 mg/kg. On the 7th postoperative day, relaparotomy was done and 4 cm of the colon with an intact area of the anastomosis was resected. Bursting pressure and histology at the anastomotic site were assessed.

RESULTS: The bursting pressure was significantly higher in Group III. In addition, bridging parameters (i.e., mucosal continuity, muscular continuity, re-epithelization, and granulation tissue), collagen pattern, and collagen density were significantly better in Group III. While the polymorphonuclear density was higher in Group II, suggestive of delayed healing.

CONCLUSION: AG, by decreasing inflammation and increasing collagen content in an organized pattern, helped in preventing I-R injury at the site of colonic anastomosis in rats.

Georg Thieme Verlag KG Stuttgart · New York.

103: Stephen D, Vatsa M, Lodha R, Kabra SK. A Randomized Controlled Trial of 2 Inhalation Methods When Using a Pressurized Metered Dose Inhaler With Valved Holding Chamber. Respir Care. 2015 Jun 16. pii: respcare.03213. [Epub ahead of print] PubMed PMID: 26081179.

BACKGROUND: Information on the comparative efficacy of single deep breathing versus tidal breathing for inhaled asthma medications is limited, although such information can be of much use for the treatment of patients suffering from asthma. The objective of the present study was to compare the relative difference in improvement in peak expiratory flow (PEF) with single maximal inhalation with breath-holding versus 5 tidal breaths during inhalation of salbutamol from a pressurized metered dose inhaler (pMDI) with valved holding chamber (VHC) in children 5-15 y of age with asthma.

METHODS: The randomized controlled trial was carried out on children with asthma between 5 and 15 y of age using a pMDI with a VHC either by a single deep breath with breath-hold or 5 tidal breaths. The experimental group received 200 μg of salbutamol from the pMDI with VHC with a single maximal inhalation and breath-hold technique, whereas the control group received 200 μg of salbutamol from pMDI with VHC using the 5 tidal breaths technique. The outcome variable, PEF, was reassessed 30 min after salbutamol use.

RESULTS: Eighty-two subjects (mean age 8.79 ± 2.5 y, 65 boys and 17 girls) were analyzed. There was significant improvement in the PEF, from baseline (pre-intervention) to post-intervention within the single maximal inhalation with breath-hold group and tidal breathing group independently ($P < .001$). The mean difference in improvement in PEF between the single maximal inhalation with a breath-hold and 5 tidal breaths group was 30.0 ± 18.16 and 28.29 ± 13.94 L/min, respectively, and was not statistically significant ($P = .88$).

CONCLUSIONS: Single maximal inhalation with a breath-hold technique is not superior to tidal breathing for improvement in PEF following salbutamol inhalation. Either method may be used in children between 5 and 15 y of age.

104: Talwar S, Bhoje A, Airan B. A Simple Technique for Closing Multiple Muscular and Apical Ventricular Septal Defects. J Card Surg. 2015 Sep;30(9):731-4. doi: 10.1111/jocs.12590. Epub 2015 Jun 28. PubMed PMID: 26118439.

BACKGROUND: Multiple ventricular septal defects (VSDs) are difficult to close. In this report, we describe a simple and safe technique of closing multiple muscular and apical VSDs.

METHODS: Between January 2010 and December 2013, 52 patients with a muscular VSD either in isolation or in association with other congenital heart disease underwent surgery using this technique in which a black silk thread was passed through the suspected VSD opening into the left ventricle and brought out through the mitral valve and the interatrial septum. Sutures were placed around the silk thread to close the VSD.
RESULTS: Out of 52 patients, 34 were male; age ranged from 45 days to 5.5 years. In addition to the large subaortic/lage muscular VSD, three additional VSDs were present in 34 patients, two additional VSDs were present in 13 patients, and five patients had "Swiss Cheese septum." The VSDs were mid-muscular in 35 patients and were apical in 17 patients. Eleven patients had associated complex lesions. Intraoperative transesophageal echocardiograms did not reveal any significant residual shunt in any of these patients. There was no step-up on oximetry. There was one hospital death due to sepsis. Follow-up was available in 48 patients; three patients were lost to follow-up. At follow-up, no patient had a residual VSD.

CONCLUSION: The biventricular approach through trans-right atrial, trans-interatrial septum using a thread through the hole method for closing multiple muscular VSD is effective with no persistent residual defects. doi: 10.1111/jocs.12590 (J Card Surg 2015;30:731-734).

105: Thukral A, Lockyer J, Bucher SL, Berkelhamer S, Bose C, Deorari A, Esamai F, Faremo S, Keenan WJ, McMillan D, Niermeyer S, Singhal N. Evaluation of an educational program for essential newborn care in resource-limited settings: Essential Care for Every Baby. BMC Pediatr. 2015 Jun 24;15:71. doi: 10.1186/s12887-015-0382-z. PubMed PMID: 26105072; PubMed Central PMCID: PMC4479066.

