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List of publications of AIIMS, New Delhi for the month of October, 2016 [Source: www.pubmed.com].

1: Agarwal N, Malik N, Goyal M, Kriplani A, Gamanagatti S. Complication of Femoral Arterial Thrombosis Following Failure of Balloon Tamponade and Massive Blood Loss During Hysterectomy in a Case of Abnormal Placentation. J Obstet Gynaecol India. 2016 Oct;66(Suppl 2):629-631. PubMed PMID: 27803528; PubMed Central PMCID: PMC5080229.

2: Agrawal D, Dawar P. Traumatic tentorial hematoma in two-wheeler riders: Correlation with helmet use. Asian J Neurosurg. 2016 Oct-Dec;11(4):392-395. PubMed PMID: 27695543; PubMed Central PMCID: PMC4974964.

BACKGROUND: Tentorial hematoma is frequently seen in traumatic brain injury (TBI) patients, especially in motorized two-wheeler riders following head injury. However its relevance and prognostic significance are not known.
OBJECTIVE: To evaluate patients of TBI with tentorial hematoma using a simple grading system and attempt to correlate this grading with factors like helmet use and neurological outcome.
MATERIALS AND METHODS: This prospective study over a 1-year period included patients with TBI who had tentorial hematoma in the initial plain head. Patients were divided into three grades based on the initial CT findings: Grade I: Isolated tentorial hematoma, grade II: tentorial hematoma with midline shift but open cisterns and grade III: Tentorial hematoma with effaced cisterns. Clinical and radiological records of patients including admission GCS and GOS at discharge were assessed in all cases.
OBSERVATIONS: A total of 1786 patients of TBI were admitted during the study period. Of these, 106 (5.9%) patients had tentorial hematoma. 84.9% (n = 90) were male and 15.1% (n = 16) were female with the mean age being 36.5 years (range 2-66 years). The mean admission GCS was 13, 11 and 8 in patients with grade I, II and III tentorial hematoma respectively. 43.4% (n = 46) of the patients had grade I, 32.1% (n = 34) had grade II and 24.5% (n = 26) patients had grade III tentorial hematoma. Seventy-one patients (84.5%) were riding motorized two wheelers with 63 (89%) wearing helmets. The majority of the patients wearing helmets (58.8%) had grade I hematoma with 35% (n = 22) having grade II hematoma and only 6.3% (n = 4) having grade III hematoma. Overall, there were 20 deaths. 50% (n = 10) of the deaths were in patients with grade III hematoma and 40% (n = 8) of the deaths were in patients with grade II hematoma. There were two (10%) deaths in patients with grade I hematoma (both unrelated to head injury). The mean GOS at the time of discharge was 5, 4.1 and 2.2 in patients with grade I, II and III tentorial hematoma, respectively.
CONCLUSIONS: Tentorial hematomas are very common in two-wheeler riders with TBI and could be a marker for indirect forces such as rotational forces experienced while wearing helmets.

DOI: 10.4103/1793-5482.144182
PMCID: PMC4974964
PMID: 27695543

3: Agrawal R, Dale TP, Al-Zubaidi MA, Benny Malgulwar P, Forsyth NR, Kulshreshtha R. Pluripotent and Multipotent Stem Cells Display Distinct Hypoxic miRNA Expression Profiles. PLoS One. 2016 Oct 26;11(10):e0164976. doi: 10.1371/journal.pone.0164976. PubMed PMID: 27783707; PubMed Central PMCID: PMC5081191.

MicroRNAs are reported to have a crucial role in the regulation of self-renewal and differentiation of stem cells. Hypoxia has been identified as a key biophysical element of the stem cell culture milieu however, the link between hypoxia and miRNA expression in stem cells remains poorly understood. We therefore explored miRNA expression in hypoxic human embryonic and mesenchymal stem cells (hESCs and hMSCs). A total of 50 and 76 miRNAs were differentially regulated by hypoxia (2% O2) in hESCs and hMSCs, respectively, with a negligible overlap of only three miRNAs. We found coordinate regulation of precursor and

mature miRNAs under hypoxia suggesting their regulation mainly at transcriptional level. Hypoxia response elements were located upstream of 97% of upregulated hypoxia regulated miRNAs (HRMs) suggesting hypoxia-inducible-factor (HIF) driven transcription. HIF binding to the candidate cis-elements of specific miRNAs under hypoxia was confirmed by Chromatin immunoprecipitation coupled with qPCR. Role analysis of a subset of upregulated HRMs identified linkage to reported inhibition of differentiation while a downregulated subset of HRMs had a putative role in the promotion of differentiation. MiRNA-target prediction correlation with published hypoxic hESC and hMSC gene expression profiles revealed HRM target genes enriched in the cytokine:cytokine receptor, HIF signalling and pathways in cancer. Overall, our study reveals, novel and distinct hypoxia-driven miRNA signatures in hESCs and hMSCs with the potential for application in optimised culture and differentiation models for both therapeutic application and improved understanding of stem cell biology.

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PMCID: PMC5081191
PMID: 27783707

Conflict of interest statement: The authors have declared that no competing interests exist.

4: Ahuja D, Bharati SJ, Gupta N, Kumar R, Bhatnagar S. Possible role of aprepitant for intractable nausea and vomiting following whole brain radiotherapy-a case report. Ann Palliat Med. 2016 Oct;5(4):315-318. doi: 10.21037/apm.2016.08.01. PubMed PMID: 27701875.

Radiation-induced nausea and vomiting (RINV) is one of the most distressing symptoms that adversely affects quality of life (QOL) as well as the ongoing management plan of cancer patients. Although there are protocols for management of chemotherapy induced nausea and vomiting (CINV) but such guidelines are still lacking for RINV. Various agents like 5-hydroxy tryptophan 3 (5-HT3) antagonist, dexamethasone, metoclopramide and haloperidol are used in clinical practice for RINV but the results are not very encouraging. Because of proposed similarity in the mechanism of nausea and vomiting following chemotherapy and radiotherapy, aprepitant, a substance P neurokinin 1 receptor antagonist can be an optimal agent for RINV on account of its unique pharmacological property. We report a case of metastatic carcinoma breast with bilateral cerebellar metastasis. She presented with complaints of headache and intractable nausea and vomiting. A single fraction whole brain radiotherapy (WBRT) was given for bilateral cerebellum metastasis which further precipitated her symptoms. The prophylactic and therapeutic efficacy of antiemetic used for RINV may be enhanced by adding aprepitant before starting radiotherapy in high risk cases as in ours.

DOI: 10.21037/apm.2016.08.01
PMID: 27701875 [Indexed for MEDLINE]

5: Ayyalusamy A, Vellaiyan S, Shanmugam S, Ilamurugu A, Gandhi A, Shanmugam T, Murugesan K. Feasibility of offline head & neck adaptive radiotherapy using deformed planning CT electron density mapping on weekly cone beam computed tomography. Br J Radiol. 2017 Jan;90(1069):20160420. PubMed PMID: 27781491.

OBJECTIVE: The purpose of the study was to use deformable mapping of planning CT (pCT) electron density values on weekly cone-beam CT (CBCT) to quantify the anatomical changes and determine the dose-volume relationship in offline adaptive volumetric-modulated arc therapy.
METHODS: 10 patients treated with RapidArc plans who had weekly CBCTs were selected retrospectively. The pCT was deformed to weekly CBCTs and the deformed contours were checked for any discrepancies. Clinical target volume 66 Gy and 60 Gy (CTV66 and CTV60), parotids and spinal cord were the structures selected for analysis. Volume reduction and dice similarity index (DSI) were determined.

Hybrid RapidArc plans were created and the cumulative dose-volume histograms for selected structures were analyzed.
RESULTS: Results showed a mean volume reduction of 18.82 ± 6.08% and 18.22 ± 6.1% for Clinical target volume 66 Gy and 60 Gy (CTV66 and CTV60), respectively, and their corresponding DSI values were 0.94 ± 0.03 and 0.95 ± 0.01. Mean volume reductions of left and right parotids were 32.79 ± 10.28% and 29.46 ± 8.78%, respectively, and their corresponding mean DSI values were 0.90 ± 0.05 and 0.89 ± 0.05. The cumulative mean dose difference for Planning target volume 66 Gy (PTV66) was -1.35 ± 1.71% and for Planning target volume 60 Gy (PTV60), it was -0.69 ± 1.37%. Spinal cord doses varied for all patients over the course.
CONCLUSION: The results from the study showed that it is clinically feasible to estimate the dose-volume relationship using deformed pCT. Monitoring of patient anatomic changes and incorporating patient-specific replanning strategy are necessary to avoid critical structure complications. Advances in knowledge: Deformable mapping of pCT electron density values on weekly CBCTs has been performed to establish the volumetric and dosimetric changes. The anatomical changes differ among the patients and hence, the choice for adaptive radiotherapy should be strictly patient specific rather than time specific.

DOI: 10.1259/bjr.20160420
PMID: 27781491 [Indexed for MEDLINE]

6: Bagga A. Discussion: The Heart of the Paper. Indian Pediatr. 2016 Oct 8;53(10):901-904. PubMed PMID: 27771670.

The discussion section explains the meaning of results to the readers, and addresses the implications of the findings emanating from the particular study. Authors should compare their results with previous reports, and attempt to explain similarities and differences. It is useful to outline the limitations and strengths of the study, and suggest a future line of work. A concise, convincing and meticulous discussion with scholarly referencing is the key to a lasting impression.

PMID: 27771670

7: Bajpai G, Shukla G, Pandey RM, Gupta A, Afsar M, Goyal V, Srivastava A, Behari M. Validation of a modified Hindi version of the Epworth Sleepiness Scale among a North Indian population. Ann Indian Acad Neurol. 2016 Oct-Dec;19(4):499-504. PubMed PMID: 27994361; PubMed Central PMCID: PMC5144473.

BACKGROUND: Since a majority of population in India does not drive automobiles, one item on the Epworth Sleepiness Scale (ESS) requires modification and validation. In addition, data collected by us indicated that a majority of rural and urban Indians regularly spend time in prayer/spiritual activity. The main purpose of this study was to develop a cross-cultural adaptation of the ESS for a North Indian population, in Hindi language (ESS-I). The study also provides evidence of reliability and validity of the modified version.
METHODOLOGY: The subjects included were normal volunteers aged 18-75 years (Group 1) (n = 70), compared with patients with complaints of excessive daytime sleepiness, who had undergone polysomnography (Group 2) (n = 22) and patients who had undergone multiple sleep latency test (Group 3) (n = 10). The study was carried out in four phases: Translation and retranslation of the original scale with modification of item 8 (mainly addition of option of question on "while offering prayers or in spiritual activity"); reliability (test-retest) (n = 30); internal consistency (using Cronbach's alpha index) (n = 102); and sensitivity to change (n = 8).
RESULTS: Group 1 showed spiritual activity as a significantly more commonly practiced activity than driving. The Cronbach's alpha for the modified version was 0.892 (excellent), and this was not improved by removing the modified item. The alpha value for Group 1 versus Groups 2 and 3 was 0.667 and 0.892, respectively. The scale was reliable over time (test-retest), and it was

sensitive to sleepiness change in patients with obstructive sleep apnea during treatment.
CONCLUSION: The ESS-I, is comparable to the original scale. It is reliable, valid, and change-sensitive. It is proposed that the modified version can be very useful for detecting sleepiness among Indian population, especially those who do not drive their own vehicles.

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PMCID: PMC5144473
PMID: 27994361

Conflict of interest statement: There are no conflicts of interest.

8: Balhara YP, Lev-Ran S, Martínez-Raga J, Benyamina A, Singh S, Blecha L, Szerman N. State of Training, Clinical Services, and Research on Dual Disorders Across France, India, Israel, and Spain. J Dual Diagn. 2016 Jul-Dec;12(3-4):252-260. PubMed PMID: 27797649.

OBJECTIVE: This article overviews training, clinical services, and research on dual disorders across four countries: France, India, Israel, and Spain.
METHODS: The current dual disorders systems in each of the four countries were reviewed, with a focus on strengths and limitations of each.
RESULTS: In France, psychiatric care occurs within the public health care system and involves little training of medical graduates for managing dual disorders. Special courses and forums for specialists have recently started to meet the growing interest of physicians in learning how to manage dual disorders. The Indian health care system grapples with a large treatment gap for mental disorders, and while some treatment services for dual disorders exist, specific research and training efforts on dual disorders are just beginning. Israel has both public- and private sector services for patients with dual disorders, with specialized inpatient and emergency care for the acutely ill as well as day care and therapeutic communities for long-term management. Interest by researchers is growing, but training and education efforts in dual disorders are, however, minimal. Similar to the other countries, addiction and psychiatry disciplines are governed by separate divisions within the National Health System in Spain. There are some dual disorders services available, but they are limited in scope. While medical professionals clearly recognize the importance of dual disorders, there is no such recognition by the national and regional governing bodies.
CONCLUSIONS: The common thread in various aspects of dual disorder management in each of these four countries is that there is a lower-than-desirable level of attention to dual disorders in terms of care, policy, research, and training. There are growing opportunities for training and continuing education in dual disorders management. We suggest that nations could learn from each other's experiences on how to address the issue of dual disorders.

DOI: 10.1080/15504263.2016.1254309
PMID: 27797649

9: Batra A, Pushker N, Venkatesh P, Arora T, Tewari R, Bakhshi S. Long-term visual outcomes in intraocular retinoblastoma with eye preservation. Clin Transl Oncol. 2016 Oct;18(10):1034-8. doi: 10.1007/s12094-016-1482-4. PubMed PMID: 26781471.

PURPOSE: Inconsistent data exist on long-term visual outcomes in survivors of retinoblastoma. No studies have been reported on role of ocular coherence tomography (OCT) in predicting visual acuity. We assessed visual acuity in patients with retinoblastoma treated at our center in whom affected eyes were preserved.
METHODS: Patients who had completed a 2-year follow-up and were more than 5 years of age at assessment were included. Clinical data were obtained from database and factors predicting visual acuity were analyzed. OCT was performed in these patients to assess central macular thickness (CMT).

RESULTS: Visual outcomes were assessed in 45 eyes of 43 patients, of which 38 (88 %) had bilateral retinoblastoma. The median age at diagnosis was 12 months. Sixty percent (27/45) had International classification of retinoblastoma group C or D disease with 40 % eyes showing macular lesions. The far visual acuity was better than 6/12 in 53 % (24/45), 6/12 to 6/60 in 40 % (18/45) and 6/60 in 7 % (6/60). Macular location and International classification of retinoblastoma predicted poor vision (p = 0.06 and 0.07, respectively). CMT was less than 200 µm in 3 of 36 eyes (8 %) and 1 eye showed epiretinal membrane. Radiotherapy was associated with foveal thinning (p = 0.003). Two of 3 eyes with foveal thinning had a vision of 6/60.
CONCLUSIONS: Good visual outcomes were observed in half of retinoblastoma patients treated with eye preservation. Macular location and International classification of retinoblastoma group C and D predicted poor visual acuity, while previous radiotherapy predicted foveal thinning, which was associated with poor visual acuity.

DOI: 10.1007/s12094-016-1482-4
PMID: 26781471 [Indexed for MEDLINE]

10: Bhasin A, Srivastava MV, Mohanty S, Vivekanandhan S, Sharma S, Kumaran S, Bhatia R. Paracrine Mechanisms of Intravenous Bone Marrow-Derived Mononuclear Stem Cells in Chronic Ischemic Stroke. Cerebrovasc Dis Extra. 2016 Oct 19;6(3):107-119. [Epub ahead of print] PubMed PMID: 27846623; PubMed Central PMCID: PMC5123023.

BACKGROUND: The emerging role of stem cell technology and transplantation has helped scientists to study their potential role in neural repair and regeneration. The fate of stem cells is determined by their niche, consisting of surrounding cells and the secreted trophic growth factors. This interim report evaluates the safety, feasibility and efficacy (if any) of bone marrow-derived mononuclear stem cells (BM-MNC) in chronic ischemic stroke by studying the release of serum vascular endothelial growth factor (VEGF) and brain-derived neurotrophic growth factor (BDNF).
METHODS: Twenty stroke patients and 20 age-matched healthy controls were recruited with the following inclusion criteria: 3 months to 1.5 years from the index event, Medical Research Council (MRC) grade of hand muscles of at least 2, Brunnstrom stage 2-5, conscious, and comprehendible. They were randomized to one group receiving autologous BM-MNC (mean 60-70 million) and to another group receiving saline infusion (placebo). All patients were administered a neuromotor rehabilitation regime for 8 weeks. Clinical assessments [Fugl Meyer scale (FM), modified Barthel index (mBI), MRC grade, Ashworth tone scale] were carried out and serum VEGF and BDNF levels were assessed at baseline and at 8 weeks.
RESULTS: No serious adverse events were observed during the study. There was no statistically significant clinical improvement between the groups (FM: 95% CI 15.2-5.35, p = 0.25; mBI: 95% CI 14.3-4.5, p = 0.31). VEGF and BDNF expression was found to be greater in group 1 compared to group 2 (VEGF: 442.1 vs. 400.3 pg/ml, p = 0.67; BDNF: 21.3 vs. 19.5 ng/ml) without any statistically significant difference.
CONCLUSION: Autologous mononuclear stem cell infusion is safe and tolerable by chronic ischemic stroke patients. The released growth factors (VEGF and BDNF) in the microenvironment could be due to the paracrine hypothesis of stem cell niche and neurorehabilitation regime.

DOI: 10.1159/000446404
PMCID: PMC5123023
PMID: 27846623

11: Birla S, Khadgawat R, Jyotsna VP, Jain V, Garg MK, Bhalla AS, Sharma A. Identification of Novel PROP1 and POU1F1 Mutations in Patients with Combined Pituitary Hormone Deficiency. Horm Metab Res. 2016 Dec;48(12):822-827. PubMed

PMID: 27756091.

Growth hormone deficiency (GHD) results from variations affecting the production and release of growth hormone (GH) and is of 2 types: isolated growth hormone deficiency (IGHD) and combined pituitary hormone deficiency (CPHD). IGHD results from mutations in GH1 and GHRHR while CPHD is associated with defects in transcription factor genes PROP1, POU1F1, and HESX1. The present study reports on screening of POU1F1, PROP1, and HESX1 in CPHD patients and the novel variations identified. Fifty-one CPHD patients from 49 unrelated families clinically diagnosed on the basis of biochemical and imaging investigations along with 100 controls were enrolled. Detailed family history was noted from all participants and 5ml blood samples drawn were processed for DNA isolation followed by direct sequencing of POU1F1, PROP1, and HESX1genes. Of the 51 patients, 8 were females and 43 were males. Mean height standard deviation score (SDS) and weight SDS were -5.50 and -2.76, respectively. Thirty-six of the 51 patients underwent MRI of which 9 (25%) had normal pituitary structure and morphology while 27 (75%) showed abnormalities. Molecular analysis revealed 10 (20%) patients to have POU1F1 and PROP1 mutations/variations of which 5 were novel and 2 previously reported. No mutations were identified in HESX1. The novel variations identified were absent in the 100 healthy individuals screened and the control database Exome Aggregation Consortium (ExAC). Reported POU1F1 and PROP1 mutation hotspots were absent in our patients. Instead, novel POU1F1 changes were identified suggesting existence of a distinct mutation spectrum in our population.

DOI: 10.1055/s-0042-117112
PMID: 27756091 [Indexed for MEDLINE]

12: Biswal S, Das D, Barhwal K, Kumar A, Nag TC, Thakur MK, Hota SK, Kumar B. Epigenetic Regulation of SNAP25 Prevents Progressive Glutamate Excitotoxicty in Hypoxic CA3 Neurons. Mol Neurobiol. 2016 Oct 3. [Epub ahead of print] PubMed PMID: 27699604.

Exposure to global hypoxia and ischemia has been reported to cause neurodegeneration in the hippocampus with CA3 neurons. This neuronal damage is progressive during the initial phase of exposure but maintains a plateau on prolonged exposure. The present study on Sprague Dawley rats aimed at understanding the underlying molecular and epigenetic mechanisms that lead to hypoxic adaptation of CA3 neurons on prolonged exposure to a global hypoxia. Our results show stagnancy in neurodegeneration in CA3 region beyond 14 days of chronic exposure to hypobaria simulating an altitude of 25,000 ft. Despite increased synaptosomal glutamate and higher expression of NR1 subunit of NMDA receptors, we observed decrease in post-synaptic density and accumulation of synaptic vesicles at the pre-synaptic terminals. Molecular investigations involving western blot and real-time PCR showed duration-dependent decrease in the expression of SNAP-25 resulting in reduced vesicular docking and synaptic remodeling. ChIP assays for epigenetic factors showed decreased expression of H3K9Ac and H3K14Ac resulting in SNAP-25 promoter silencing during prolonged hypoxia. Administration of sodium butyrate, a non-specific HDAC inhibitor, during 21 days hypoxic exposure prevented SNAP-25 downregulation but increased CA3 neurodegeneration. This epigenetic regulation of SNAP-25 promoter was independent of increased DNMT3b expression and promoter methylation. Our findings provide a novel insight into epigenetic factors-mediated synaptic remodeling to prevent excitotoxic neurodegeneration on prolonged exposure to global hypobaric hypoxia.

DOI: 10.1007/s12035-016-0156-0
PMID: 27699604

13: Biswas M, Patel R, German C, Kharod A, Mohamed A, Dod HS, Kapoor PM, Nanda NC. Simulation-based training in echocardiography. Echocardiography. 2016 Oct;33(10):1581-1588. doi: 10.1111/echo.13352. PubMed PMID: 27587344.