BACKGROUND: Essential Care for Every Baby (ECEB) is an evidence-based educational program designed to increase cognitive knowledge and develop skills of health care professionals in essential newborn care in low-resource areas. The course focuses on the immediate care of the newborn after birth and during the first day or until discharge from the health facility. This study assessed the overall design of the course; the ability of facilitators to teach the course; and the knowledge and skills acquired by the learners.

METHODS: Testing occurred at 2 global sites. Data from a facilitator evaluation survey, a learner satisfaction survey, a multiple choice question (MCQ) examination, performance on two objective structured clinical evaluations (OSCE), and pre- and post-course confidence assessments were analyzed using descriptive statistics. Pre-post course differences were examined. Comments on the evaluation form and post-course group discussions were analyzed to identify potential program improvements.

RESULTS: Using ECEB course material, master trainers taught 12 facilitators in India and 11 in Kenya who subsequently taught 62 providers of newborn care in India and 64 in Kenya. Facilitators and learners were satisfied with their ability to teach and learn from the program. Confidence (3.5 to 5) and MCQ scores (India: pre 19.4, post 24.8; Kenya: pre 20.8, post 25.0) improved ($p < 0.001$). Most participants demonstrated satisfactory skills on the OSCEs. Qualitative data suggested the course was effective, but also identified areas for course improvement. These included additional time for hands-on practice, including practice in a clinical setting, the addition of video learning aids and the adaptation of content to conform to locally recommended practices.

CONCLUSION: ECEB program was highly acceptable, demonstrated improved confidence, improved knowledge and developed skills. ECEB may improve newborn care in low resource settings if it is part of an overall implementation plan that addresses local needs and serves to further strengthen health systems.

106: Titiyal JS, Sharma N, Agarwal AK, Prakash G, Tandon R, Vajpayee R. Live Related versus Cadaveric Limbal Allograft in Limbal Stem Cell Deficiency. Ocul Immunol Inflamm. 2015 Jun;23(3):232-9. doi: 10.3109/09273948.2014.902076. Epub 2014 Jul 24. PubMed PMID: 25058380.

AIM: To compare outcomes of live related limbal allograft (Lr-CLAL) versus cadaveric keratolimbal allograft (KLAL) in limbal stem cell deficiency (LSCD) secondary to ocular burns.
METHODS: Twenty patients with stage IIb LSCD were randomized so that cases underwent either Lr-CLAL or KLAL. Fibrovascular pannus was removed and superficial keratectomy done on the recipient bed. Limbal lenticule of 2-3 clock hours' length was harvested from the donor, which was placed over the host bed and sutured followed by bandage contact lens application. Parameters assessed were uncorrected visual acuity (UCVA), best corrected visual acuity (BCVA), conjunctivalization, corneal neovascularization, epithelial defects, corneal clarity, Schirmer's test, tear film breakup time (tBUT), and ultrasonic pachymetry.

RESULTS: At 6 months follow-up, the Lr-CLAL group had a higher gain in vision ($p=0.029$), decrease in conjunctivalization ($p=0.009$), and increase in Schirmer's values ($p=0.009$).
CONCLUSION: Lr-CLAL seems to have better result in terms of vision gain and ocular surface restoration.

107: Tripathi M, Arora G, Das CJ, Grover T, Gupta R, Bal C. Incidental detection of intracranial tuberculomas on (99m)Tc-TRODAT-1 SPECT/CT. Clin Nucl Med. 2015 Jun;40(6):e321-2. doi: 10.1097/RLU.0000000000000695. PubMed PMID: 25608162.

Tc-TRODAT-1 has high affinity and specificity for dopamine transporters and is useful for the evaluation of presynaptic dopaminergic function, especially in parkinsonism. There have been a few reports of extrastriatal pathological accumulation of Tc-TRODAT-1. We report a patient with intracranial tuberculomas that were incidentally detected when he underwent Tc-TRODAT-1 scintigraphy for an unrelated indication.

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

109: Venkatesulu B, Mallick S, George A, Bhasker S. Small cell carcinoma of the lung in a treated case of Myoepithelial carcinoma of the tongue - Report of a rare case with illustrated review of the literature. J Egypt Natl Canc Inst. 2015 Jun 24. pii: S1110-0362(15)00055-2. doi: 10.1016/j.jnci.2015.06.002. [Epub ahead of print] PubMed PMID: 26117146.

Myoepithelial carcinoma has rarely been reported in the oral cavity and oropharynx. We found only 6 cases of myoepithelioma of the tongue reported till date. Two cases had a benign myoepithelioma; four had epithelial-Myoepithelial carcinoma. The present case had malignant myoepithelioma, a distinct entity from other histologies.

110: Wadhwani M, Bali SJ, Satyapal R, Angmo D, Sharma R, Pandey V, Dada T. Test-retest variability of retinal nerve fiber layer thickness and macular ganglion cell-inner plexiform layer thickness measurements using spectral-domain optical coherence tomography. J Glaucoma. 2015 Jun-Jul;24(5):e109-15. doi: 10.1097/IJG.0000000000000203. PubMed PMID: 25517254.