The knowledge gained from echocardiography is paramount for the clinician in diagnosing, interpreting, and treating various forms of disease. While cardiologists traditionally have undergone training in this imaging modality during their fellowship, many other specialties are beginning to show interest as well, including intensive care, anesthesia, and primary care trainees, in both transesophageal and transthoracic echocardiography. Advances in technology have led to the development of simulation programs accessible to trainees to help gain proficiency in the nuances of obtaining quality images, in a low stress, pressure free environment, often with a functioning ultrasound probe and mannequin that can mimic many of the pathologies seen in living patients. Although there are various training simulation programs each with their own benefits and drawbacks, it is clear that these programs are a powerful tool in educating the trainee and likely will lead to improved patient outcomes.

DOI: 10.1111/echo.13352
PMID: 27587344

14: Chandrashekhara SH, Gamanagatti S, Singh A, Bhatnagar S. Current Status of Percutaneous Transhepatic Biliary Drainage in Palliation of Malignant Obstructive Jaundice: A Review. Indian J Palliat Care. 2016 Oct-Dec;22(4):378-387. Review. PubMed PMID: 27803558; PubMed Central PMCID: PMC5072228.

Malignancies leading to obstructive jaundice present too late to perform surgery with a curative intent. Due to inexorably progressing hyperbilirubinemia with its consequent deleterious effects, drainage needs to established even in advanced cases. Percutaneous transhepatic biliary drainage (PTBD) and endoscopic retrograde cholangiopancreatography (ERCP) are widely used palliative procedures each with its own merits and lacunae. With the current state-of-the-art PTBD technique consequent upon procedural and hardware improvement, it is equaling ERCP regarding technical success and complications. In addition, there is a reduction in immediate procedure-related mortality with proven survival benefit. Nonetheless, it is the only imminent lifesaving procedure in cholangitis and sepsis.

DOI: 10.4103/0973-1075.191746
PMCID: PMC5072228
PMID: 27803558

15: Chauhan S, Manoj K, Rastogi S, Khan SA, Prasad A. Biomechanical investigation of the effect of extracorporeal irradiation on resected human bone. J Mech Behav Biomed Mater. 2017 Jan;65:791-800. doi: 10.1016/j.jmbbm.2016.09.032. PubMed PMID: 27776321.

Extra Corporeal irradiation and Reimplantation Therapy (ECRT) is an established biological reconstruction technique of limb salvage surgery for malignant bone tumor. Several studies have focused on clinical outcome of the procedure, but biomechanical changes post ECRT procedure are not well established. The present study investigates changes in strength, deformation, and composition of cortical bone obtained post en block resection from five patients suffering from ECRT, and the results are verified against age-match control specimen from cadaver. For pre-irradiated sample, average indentation modulus varied from 11.1GPa to 15.8GPa, and hardness from 0.36GPa to 0.48GPa. Post 50Gy irradiation, we observed an overall increase in deformation, viscous response, and energy dissipation across all samples, together with reduction in indentation modulus and hardness. These changes in strength and deformation were found to be consistent with compositional investigations via Raman spectroscopy, where mineralization and amount of calcium content was found to be decreased. The study thus quantifies the effect of extra corporeal irradiation on bone mechanical and compositional response, which in turn can provide clinicians much needed insight into the

mechanism of bone healing and repair post ECRT to guide follow-up care and recovery.

DOI: 10.1016/j.jmbbm.2016.09.032
PMID: 27776321

16: Chauhan V, Jyotsna VP, Jain V, Khadgawat R, Dada R. Novel Heterozygous Genetic Variants in Patients with 46,XY Gonadal Dysgenesis. Horm Metab Res. 2017 Jan;49(1):36-42. doi: 10.1055/s-0042-114778. PubMed PMID: 27711951.

46,XY gonadal dysgenesis (GD) constitutes a rare group of disorders characterized by the presence of dysfunctional testes in genotypic males. The molecular etiology is not known in about 2 thirds of instances. The aim of this study was to identify the genetic cause in patients with 46,XY gonadal dysgenesis. Based on clinical, cytogenetic, and biochemical screening, 10 patients with 46,XY GD were recruited. Direct sequencing of SRY, NR5A1, SOX9, DAX1, DHH, DMRT1 genes was carried out for molecular analysis. Among 10 patients, 5 were diagnosed with complete gonadal dysgenesis (CGD), 3 with partial gonadal dysgenesis (PGD), and 3 with testicular agenesis. Molecular analysis revealed 12 heterozygous genetic changes, 4 of which were novel. One (c.416T>A) was observed in evolutionary conserved region of DMRT1 gene in a patient with CGD and was found to be probably damaging on in silico analysis. Other 3 were identified in NR5A1 gene (c.990+22 C>A, c.1387+1403T>A and p.131P), but their association with gonadal dysgenesis is not evident from our study. These genetic changes were absent in parents and 50 healthy control samples, which were also studied. With targeted sequencing approach, a molecular diagnosis was made in only one patient with 46,XY GD. The application of new genomic technologies is required for the precise evaluation of these rare genetic defects.

DOI: 10.1055/s-0042-114778
PMID: 27711951

17: Chawla R, Venkatesh P, Garg SP, Tripathy K. Bilateral metastatic endophthalmitis due to Pseudomonas aeruginosa after vaginal delivery. J Obstet Gynaecol. 2016 Nov;36(8):1016-1017. PubMed PMID: 27750450.

18: Dada T, Angmo D, Midha N, Sidhu T. Intraoperative Optical Coherence Tomography Guided Bleb Needling. J Ophthalmic Vis Res. 2016 Oct-Dec;11(4):452-454. PubMed PMID: 27994819; PubMed Central PMCID: PMC5139562.

Two patients with history of trabeculectomy presented with uncontrolled intraocular pressure (IOP) postoperatively. The first patient had a flat and vasularized bleb 10 weeks after the surgery, and the second subject developed encapsulated bleb 3 months postoperatively. Both patients were taken to the operating room and intraoperative optical coherence tomography (OCT) guided bleb needling was performed to restore aqueous egress into the subconjunctival space. Postoperatively, IOP of the operated eyes ranged 14-18 mmHg at week 6 and month 3. None of the eyes had any intraoperative or postoperative complications. This novel application of the intraoperative OCT for bleb needling facilitates precision surgery under direct visualization and reduces the risk of complications.

DOI: 10.4103/2008-322X.194150
PMCID: PMC5139562
PMID: 27994819

Conflict of interest statement: There are no conflicts of interest.

19: Dangat K, Upadhyay D, Kilari A, Sharma U, Kemse N, Mehendale S, Lalwani S, Wagh G, Joshi S, Jagannathan NR. Altered breast milk components in preeclampsia; An in-vitro proton NMR spectroscopy study. Clin Chim Acta. 2016 Dec 1;463:75-83. doi: 10.1016/j.cca.2016.10.015. PubMed PMID: 27742491.

OBJECTIVE: To investigate the metabolic profile of milk on day 3 and at the 6th month of lactation in mothers with preeclampsia (PE) and normotensive mothers.
STUDY DESIGN: Women with PE (n=29) and control women (n=31) were recruited for this study. Milk was collected on day 3 and at the 6th month of lactation. Proton NMR spectroscopy was used to identify 25 milk metabolites (alpha-lactose, beta-lactose, oligosaccharides, myo-inositol, alanine, glutamate, glutamine, glycine, histidine, isoleucine, leucine, lysine, phenylalanine, tyrosine, valine, acetone, citrate, creatine, phosphocreatine, acetate, choline, lactate, lipid, phosphocholine and glycerophosphocholine). Principle component analysis (PCA) and Partial Least Square Discriminant Analysis (PLS-DA) were carried out to identify differences in milk metabolite composition between both the groups.
RESULTS: The levels of milk metabolites varied between the control and PE groups. Alpha and beta-lactose, glycine, glycerophosphocholine ($p<0.01$ for all); glutamate, glutamine and phosphocholine levels ($p<0.05$ for all) were increased at the 6th month as compared to day 3 of lactation in the control group. However, in the PE group, only glycerophosphocholine level showed an increase ($p<0.01$) at the 6th month. The levels of acetate, acetone ($p<0.05$ for both) and creatine ($p<0.01$) decreased at the 6th month as compared to day 3 of lactation in both groups. However, the levels of oligosaccharides were similar between groups and also similar at day 3 and at the 6th month of lactation.
CONCLUSION: Our data indicates differential levels of metabolites in the milk of women with PE. Future studies are required to investigate the associations between milk components and infant growth and development.

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PMID: 27742491 [Indexed for MEDLINE]

20: Das P, Rawat R, Verma AK, Singh G, Vallonthaiel AG, Yadav R, Gahlot GP, Dinda AK, Ahuja V, Datta Gupta S, Agarwal SK, Makharia GK. Immunohistochemical Expression of Antitissue Transglutaminase 2 in Tissue Injuries: An Interpretation Beyond Celiac Disease. Appl Immunohistochem Mol Morphol. 2016 Oct 7. [Epub ahead of print] PubMed PMID: 27753658.

Tissue transglutaminase 2 enzyme plays a diverse role in intracellular and extracellular functioning. Aberrant expression of anti-TG2 antibody has recently been proposed for extraintestinal identification of celiac disease (CeD), but its utility is questionable. To examine whether anti-TG2 immunohistochemical (IHC) staining can be of diagnostic value in identifying extraintestinal involvement in CeD, tissue blocks of patients with IgA nephropathies (IgAN), minimal change disease, membranous glomerulonephritis, membrano-proliferative glomerulonephritis, normal kidney, intestinal biopsies from CeD, tropical sprue, nonspecific duodenitis, and inflammatory bowel disease; liver biopsies from patients with chronic hepatitis B and C, acute liver failure (ALF), and CeD-associated liver diseases were retrieved and subjected to IHC staining for anti-tissue transglutaminase 2 enzyme. H-score was calculated by multiplying the area of positivity and stain intensity. Anti-TG2 stain H-scores were almost similar in IgAN and non-IgANs (H-score 6.31±3 vs. 7.03±2.7); however, H-scores in both of these groups were significantly higher than in normal renal parenchyma (1.6±1.5). Only 6.2% patients with IgAN with anti-TG2 immunostain positivity showed a positive anti-tTG antibody serology and villous abnormalities, suggestive of CeD. Intestinal biopsies from patients with CeD, tropical sprue, nonspecific duodenitis, and inflammatory bowel disease also showed high anti-TG2 H-scores, with no statistically significant differences. Liver biopsies from

patients with both ALF, as well as chronic liver diseases showed high anti-TG2 H-scores; with highest stain expression in ALF. In conclusion, IHC expression of anti-TG2 stain correlates with both acute and chronic tissue injuries, irrespective of etiology and organ involvement. It is not a reliable marker for diagnosis of CeD.

DOI: 10.1097/PAI.0000000000000430
PMID: 27753658

21: Dash D, Tripathi M, Ihtisham K, Tripathi M. LGI1 encephalitis: a disease of jerks and confusion. BMJ Case Rep. 2016 Oct 13;2016. pii: bcr2016217083. doi: 10.1136/bcr-2016-217083. PubMed PMID: 27737869.

Limbic encephalitis is a group of immune-mediated disorders that includes the classic paraneoplastic encephalitic syndrome and the recently described non-paraneoplastic autoimmune encephalitis most of which target the extracellular antigens. We present a case of 70-year-old man who presented with rapidly progressive cognitive decline and refractory faciobrachial dystonic seizures and demonstrated seropositivity for leucine-rich, glioma-inactivated protein 1 antibodies. After immunomodulation, the patient had dramatic improvement in the cognitive functioning and in seizure control.

DOI: 10.1136/bcr-2016-217083
PMID: 27737869 [Indexed for MEDLINE]

Conflict of interest statement: Conflicts of Interest: None declared.

22: Dash D, Choudhary R, Ramanujam B, Vasantha PM, Tripathi M. Paraneoplastic syndrome mimicking progressive supranuclear palsy. J Clin Neurosci. 2016 Oct;32:162-3. doi: 10.1016/j.jocn.2016.02.032. PubMed PMID: 27318371.

Paraneoplastic syndrome presenting with progressive supranuclear palsy (PSP) phenotype is extremely rare. We report a patient who presented with features of rapidly progressive parkinsonism similar to PSP and was found to have small cell carcinoma of the lung along with seropositivity for onconeural antigen. The patient was treated with immunomodulation and was given chemotherapy for the malignancy and subsequently improved.

DOI: 10.1016/j.jocn.2016.02.032
PMID: 27318371

23: Dash NR, Kilambi R, Singh AN, Pal S, Asfan MA. Presentation and Management of Pseudoaneurysmogastric Fistula: A Life Threatening Emergency. J Invest Surg. 2016 Oct 21:1-4. [Epub ahead of print] PubMed PMID: 27768398.

Pseudoaneurysmogastric fistula is a rare consequence of pseudoaneurysms occurring in the vicinity of stomach. They are the result of pseudoaneurysms eroding into the stomach, and represent a life threatening emergency. Urgent surgical intervention is often necessary to salvage the patient. Data regarding the presentation and management of this condition is sparse. Herein, we present our experience with four cases of pseudoaneurysmogastric fistula, their clinical context, presentation, management and outcomes. We attempt to outline an algorithm for the diagnosis and management of this unusual complication.

DOI: 10.1080/08941939.2016.1244312
PMID: 27768398

24: Dhawan A, Pattanayak RD, Chopra A, Tikoo VK, Kumar R. Injection drug use among children and adolescents in India: Ringing the alarm bells. Indian J Psychiatry. 2016 Oct-Dec;58(4):387-393. doi: 10.4103/0019-5545.196701. PubMed PMID: 28196995; PubMed Central PMCID: PMC5270263.

INTRODUCTION: Injection drug use (IDU) is intricately linked to preventive aspects for human immunodeficiency virus from a public health perspective. No large-scale data are yet available for injectable drug use among children and adolescents in India, apart from few anecdotal reports.
AIMS AND METHODS: The present paper reports on the profile and substance use pattern of 509 child IDU users, among a total sample of over 4000 children using substances across 100 sites from 27 states and 2 UTs in India. It was undertaken in 2012-2013 by the National Commission of Protection for Child Rights in collaboration with the National Drug Dependence Treatment Centre, All India Institute of Medical Sciences, New Delhi. For inclusion, participants had to be 18 years or less, should have used at least one other substance besides tobacco in the last 1 year, and should be living at home/street, in or out of school. Data were gathered using a 95-item semi-structured questionnaire.
RESULTS: A large proportion of ever users of IDU also reported use in the past year (96.5%) and past month (92.7%). Apart from IDU, tobacco, alcohol, cannabis, and pharmaceutical opioids were the most common substances of abuse in order of frequency. There was an interval of about 3 years from the initiation of tobacco to the initiation of IDU. Average age of onset for IDU was a year lesser in males than female users. The street children initiated IDU earlier than out-of-school and schoolgoing children. No quit attempt was made by more than half of the children. More than 40% had frequent familial conflicts, more than half had a familial history of substance use, and three-fourths had drug-using peers.
CONCLUSION: The paper highlights the profile and pattern of children and adolescents using IDU across many parts of India, dispelling the myth that IDU is largely an adult phenomenon in India. There is a clear need to promote different harm reduction and preventive strategies across the "hard-to-reach" younger age groups using injecting drugs.

DOI: 10.4103/0019-5545.196701
PMCID: PMC5270263
PMID: 28196995

Conflict of interest statement: There are no conflicts of interest.

25: Dhooria S, Madan K, Pattabhiraman V, Sehgal IS, Mehta R, Vishwanath G, Srinivasan A, Sivaramakrishnan M, Mohan A, Mathew JL, Kabra SK, Guleria R, Behera D, Agarwal R. A multicenter study on the utility and safety of EBUS-TBNA and EUS-B-FNA in children. Pediatr Pulmonol. 2016 Oct;51(10):1031-1039. doi: 10.1002/ppul.23415. PubMed PMID: 27142997.

BACKGROUND AND AIM: Endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) and endoscopic ultrasound with an echobronchoscope-guided fine needle aspiration (EUS-B-FNA) are useful modalities in the evaluation of mediastinal lymphadenopathy in adults; however, there is sparse data in children. The aim of this multicenter study is to describe the efficacy and safety of EBUS-TBNA and EUS-B-FNA in children with mediastinal lymphadenopathy of undefined etiology.
METHODS: Retrospective analysis of consecutive pediatric (<18 years) subjects who underwent EBUS-TBNA or EUS-B-FNA for the evaluation of mediastinal lymphadenopathy. The demographic characteristics, indications, procedural details, pathological, cytological and microbiological diagnosis, diagnostic yield, and complications are presented.
RESULTS: Of the 3,424 EBUS/EUS-B-FNA procedures, 67 (1.9%) were performed in the pediatric (3-17 years) population. Of these, 19 (28.4%) were performed in children ≤12 years of age. Overall, EBUS-TBNA and EUS-B-FNA were performed in 53 and 12 subjects, respectively. In two subjects, no significant lymph node was seen on EBUS. The procedure was performed under moderate sedation in

spontaneously breathing subjects in 54 (80.6%) instances. An adequate sample was obtained in 60 (92.3%) subjects while a diagnostic sample was obtained in 37 (56.9%) of the 65 subjects. The diagnostic yield was not significantly different (P=0.59) between EBUS-TBNA (58.5%) and EUS-B-FNA (50%). The sensitivity of EBUS-TBNA/EUS-B-FNA was 79.1% and led to a change in diagnosis in 28 (41.8%) subjects. Complications, all minor were encountered in six (8.9%) subjects. CONCLUSIONS: EBUS-TBNA and EUS-B-FNA are safe techniques with a good diagnostic yield in the evaluation of children with mediastinal lymphadenopathy. Pediatr Pulmonol. 2016;51:1031-1039. © 2016 Wiley Periodicals, Inc.

DOI: 10.1002/ppul.23415
PMID: 27142997

26: Dhua AK, Varshney A, Bhatnagar V. Transverse testicular ectopia with a blind ending vas deferens. Indian J Urol. 2016 Oct-Dec;32(4):317-319. PubMed PMID: 27843218; PubMed Central PMCID: PMC5054666.

Transverse testicular ectopia (TTE) is an uncommon anomaly of testicular descent. Herein, we describe a case of TTE with blindly ending vas and persistent Móllerian duct syndrome in a 2-year-old child. Orchidopexy could be done through the normal orthotopic route after separating it from the Móllerian structure and dividing the peritoneal fold just distal to the blindly ending vas. The report highlights that laparoscopy is useful for identifying subtle anomalies in addition to its therapeutic role.

DOI: 10.4103/0970-1591.189717
PMCID: PMC5054666
PMID: 27843218

27: Dwivedi DK, Kumar R, Bora GS, Sharma S, Thulkar S, Gupta SD, Jagannathan NR. Multiparametric MR can identify high grade prostatic intraepithelial neoplasia (HGPIN) lesions and predict future detection of prostate cancer in men with a negative initial prostate biopsy. Magn Reson Imaging. 2016 Oct;34(8):1081-6. doi: 10.1016/j.mri.2016.05.006. PubMed PMID: 27211254.

PURPOSE: This study aims to determine the pre-biopsy diffusion-weighted imaging (DWI) and magnetic resonance spectroscopic imaging (MRSI) characteristics of patients with high-grade prostatic intraepithelial neoplasia (HGPIN) and perform follow-up studies in these patients to assess the clinical implications.
MATERIALS AND METHODS: One hundred sixteen men with prostate specific antigen between 4 and 10ng/ml underwent pre-biopsy MR examinations. Nine of them had HGPIN lesions without concomitant prostate cancer (PCa) on biopsy. Apparent diffusion coefficient (ADC) and metabolite ratio [Citrate/(Choline+Creatine)] were calculated and these 9 patients were followed to determine the clinical outcomes.
RESULTS: Mean ADC for HGPIN foci was 1.01±0.16×10(-3)mm(2)/s while for the normal peripheral zone it was 1.69±0.25×10(-3)mm(2)/s (p<0.005). Mean metabolite ratio for voxels in the HGPIN region of initial biopsy was 0.24±0.16 while for the normal peripheral zone the value was 2.66±1.57 (p<0.005). Four of 5 patients who were available for follow-up were detected to have prostate cancer on repeat biopsy. No significant change in metabolite ratio and PSA was observed while ADC showed further reduction on follow-up.
CONCLUSION: HGPIN foci have ADC and metabolite ratio values similar to adenocarcinoma prostate, indicating that such patients have a high likelihood of developing cancer. DWI may help identify such men who may be candidates for close follow-up.

DOI: 10.1016/j.mri.2016.05.006

PMID: 27211254

28: Fitchett EJ, Seale AC, Vergnano S, Sharland M, Heath PT, Saha SK, Agarwal R, Ayede AI, Bhutta ZA, Black R, Bojang K, Campbell H, Cousens S, Darmstadt GL, Madhi SA, Meulen AS, Modi N, Patterson J, Qazi S, Schrag SJ, Stoll BJ, Wall SN, Wammanda RD, Lawn JE; SPRING (Strengthening Publications Reporting Infection in Newborns Globally) Group.. Strengthening the Reporting of Observational Studies in Epidemiology for Newborn Infection (STROBE-NI): an extension of the STROBE statement for neonatal infection research. Lancet Infect Dis. 2016 Oct;16(10):e202-13. doi: 10.1016/S1473-3099(16)30082-2. Review. PubMed PMID: 27633910.

Neonatal infections are estimated to account for a quarter of the 2·8 million annual neonatal deaths, as well as approximately 3% of all disability-adjusted life-years. Despite this burden, few data are available on incidence, aetiology, and outcomes, particularly regarding impairment. We aimed to develop guidelines for improved scientific reporting of observational neonatal infection studies, to increase comparability and to strengthen research in this area. This checklist, Strengthening the Reporting of Observational Studies in Epidemiology for Newborn Infection (STROBE- NI), is an extension of the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) statement. STROBE-NI was developed following systematic reviews of published literature (1996-2015), compilation of more than 130 potential reporting recommendations, and circulation of a survey to relevant professionals worldwide, eliciting responses from 147 professionals from 37 countries. An international consensus meeting of 18 participants (with expertise in infectious diseases, neonatology, microbiology, epidemiology, and statistics) identified priority recommendations for reporting, additional to the STROBE statement. Implementation of these STROBE-NI recommendations, and linked checklist, aims to improve scientific reporting of neonatal infection studies, increasing data utility and allowing meta-analyses and pathogen-specific burden estimates to inform global policy and new interventions, including maternal vaccines.