PURPOSE: To evaluate the test-retest variability of spectral-domain optical coherence tomography (OCT) in measurement of retinal nerve fiber layer (RNFL) thickness and macular ganglion cell-inner plexiform layer (GCIPL) thickness. METHODS: A total of 65 eyes of healthy subjects were enrolled in this observational cross-sectional study. RNFL thickness and GCIPL thickness were measured using the repeat scan optic cube and macular cube protocol using Cirrus HD-OCT (software version 6.0). A single operator obtained 3 measurements during 1 session to determine test-retest variability. Intrasession repeatability was defined by intraclass correlation, limits of agreement, and coefficient of variation.

RESULTS: The mean age of patients was 37.89±15.11 years (range, 10 to 70 y). The mean RNFL thickness readings as measured during 3 sessions were 93.89±9.73, 93.63±10.00, and 93.55±9.64 μm and average GCIPL thickness measurements were 82.90±4.61, 82.98±4.24, and 83.06±4.36 μm, respectively. Coefficient of variation was 1.2 for average RNFL thickness and 0.82 for average GCIPL thickness. The intraclass correlation coefficient showed a good correlation between repeat measurements for both average RNFL and GCC thicknesses (0.994 and 0.990, respectively). The limits of agreement (95% confidence interval) for the 3 sessions ranged from −3.61 to 4.13 μm for the average RNFL thickness and −2.55 to 2.40 μm for GCIPL thickness measurements.

CONCLUSIONS: In healthy eyes, Cirrus HD-OCT shows excellent intrasession repeatability for RNFL and GCIPL thickness measurements.

111: Wahiduzzaman M, Sharma C, Dey B, Bhatla N, Singh N. Development of chimeric candidate vaccine against HPV18: a proof of concept. Immunol Res. 2015 Jun;62(2):189-97. doi: 10.1007/s12026-015-8650-4. PubMed PMID: 25929429.

Human papillomaviruses (HPVs) are prerequisite for the development of cervical cancer, with HPV16 and HPV18 being the most prevalent. Despite the fact that two prophylactic vaccines against HPVs are in the market, wide-scale application of the vaccine in developing countries is a major problem as far as cost of the vaccine and lack of therapeutic efficacy are concerned. Hence, the aim of our study was to develop HPV18 L1E7 chimeric virus-like particles (CVLPs) vaccine candidate possessing both, prophylactic and therapeutic potential against

HPV18-associated cervical cancer. In this study, we have developed a potential candidate vaccine against HPV18 involving HPV18 L1E7 CVLPs, which was expressed in E. coli and assembled in vitro. These CVLPs were able to induce a neutralizing antibody response as well as a cell-mediated immune response in mice.

112: Yadav A, Raheel MS, Kumar R L, Sharma SK, Kanwar H. Cut-throat wounds: Suicidal and homicidal-two case reports and review of literature. Med Sci Law. 2015 Jun 21. pii: 0025802415591200. [Epub ahead of print] PubMed PMID: 26101442.

Cut-throat wounds are a well-recognized method of homicide, are less commonly used in suicides and are rarely accidental. The forensic pathologist has a very challenging and important task when commenting on the manner of infliction of such wounds when such a case is presented with no proper history or witnesses. We present two cases of cut-throat wounds, one suicide and one homicide, to show the differences between the pattern of wounds. We highlight the differences between the two cases in relation to other external injuries, the circumstances in which the bodies were found and other factors. We intend to update the literature regarding this topic in reference to our cases. We also hope that our presentation will be beneficial to doctors performing autopsies on such cases, so as to distinguish the manner of cut-throat wounds in equivocal cases of death.

113: Yadav AK, Upadhyay A, Gothwal S, Dubey K, Mandal U, Yadav CP. Comparison of three types of intervention to enhance placental redistribution in term newborns: randomized control trial. J Perinatol. 2015 Sep;35(9):720-4. doi: 10.1038/jp.2015.65. Epub 2015 Jun 18. PubMed PMID: 26087318.

OBJECTIVE: To compare the effect of combined delayed cord clamping and umbilical cord milking to either of them had done alone, on hematological parameters at 6 weeks of age in term neonates.

STUDY DESIGN: It was a randomized controlled trial, conducted during January to December 2014. Three hundred eligible neonates were randomly allocated to three parallel groups. Primary outcome was hemoglobin and serum ferritin at 6 weeks of age. Data were analyzed using analysis of variance and Kruskal-Wallis test.

RESULTS: Baseline characteristics and hemodynamic parameters were comparable in all the three groups. The median serum ferritin level at 6 weeks was significantly higher in the group receiving both delayed cord clamping and milking the cut cord group (295.49 (233.5 to 346.54) ngml(-1)) as compared with the group that received only milking of the cut cord (184.55 (131.22 to 256.5) ngml(-1)) or only delayed cord clamping (268.8 (189.4 to 315.44) ngml(-1)).

CONCLUSION: Delayed cord clamping with milking the cut cord improved iron stores at 6 weeks of age in term infants, then either of the two interventions alone.