DOI: 10.1016/S1473-3099(16)30082-2
PMID: 27633910

29: Garg K, Singh PK, Kale SS, Sharma BS. Long Segment Bony Spur in Split Cord Malformation Type 1. Indian J Pediatr. 2017 Mar;84(3):246-248. doi: 10.1007/s12098-016-2244-6. PubMed PMID: 27770428.

30: Ghosh-Jerath S, Singh A, Magsumbol MS, Kamboj P, Goldberg G. Exploring the Potential of Indigenous Foods to Address Hidden Hunger: Nutritive Value of Indigenous Foods of Santhal Tribal Community of Jharkhand, India. J Hunger Environ Nutr. 2016 Oct 1;11(4):548-568. PubMed PMID: 27867449; PubMed Central PMCID: PMC5080971.

Traditional foods of indigenous communities can be explored as a sustainable means of addressing undernutrition. Our study aimed at identifying indigenous foods of the Santhal tribal community of Godda district of Jharkhand, India, assessing their nutritive value, and appraising their potential role in addressing hidden hunger. A cross-sectional survey using qualitative methods like focus group discussions with women of childbearing age (15-49 years), adult males, and elderly people was conducted for food identification. This was followed by taxonomic classification and quantitative estimate of nutritive value of the identified foods either in a certified laboratory or from secondary data. The community was well aware of the indigenous food resources in their environment. More than 100 different types of indigenous foods including a number of green leafy vegetables were identified. Taxonomic classification was available for 25 food items and an additional 26 food items were sent for taxonomic classification. Many indigenous foods (more than 50% of which were green leafy

vegetables) were found to be rich sources of micronutrients like calcium, iron, vitamin A as beta carotene, and folate. Maximizing utilization of indigenous foods can be an important and sustainable dietary diversification strategy for addressing hidden hunger in this indigenous community.

DOI: 10.1080/19320248.2016.1157545
PMCID: PMC5080971
PMID: 27867449

31: Goel AD, Akarte SV, Agrawal SP, Yadav V. Longitudinal assessment of depression, stress, and burnout in medical students. J Neurosci Rural Pract. 2016 Oct-Dec;7(4):493-498. PubMed PMID: 27695226; PubMed Central PMCID: PMC5006458.

BACKGROUND: Medical students can and do suffer from mental disorders is a concept yet to get wide acceptance. There are few studies comprehensively evaluating depression, stress, and burnout in medical students, especially in a longitudinal way in India. The current study aims to assess the impact of medical education on the development of psychological morbidities and the role of personality.
MATERIALS AND METHODS: First-year medical students of a leading medical college of India were enrolled on admission and given anonymized, validated, self-administered questionnaires assessing depression, stress, burnout, and personality. This was repeated at the end of 1(st) year. Data were analyzed independently as questionnaires were anonymized.
RESULTS: We found that 1(st) year of medical college showed a significantly increasing depression ($P < 0.01$) and stress ($P < 0.01$). Overall burnout did not increase significantly. However, only disengagement dimension of burnout increased significantly. Personalities with weak capacity to adjust had a significant positive correlation with depression ($r = 0.277$, $P < 0.001$) and stress scores ($r = 0.210$, $P = 0.008$). However, burnout did not correlate with any of the personality dimensions.
CONCLUSION: Right from the 1(st) year of medical education students perceive high-stress levels and have a high risk of depression. Burnout starts to creep in at least in the form of disengagement. This study provides a sound groundwork for planning interventions to reduce student's mental morbidity and avoid burnout.

DOI: 10.4103/0976-3147.188625
PMCID: PMC5006458
PMID: 27695226

32: Goswami D, Rani R, Saxena A, Arora MS, Batra S, Sreenivas V. Maternal and neonatal vitamin-D status in twin versus singleton pregnancies. J Obstet Gynaecol Res. 2016 Oct;42(10):1250-1257. doi: 10.1111/jog.13060. PubMed PMID: 27358199.

AIM: There is a paucity of information on vitamin D status of women with twin pregnancy and their newborns. This case-control study compared maternal and neonatal vitamin-D status in twin versus singleton pregnancies.
METHODS: Subjects included 50 women with twin pregnancy delivering at >28 weeks and 50 gestational-age-matched women with singleton pregnancy delivering during the same period. Maternal and neonatal serum 25-hydroxy vitamin D [25(OH)D] was compared between the two groups using the independent Student's t-test on log values. Serum albumin-adjusted calcium, inorganic phosphate, and intact parathormone levels were also compared.
RESULTS: Maternal vitamin-D deficiency (VDD; serum 25(OH)D < 30 nmol/L) was present in 90% of twin and 88% of singleton pregnancies. The prevalence of neonatal VDD was 89% in twin and 74% in singleton pregnancies ($P = 0.03$). Maternal serum 25(OH)D was lower in the twin group as compared to the singleton group (14.3 ± 10.47 vs 18.5 ± 12.36 nmol/L; $P = 0.02$). Mean serum calcium, intact parathormone, and inorganic phosphate were comparable between the women in the two groups. Maternal and neonatal 25(OH)D showed positive correlation in the two groups ($P < 0.001$). Mean cord blood 25(OH)D was significantly lower in the twins than in singleton newborns (14.8 ± 12.63 vs 22.6 ± 16.68 nmol/L; $P = 0.002$). The difference persisted even after adjustment for birthweights and maternal serum

25(OH)D. Mean serum calcium was significantly lower in the twins. CONCLUSION: Twin newborns and their mothers have higher VDD as compared to singleton newborns and their mothers in the VDD population.

DOI: 10.1111/jog.13060
PMID: 27358199

33: Grover S, Sarkar S, Bhalla A, Chakrabarti S, Avasthi A. Religious coping among self-harm attempters brought to emergency setting in India. Asian J Psychiatr. 2016 Oct;23:78-86. doi: 10.1016/j.ajp.2016.07.009. PubMed PMID: 27969084.

This study attempted to evaluate religious coping and its correlates among patients presenting with self-harm to an emergency setting and compared it with a healthy control group. Religious coping was assessed using brief RCOPE. Beck Hopelessness Scale, Beck Depression Inventory, Barratt Impulsivity Scale, Scale for Suicidal Ideations and Irritability Depression Anxiety scale were used to assess for hopelessness, depression, impulsiveness, suicidal ideations and irritability respectively. The study included 32 subjects with depression and 77 subjects without any psychiatric diagnosis who presented with self-harm and 50 healthy controls. Compared to healthy controls, those with self-harm irrespective of presence or absence of psychiatric diagnosis less often used positive religious coping and more often used negative religious coping. Further, among those without psychiatric diagnosis (with self harm), there was positive correlation of negative religious coping with impulsivity and hopelessness. Among those without psychiatric diagnosis with self-harm, both positive and negative religious coping correlated positively with depressive scores, severity of suicidal ideations, anxiety and irritability, but associations were stronger for negative religious coping than that for positive religious coping. The findings of the present study suggest that those who indulge in self harm have lower use of positive religious coping and higher use of negative religious coping.

DOI: 10.1016/j.ajp.2016.07.009
PMID: 27969084 [Indexed for MEDLINE]

34: Gupta D, Mohanty S, Thakral D, Bagga A, Wig N, Mitra DK. Unusual Association of Hemophagocytic Lymphohistiocytosis in Systemic Lupus Erythematosus: Cases Reported at Tertiary Care Center. Am J Case Rep. 2016 Oct 13;17:739-744. PubMed PMID: 27733745; PubMed Central PMCID: PMC5065291.

BACKGROUND Hemophagocytic lymphohistiocytosis (HLH) in the background of systemic lupus erythematosus (SLE) is rare. Inability to discriminate between these two entities may be fatal for the patient. Here we report two cases of SLE with secondary HLH, one of which manifested HLH as the initial presentation, and the significance of HLH's timely diagnosis. CASE REPORT We describe two cases of SLE secondarily affected by HLH, which were diagnosed by various laboratory parameters and detection of profoundly reduced NK cell activity by using flow cytometry. Both our cases on investigation showed hyperferritinemia, hypertriglyceridemia, hypofibrinogenemia, and marked reduction or complete absence of NK cell activity. CONCLUSIONS Association of secondary HLH with SLE is rare, and when it occurs, differentiating it from lupus flare requires a high degree of suspicion and awareness of this association. Both have overlapping clinical features, but HLH is characterized by hyperferritinemia, hypofibrinogenemia, hypertriglyceridemia, and a decrease in erythrocyte sedimentation rate (ESR) and NK cell activity unlike SLE. Therefore, early diagnosis of HLH in the background of SLE facilitates timely selection of an appropriate treatment modality to prevent fatal complications.

PMCID: PMC5065291
PMID: 27733745 [Indexed for MEDLINE]

Conflict of interest statement: Conflicts of Interest: None declared Conflicts of interest The authors declare that they have no conflicts of interest.

35: Gupta I, Goyal A, Singh NK, Yadav HN, Sharma PL. Hemin, a heme oxygenase-1 inducer, restores the attenuated cardioprotective effect of ischemic preconditioning in isolated diabetic rat heart. Hum Exp Toxicol. 2016 Oct 12. pii: 0960327116673169. [Epub ahead of print] PubMed PMID: 27738197.

BACKGROUND: Attenuated cardioprotective effect of ischemic preconditioning (IPC) by reduced nitric oxide (NO) is a hallmark during diabetes mellitus (DM). Recently, we reported that the formation of caveolin-endothelial nitric oxide synthase (eNOS) complex decreases the release of NO, which is responsible for attenuation of IPC-induced cardioprotection in DM rat heart. Heme oxygenase-1 (HO-1) facilitates release of NO by disrupting caveolin-eNOS complex. The activity of HO-1 is decreased during DM. This study was designed to investigate the role of hemin (HO-1 inducer) in attenuated cardioprotective effect of IPC in isolated diabetic rat heart.
METHODS: DM was induced in male Wistar rat by single dose of streptozotocin. Cardioprotective effect was assessed in terms of myocardial infarct size and release of lactate dehydrogenase and creatine kinase in coronary effluent. The release of NO was estimated indirectly by measuring the release of nitrite in coronary effluent. Perfusion of sodium nitrite, a precursor of NO, was used as a positive control.
RESULT: IPC-induced cardioprotection and increased release of nitrite were significantly attenuated in a diabetic rat as compared to a normal rat. Pretreatment with hemin and daidzein, a caveolin inhibitor, alone or in combination significantly restored the attenuated cardioprotection and increased the release of nitrite in diabetic rat heart. Zinc protoporphyrin, a HO-1 inhibitor, significantly abolished the observed cardioprotection and decreased the release of nitrite in hemin pretreated DM rat heart.
CONCLUSION: Thus, it is suggested that hemin restores the attenuated cardioprotective effect in diabetic rat heart by increasing the activity of HO-1 and subsequently release of NO.

DOI: 10.1177/0960327116673169
PMID: 27738197

36: Gupta PK, Krishna M, Chullikana A, Desai S, Murugesan R, Dutta S, Sarkar U, Raju R, Dhar A, Parakh R, Jeyaseelan L, Viswanathan P, Vellotare PK, Seetharam RN, Thej C, Rengasamy M, Balasubramanian S, Majumdar AS. Administration of Adult Human Bone Marrow-Derived, Cultured, Pooled, Allogeneic Mesenchymal Stromal Cells in Critical Limb Ischemia Due to Buerger's Disease: Phase II Study Report Suggests Clinical Efficacy. Stem Cells Transl Med. 2017 Mar;6(3):689-699. doi: 10.5966/sctm.2016-0237. PubMed PMID: 28297569.

Critical limb ischemia (CLI) due to Buerger's disease is a major unmet medical need with a high incidence of morbidity. This phase II, prospective, nonrandomized, open-label, multicentric, dose-ranging study was conducted to assess the efficacy and safety of i.m. injection of adult human bone marrow-derived, cultured, pooled, allogeneic mesenchymal stromal cells (BMMSC) in CLI due to Buerger's disease. Patients were allocated to three groups: 1 and 2 million cells/kg body weight (36 patients each) and standard of care (SOC) (18 patients). BMMSCs were administered as 40-60 injections in the calf muscle and locally, around the ulcer. Most patients were young (age range, 38-42 years) and ex-smokers, and all patients had at least one ulcer. Both the primary endpoints-reduction in rest pain (0.3 units per month [SE, 0.13]) and healing of

ulcers (11% decrease in size per month [SE, 0.05])-were significantly better in the group receiving 2 million cells/kg body weight than in the SOC arm. Improvement in secondary endpoints, such as ankle brachial pressure index (0.03 [SE, 0.01] unit increase per month) and total walking distance (1.03 [SE, 0.02] times higher per month), were also significant in the group receiving 2 million cells/kg as compared with the SOC arm. Adverse events reported were remotely related or unrelated to BMMSCs. In conclusion, i.m. administration of BMMSC at a dose of 2 million cells/kg showed clinical benefit and may be the best regimen in patients with CLI due to Buerger's disease. However, further randomized controlled trials are required to confirm the most appropriate dose. Stem Cells Translational Medicine 2017;6:689-699.

DOI: 10.5966/sctm.2016-0237
PMID: 28297569

37: Gupta PK, Krishna M, Chullikana A, Desai S, Murugesan R, Dutta S, Sarkar U, Raju R, Dhar A, Parakh R, Jeyaseelan L, Viswanathan P, Vellotare PK, Seetharam RN, Thej C, Rengasamy M, Balasubramanian S, Majumdar AS. Administration of Adult Human Bone Marrow-Derived, Cultured, Pooled, Allogeneic Mesenchymal Stromal Cells in Critical Limb Ischemia Due to Buerger's Disease: Phase II Study Report Suggests Clinical Efficacy. Stem Cells Transl Med. 2016 Oct 5. pii: sctm.2016-0237. [Epub ahead of print] PubMed PMID: 27708131.

: Critical limb ischemia (CLI) due to Buerger's disease is a major unmet medical need with a high incidence of morbidity. This phase II, prospective, nonrandomized, open-label, multicentric, dose-ranging study was conducted to assess the efficacy and safety of i.m. injection of adult human bone marrow-derived, cultured, pooled, allogeneic mesenchymal stromal cells (BMMSC) in CLI due to Buerger's disease. Patients were allocated to three groups: 1 and 2 million cells/kg body weight (36 patients each) and standard of care (SOC) (18 patients). BMMSCs were administered as 40-60 injections in the calf muscle and locally, around the ulcer. Most patients were young (age range, 38-42 years) and ex-smokers, and all patients had at least one ulcer. Both the primary endpoints-reduction in rest pain (0.3 units per month [SE, 0.13]) and healing of ulcers (11% decrease in size per month [SE, 0.05])-were significantly better in the group receiving 2 million cells/kg body weight than in the SOC arm. Improvement in secondary endpoints, such as ankle brachial pressure index (0.03 [SE, 0.01] unit increase per month) and total walking distance (1.03 [SE, 0.02] times higher per month), were also significant in the group receiving 2 million cells/kg as compared with the SOC arm. Adverse events reported were remotely related or unrelated to BMMSCs. In conclusion, i.m. administration of BMMSC at a dose of 2 million cells/kg showed clinical benefit and may be the best regimen in patients with CLI due to Buerger's disease. However, further randomized controlled trials are required to confirm the most appropriate dose.SIGNIFICANCE: Critical limb ischemia (CLI) due to Buerger's disease presents a major unmet medical need. The limited therapeutic options lead to increased morbidity and mortality. This study showed that use of adult human bone marrow-derived, cultured, pooled, allogeneic mesenchymal stromal cells is safe and efficacious when the cells are injected intramuscularly at a dose of 2 million cells/kg body weight in patients with CLI. Rest pain and ulcer healing significantly improved in most patients. This regimen may be a novel therapeutic option for Buerger's disease.

DOI: 10.5966/sctm.2016-0237
PMID: 27708131

38: Gupta R, Chandgothia M, Dahiya M, Bakhshi S, Sharma A, Kumar L. Multi-drug

resistance protein 1 as prognostic biomarker in clinical practice for acute myeloid leukemia. Int J Lab Hematol. 2016 Oct;38(5):e93-7. doi: 10.1111/ijlh.12529. PubMed PMID: 27321806.

39: Gupta S, Sharma U, Jagannathan NR, Gupta YK. Neuroprotective effect of lercanidipine in middle cerebral artery occlusion model of stroke in rats. Exp Neurol. 2017 Feb;288:25-37. doi: 10.1016/j.expneurol.2016.10.014. PubMed PMID: 27794423.

Oxidative stress, inflammation and apoptotic neuronal cell death are cardinal mechanisms involved in the cascade of acute ischemic stroke. Lercanidipine apart from calcium channel blocking activity possesses anti-oxidant, anti-inflammatory and anti-apoptotic properties. In the present study, we investigated neuroprotective efficacy and therapeutic time window of lercanidipine in a 2h middle cerebral artery occlusion (MCAo) model in male Wistar rats. The study design included: acute (pre-treatment and post-treatment) and sub-acute studies. In acute studies (pre-treatment) lercanidipine (0.25, 0.5 and 1mg/kg, i.p.) was administered 60min prior MCAo. The rats were assessed 24h post-MCAo for neurological deficit score (NDS), motor deficit paradigms (grip test and rota rod) and cerebral infarction via 2,3,5-triphenyltetrazolium chloride (TTC) staining. The most effective dose was found to be at 0.5mg/kg, i.p., which was considered for further studies. Regional cerebral blood flow (rCBF) was monitored till 120min post-reperfusion to assess vasodilatory property of lercanidipine (0.5mg/kg, i.p.) administered at two different time points: 60min post-MCAo and 15min post-reperfusion. In acute studies (post-treatment) lercanidipine (0.5mg/kg, i.p.) was administered 15min, 120min and 240min post-reperfusion. Based on NDS and cerebral infarction via TTC staining assessed 24h post-MCAo, effectiveness was evident upto 120min. For sub-acute studies same dose/vehicle was repeated for next 3days and magnetic resonance imaging (MRI) was performed 96h after the last dose. Biochemical markers estimated in rat brain cortex 24h post-MCAo were oxidative stress (malondialdehyde, reduced glutathione, nitric oxide, superoxide dismutase), blood brain barrier damage (matrix metalloproteinases-2 and -9) and apoptotic (caspase-3 and -9). Lercanidipine significantly reduced NDS, motor deficits and cerebral infarction volume as compared to the control group. Lercanidipine (60min post-MCAo) significantly increased rCBF (86%) as compared to vehicle treated MCAo group (64%) 120min post-reperfusion, but failed to show vasodilatation with 15min post-reperfusion group. Lercanidipine (13.78±2.78%) significantly attenuated percentage infarct volume as evident from diffusion-weighted (DWI) and T2-weighted images as compared to vehicle treated MCAo group (25.90±2.44%) investigated 96h post-MCAo. The apparent diffusion coefficient (ADC) was also significantly improved in lercanidipine group as compared to control group. Biochemical alterations were significantly ameliorated by lercanidipine till 120min post-reperfusion group and MMP-9 inhibition observed even with 240min group. Thus, lercanidipine revealed significant neuroprotective effect mediated through attenuation of oxidative stress, inflammation and apoptosis.

DOI: 10.1016/j.expneurol.2016.10.014
PMID: 27794423

40: Gupta S. It is the Cooperation, Stupid! J Cutan Aesthet Surg. 2016 Oct-Dec;9(4):274-277. doi: 10.4103/0974-2077.197085. PubMed PMID: 28163463; PubMed Central PMCID: PMC5227085.

The rise of aesthetics in medicine has resulted from society's acknowledgement of the importance of physical beauty. This has led to an emerging conflict between allied specialties. The author introduces the concept of "Aesthetic Socialism" according to which everyone should have an opportunity to enhance or restore the beauty where it is missing or when it is lost due to disease, trauma or ageing.

However, there are multiple aspects of aesthetics, which can not be addressed by a single specialty, therefore author recommends interdisciplinary cooperation rather than conflict to achieve aesthetic socialism.

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PMCID: PMC5227085
PMID: 28163463

Conflict of interest statement: There are no conflicts of interest.

41: Gupta S, Haresh KP, Roy S, Kashyap L, Adhikari N, Pandey R, Sharma D, Julka PK, Rath GK. Metabolic toxicities in patients undergoing treatment for nonhematological malignancy: A cross-sectional study. Indian J Med Paediatr Oncol. 2016 Oct-Dec;37(4):256-259. doi: 10.4103/0971-5851.195737. PubMed PMID: 28144092; PubMed Central PMCID: PMC5234162.

OBJECTIVES: The objective of this study was to evaluate the prevalence of metabolic toxicities in patients with different nonhematological malignancies admitted in oncology ward of a tertiary cancer care center while on treatment.
METHODS: We did this cross-sectional study over a period of 7 months (January-July 2013) for all adult patients (n = 280) who, while undergoing anti-cancer therapy at our center, got admitted to our oncology inpatient ward with metabolic toxicity. Grading of toxicity was done using National Cancer Institute Common Terminology Criteria for Adverse Events Version 4.0.
RESULTS: A total of 46 events of metabolic toxicities were noted in 31 patients over this period. The most common of them was hyperglycemia (n = 10). The others were hypokalemia (n = 9), hyponatremia (n = 9), hypernatremia (n = 5), hyperkalemia (n = 5), tumor lysis syndrome (n = 4), hypercalcemia (n = 2), and grade ≤2 hypomagnesemia (n = 2). Majority of the patients were asymptomatic (n = 26). However, death occurred in five patients. Treatment interruptions took place in 19 patients. Age ≤40 years (P = 0.03), Eastern Cooperative Oncology Group performance status ≥2 (P = 0.023), history of addiction (P = 0.02), comorbidities (P = 0.037) were associated with increased risk of having metabolic toxicities on univariate analysis. While on multivariate analysis, only age, performance status, and history of addiction retained their statistical significance. Age ≤40 years (P = 0.02), use of more than one modality of treatment (P = 0.013), and hyperglycemia (P = 0.037) were associated with higher risk of death.
CONCLUSION: Metabolic toxicities are common phenomena among cancer patients, especially those with young age, comorbidities, and having history of addictions. In young age, they might even be fatal, especially when they are treated with combined modality of treatment.

DOI: 10.4103/0971-5851.195737
PMCID: PMC5234162
PMID: 28144092

Conflict of interest statement: There are no conflicts of interest.

42: Gupta V, Ramesh V. Understanding cutaneous tuberculosis in children. Int J Dermatol. 2017 Feb;56(2):242-244. doi: 10.1111/ijd.13441. PubMed PMID: 27706795.

43: Gupta V, Somarajan BI, Gupta S, Chaurasia AK, Kumar S, Dutta P, Gupta V, Sharma A, Tayo BO, Nischal K. The inheritance of juvenile onset primary open angle glaucoma. Clin Genet. 2016 Oct 25. doi: 10.1111/cge.12906. [Epub ahead of print] Review. PubMed PMID: 27779752.

Juvenile onset open angle glaucoma (JOAG) affects patients before 40 years of age, who present with high intraocular pressure and deep steep cupping of the optic nerve head. While it was considered to be inherited in an autosomal dominant fashion, recent studies have shown an autosomal recessive pattern as well as sporadic occurrence of the disease in several families. In this review,

we analyze the genetic basis of the disease along with common mutations and their association with JOAG. We also analyzed the inheritance patterns in a large group of unrelated JOAG patients (n=336) from Northern India wherein the prevalence of familial occurrence was assessed and segregation analysis performed, to determine the mode of inheritance.

DOI: 10.1111/cge.12906
PMID: 27779752

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46: Gupta VG, Arora B, Radhakrishnan V, Banavali S, Bakhshi S. Treatment rates of paediatric acute myeloid leukaemia: a view from three tertiary centres in India. Br J Haematol. 2016 Oct;175(2):346-347. doi: 10.1111/bjh.13858. PubMed PMID: 26586018.

47: Iqbal N, Kumar M, Sharma P, Yadav SP, Kaur P, Sharma S, Singh TP. Binding studies and structure determination of the recombinantly produced type-II 3-dehydroquinate dehydratase from Acinetobacter baumannii. Int J Biol Macromol. 2017 Jan;94(Pt A):459-465. doi: 10.1016/j.ijbiomac.2016.10.049. PubMed PMID: 27769928.

Dehydroquinase (3-dehydroquinate dehydratase, DHQD, EC 4.2.1.10) catalyzes the conversion of dehydroquinate to dehydroshikimate. DHQD from Acinetobacter baumannii (AbDHQD) was cloned, expressed and purified to homogeneity. The binding studies showed that two compounds quinic acid and citrazinic acid bound to AbDHQD at micromolar concentrations. AbDHQD was crystallized using 30% PEG-3350, 50mM tris-HCl and 1.0M MgSO4 at pH 8.0. Crystals of AbDHQD were stabilized with 25% glycerol for data collection at 100K. The X-ray intensity data were collected to 2.0Å resolution. Crystals belonged to monoclinic space group P21 with cell dimensions, a=82.3, b=95.3, c=132.3Å and β=95.7°. The structure was solved with molecular replacement method and refined to values of 0.200 and 0.232 for Rcryst and Rfree factors. The structures of 12 crystallographically independent molecules in the asymmetry unit were identical with r.m.s shifts for the C(α) atoms ranging from 0.3Å to 0.8Å. They formed a dodecamer with four trimers arranged in a tetrahedral manner. The classical lid adopted an open conformation although a sulfate ion was observed in the substrate binding site. As a result of which, the compounds quinic acid and citrazinic acid could not bind to AbDHQD.

DOI: 10.1016/j.ijbiomac.2016.10.049
PMID: 27769928

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Aortic atresia with an associated ventricular septal defect and adequate sized left ventricle is extremely rare. We present two cases in which an alternate diagnosis was suggested on echocardiography because the hypoplastic aortic trunk was missed due to its small caliber. The final diagnosis was, however, clinched on dual source computed tomography, which not only showed the thin aortic trunk

but also clearly depicted the coronary artery origins from the hypoplastic aortic root. To the best of our knowledge, use of multi-detector computed tomography in aortic atresia with well developed left ventricle has not been reported in literature till date.

DOI: 10.4103/0971-3026.195784
PMCID: PMC5201087
PMID: 28104951

Conflict of interest statement: There are no conflicts of interest.

49: Jain R, Sharma N, Basu S, Iyer G, Ueta M, Sotozono C, Kannibiran C, Rathi VM, Gupta N, Kinoshita S, Gomes JA, Chodosh J, Sangwan VS. Reply: amniotic membrane transplantation in Stevens-Johnson syndrome. Surv Ophthalmol. 2017 Mar - Apr;62(2):249-250. doi: 10.1016/j.survophthal.2016.10.005. PubMed PMID: 27751824.

50: Jayasundar R, Ghatak S. Spectroscopic and E-tongue evaluation of medicinal plants: A taste of how rasa can be studied. J Ayurveda Integr Med. 2016 Oct - Dec;7(4):191-197. doi: 10.1016/j.jaim.2016.09.003. PubMed PMID: 27889428; PubMed Central PMCID: PMC5192283.

BACKGROUND: The use of medicinal plants in Ayurveda is based on rasa, generally taken to represent taste as a sensory perception. This chemosensory parameter plays an important role in Ayurvedic pharmacology.
OBJECTIVE: The aim is to explore the use of structuro-functional information deduced from analytical techniques for the rasa-based classification of medicinal plants in Ayurveda.
MATERIALS AND METHODS: Methods of differential sensing and spectroscopic metabolomics have been used in select medicinal plants from three different taste categories (sweet, pungent and multiple taste): Tribulus terrestris, Vitis vinifera and Glycyrrhiza glabra from sweet category; Piper longum, Cuminum cyminum and Capsicum annum from pungent group; Emblica officinalis with five tastes. While Electronic tongue was used for evaluation of the sensorial property of taste, the chemical properties were studied with Nuclear Magnetic Resonance (NMR), Fourier Transform InfraRed (FTIR) and Laser Induced Breakdown Spectroscopy (LIBS).
RESULTS: In terms of taste and phytochemical profiles, all samples were unique but with similarities within each group. While the sensor response in E-tongue showed similarities within the sweet and pungent categories, NMR spectra in the aromatic region showed close similarities between the plants in the sweet category. The sensory, phytochemical and phytoelemental profiles of E. officinalis (with five rasa) in particular, were unique.
CONCLUSION: A combination of sensorial and chemical descriptors is a promising approach for a comprehensive evaluation and fingerprinting of the Ayurvedic pharmacological parameter rasa.

DOI: 10.1016/j.jaim.2016.09.003
PMCID: PMC5192283
PMID: 27889428

51: Jayaswal A, Kandwal P, Goswami A, Vijayaraghavan G, Jariyal A, Upendra BN, Gupta A. Early onset scoliosis with intraspinal anomalies: management with growing rod. Eur Spine J. 2016 Oct;25(10):3301-3307. PubMed PMID: 27072552.

OBJECTIVE: To evaluate clinical and radiological outcomes of growing rod (GR) in the management of Early Onset Scoliosis (EOS) with intraspinal anomalies.
BACKGROUND DATA: The effect of repeated distractions following GR, in the presence of intraspinal anomalies has not been studied.
METHODS: During 2007-2012, 46 patients underwent fusionless surgery. Out of these

46 patients, 13 patients had one or more intraspinal anomalies. 11 patients had undergone prior neurosurgical procedure while 2 (filum terminale lipoma and syringomyelia) did not. A total of 88 procedures were conducted during the treatment period; 13 index surgeries, 74 distractions of GR and 1 unplanned surgery.
RESULTS: The age at surgery was 6.8 ± 2.5 years (3.5-12 years). 11 patients had congenital scoliosis and 2 had idiopathic scoliosis. A total of 19 (41.30 %) intraspinal anomalies [Tethered Cord Syndrome (TCS) 08, Split Cord Malformation (SCM) 08, Syringomyelia 01, Meningomyelocele 01, Filum terminale Lipoma 01] were seen. The average lengthening procedures per patient were 5.7 (4-9) with distraction interval of 6.7 (6-7.25) months. Pre-operative Cobb angle was 78.50 ± 18.1 (54-114°) and improved to 53.10 ± 16.70 (36-84°) at final follow-up. A total of 15 complications related to implant (9), wound (2), anesthesia (2) and neurological (2) occurred in 7 patients. Among the two neurological complications, one patient sustained fall in the post-op period and reported to the emergency department with paraplegia and broken proximal screw. While other patient experienced MEP changes during index procedure. None of the patients had any neurological complications during repeated lengthening procedures.
CONCLUSION: The most common cord anomalies associated with EOS in our study are TCS and SCM. Although presence of previous intraspinal anomaly does not seem to increase the incidence of neurological deficit, use of neuromonitoring is advisable for all index procedure and selected distractions.
STUDY DESIGN: Level 4 (case series).

DOI: 10.1007/s00586-016-4566-5
PMID: 27072552

52: Kachhawa G, Malik N, Kriplani A, Mahey R. Pregnancy with Malecot Catheter In Situ Following Cervical and Vaginal Reconstruction of a Cicatrized Vagina and Cervix: A Rare Case. J Obstet Gynaecol India. 2016 Oct;66(Suppl 2):583-586. PubMed PMID: 27803514; PubMed Central PMCID: PMC5080232.

53: Kakkar A, Nambirajan A, Kaur K, Kumar A, Mallick S, Suri V, Sarkar C, Kale SS, Garg A, Sharma MC. ATRX loss in glioneuronal tumors with neuropil-like islands indicates similarity to diffuse astrocytic tumors. J Neurooncol. 2016 Oct;130(1):63-68. PubMed PMID: 27469217.

Glioneuronal tumor with neuropil-like islands (GTNI) is a rare, recently described neoplasm, whose pathogenesis has not been studied extensively. The role of ATRX mutations, a class-defining alteration in diffuse astrocytic neoplasms, has not been assessed in GTNIs previously. We therefore aimed to assess the status of ATRX, along with IDH1, 1p/19q and p53, in cases of GTNI in order to evaluate the molecular profile of these tumors. All cases of GTNI diagnosed at our Institute were retrieved and clinicopathological features were reviewed. Immunohistochemistry for ATRX, IDH1 and p53 was performed. We identified four cases of GTNI, majority of which occurred in young adults. Loss of ATRX immunoexpression, a surrogate marker for ATRX mutation, was seen in all four cases. All cases were immunopositive for p53, while IDH1 positivity was seen in all three cases assessed. 1p/19q codeletion was absent in the three cases analyzed. These results indicate that the molecular pathogenesis of GTNIs similar to that of diffuse astrocytic tumors. Further, the loss of ATRX expression is seen in both the glial as well as neuronal components, indicating that both arise from the same tumor stem/progenitor cell and that the latter may be a metaplastic change. Thus, loss of ATRX immunoexpression, shown for the first time in these tumors, along with immunopositivity for p53 and IDH1, indicates that these tumors are molecular astrocytomas, and their clinical behaviour is likely to recapitulate that of ATRX-mutant and IDH-mutant diffuse astrocytomas of the same grade.

DOI: 10.1007/s11060-016-2224-8
PMID: 27469217

54: Kamal VK, Agrawal D, Pandey RM. Epidemiology, clinical characteristics and outcomes of traumatic brain injury: Evidences from integrated level 1 trauma center in India. J Neurosci Rural Pract. 2016 Oct-Dec;7(4):515-525. PubMed PMID: 27695230; PubMed Central PMCID: PMC5006462.

INTRODUCTION: Traumatic brain injury (TBI) is a leading cause of mortality, morbidity, disability, and socioeconomic losses in the Indian subcontinent. However, for policymaking and research, there is a lack of reliable and larger data in our settings.
AIMS AND OBJECTIVES: To evaluate and describe the epidemiological, clinical characteristics, and outcomes of patients with TBI in a Level 1 Trauma Center in India.
MATERIALS AND METHODS: In this retrospective study, all patients with moderate or severe TBI, based on emergency department Glasgow Coma Scale, admitted to neurosurgery Intensive Care Unit (ICU) during May 2010-July 2012 were evaluated to provide detailed information on TBI-related variables and outcomes using descriptive statistics.
RESULTS: Among the 1527 patients with moderate or severe TBI patients with mean age 32.15 ± 16.76 years (range: 1-90) and male:female ratio 6.5:1, 1281 (83.89%) had severe TBI. The majority of cases took place in the age group of 21-40 years (50.24%) with the most common mode of injury as road traffic accidents (RTAs) (64.96%). Surgical intervention (craniotomy) was done in 49.12% of patients. About 34.58% (n = 528) patients died in hospital, and 67.21% (n = 701) had unfavorable outcome at 6 months.
CONCLUSIONS: This is the first study of its kind from the Indian subcontinent that gives data on the admission characteristics, mortality, and 6 months outcome of such patients. Most of the injuries occurred due to RTAs, more common among the economic productive age groups and mostly in males with a high rate of mortality and unfavorable outcome.

DOI: 10.4103/0976-3147.188637
PMCID: PMC5006462
PMID: 27695230

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In 1980, Transesophageal Echocardiography (TEE) first technology has introduced the standard of practice for most cardiac operating rooms to facilitate surgical decision making. Transoesophageal echocardiography as a diagnostic tool is now an integral part of intraoperative monitoring practice of cardiac anaesthesiology. Practice guidelines for perioperative transesophageal echocardiography are systematically developed recommendations that assist in the management of surgical patients, were developed by Indian Association of Cardiac Anaesthesiologists (IACTA). This update relates to the former IACTA practice guidelines published in 2013 and the ASE/EACTA guidelines of 2015. The current authors believe that the basic echocardiographer should be familiar with the technical skills for acquiring 28 cross sectional imaging planes. These 28 cross sections would provide also the format for digital acquisition and storage of a comprehensive TEE examination and adds 5 more additional views, introduced for different clinical scenarios in recent times. A comparison of 2D TEE views versus 3D TEE views is attempted for the first time in literature, in this manuscript. Since, cardiac anaesthesia variability exists in the precise anatomic orientation between the heart and the oesophagus in individual patients, an attempt has been made to provide specific criteria based on identifiable anatomic landmarks to

improve the reproducibility and consistency of image acquisition for each of the standard cross sections.

DOI: 10.4103/0971-9784.192624
PMCID: PMC5100243
PMID: 27762249

57: Karthikeyan G, Guzic Salobir B, Jug B, Devasenapathy N, Alexanderson E, Vitola J, Kraft O, Ozkan E, Sharma S, Purohit G, Dolenc Novak M, Meave A, Trevethan S, Cerci R, Zier S, Gotthardtová L, Jonszta T, Altin T, Soydal C, Patel C, Gulati G, Paez D, Dondi M, Kashyap R. Functional compared to anatomical imaging in the initial evaluation of patients with suspected coronary artery disease: An international, multi-center, randomized controlled trial (IAEA-SPECT/CTA study). J Nucl Cardiol. 2016 Oct 28. [Epub ahead of print] PubMed PMID: 27796852.

OBJECTIVE: To test the hypothesis that, in the initial evaluation of patients with suspected coronary artery disease (CAD), stress myocardial perfusion imaging (MPI) would result in less downstream testing than coronary computed tomographic angiography (CCTA).
METHODS: In this international, randomized trial, mildly symptomatic patients with an intermediate likelihood of having CAD, and asymptomatic patients at intermediate risk of cardiac events, underwent either initial stress-rest MPI or CCTA. The primary outcome was downstream noninvasive or invasive testing at 6 months. Secondary outcomes included cumulative effective radiation dose (ERD) and costs at 12 months.
RESULTS: We recruited 303 patients (151 MPI and 152 CTA) from 6 centers in 6 countries. The initial MPI was abnormal in 29% (41/143) and CCTA in 56% (79/141) of patients. Fewer patients undergoing initial stress-rest MPI had further downstream testing at 6 months (adjusted OR 0.51, 95% CI 0.28-0.91, P = 0.023). There was a small increase in the median cumulative ERD with MPI (9.6 vs. 8.8 mSv, P = 0.04), but no difference in costs between the two strategies at 12 months.
CONCLUSION: In the management of patients with suspected CAD, a strategy of initial stress MPI is substantially less likely to require further downstream testing than initial testing with CCTA.
TRIAL REGISTRATION: clinicaltrials.gov identification number NCT01368770.

DOI: 10.1007/s12350-016-0664-3
PMID: 27796852

58: Kataria K, Srivastava A, Qaiser D. What Is a False Negative Sentinel Node Biopsy: Definition, Reasons and Ways to Minimize It? Indian J Surg. 2016 Oct;78(5):396-401. PubMed PMID: 27994336; PubMed Central PMCID: PMC5127992.

Sentinel node biopsy helps in assessing the involvement of axillary lymph node without the morbidity of full axillary lymph node dissection, namely arm and shoulder pain, paraesthesia and lymphoedema. The various methods described in the literature identify the sentinel lymph nodes in approximately 96 % of cases and associated with a false negativity rate of 5 to 10 %. A false negative sentinel node is defined as the proportion of cases in whom sentinel node biopsy is reported as negative, but the rest of axillary lymph node(s) harbours cancer cells. The possible causes of a false negative sentinel lymph node may be because of blocked lymphatics either by cancer cells or following fibrosis of previous surgery/radiotherapy, and an alternative pathway opens draining the blue dye or isotope to another uninvolved node. The other reasons may be two lymphatic pathways for a tumour area, the one opening to a superficial node and the other in deep nodes. Sometimes, lymphatics do not relay into a node but traverse it going to a higher node. In some patients, the microscopic focus of metastasis inside a lymph node is so small-micrometastasis (i.e. between 0.2 and 2 mm) or isolated tumour cells (i.e. less than 0.2 mm) that is missed by the pathologist. The purpose of this review is to clear some fears lurking in the mind of most

surgeons about the false negative sentinel lymph node (FNSLN).

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PMCID: PMC5127992 [Available on 2017-10-01]
PMID: 27994336

Conflict of interest statement: Compliance with Ethical Standards Funding None. Presentation or Prior Publication None. Conflict of Interest The authors declare that they have no conflict of interest.

59: Kattimani S, Sarkar S, Menon V, Muthuramalingam A, Nancy P. Duration of suicide process among suicide attempters and characteristics of those providing window of opportunity for intervention. J Neurosci Rural Pract. 2016 Oct-Dec;7(4):566-570. PubMed PMID: 27695238; PubMed Central PMCID: PMC5006470.

BACKGROUND: There is limited cross-cultural literature on the duration of suicide process among attempters.
AIMS: The primary aim was to assess the duration of suicide process among suicide attempters attending the Crisis Intervention Clinic. We also aimed to identify the characteristics of those who reported a longer duration for this process.
METHODS: In this retrospective record-based study, we collected the duration of the suicidal process from the records of all the suicide attempters evaluated over a 3-year period (n = 319). Attempters were divided into four groups based on the quartile value of the duration of the suicidal process. For analysis, the characteristics of those in the last quartile with suicide process time of >120 min (n = 75) were compared with those in the first three (n = 244). Those in the last quartile were considered to provide a window of opportunity for intervention.
RESULTS: The median time for the suicidal process was 30 min (interquartile range of 5 min to 120 min). Seventy-five (23.5%) subjects belonged to the fourth quartile (duration of suicide process >120 min). A significant proportion of them came from urban areas (P = 0.011), had a diagnosis of mood disorder (P = 0.028), had visited a health professional in the recent past (P = 0.015), and had lower rates of attempt under intoxication (P = 0.005). A lesser proportion of them showed problem-focused disengagement style of coping strategy (P = 0.015).
CONCLUSIONS: The suicide process time among Indian suicide attempters is short. However, a quarter of them has suicide process duration of 2 h which provides some scope for intervention. Individual and community level interventions need further evaluation for their potential efficacy in preventing the progress of the suicidal process.

DOI: 10.4103/0976-3147.185505
PMCID: PMC5006470
PMID: 27695238

60: Kavin K, Vijay S, Devendra L, Kamran F. Patient satisfaction after open reduction and internal fixation through lateral extensile approach in displaced intraarticular calcaneal fractures (Sander's type II and III). J Clin Orthop Trauma. 2016 Oct-Dec;7(4):296-301. PubMed PMID: 27857507; PubMed Central PMCID: PMC5106478.

AIM: To determine patient satisfaction in the patients of displaced intraarticular calcaneal fractures treated with standard lateral approach.
METHOD: The patients of displaced calcaneal fractures (Sander's type II and III) treated between March 2009 and March 2012 were included in the retrospective review and functional outcome was evaluated using American Orthopaedic Foot and Ankle Society (AOFAS) hind foot score, Creighton Nebraska Health Foundation Assessment (CNHFA) scale and foot function index (FFI).
RESULT: The cohort included 26 patients (19 males: seven were females) with a mean age of 38.16 ± 13.53 years (range 18-64 years). The mean period of follow-up was 24.42 ± 6.68 months. The patients achieved good functional scores after anatomical reduction of the fracture. The complication rate was low following

strict inclusion criteria.
CONCLUSION: Careful patient selection in displaced intraarticular calcaneal fractures treated through lateral extensile approach achieves good patient satisfaction.

DOI: 10.1016/j.jcot.2016.06.007
PMCID: PMC5106478 [Available on 2017-10-01]
PMID: 27857507

61: Kedia S, Ahuja V, Makharia GK. Golimumab for moderately to severely active ulcerative colitis. Expert Rev Clin Pharmacol. 2016 Oct;9(10):1273-82. doi: 10.1080/17512433.2016.1221759. Review. PubMed PMID: 27498886.

INTRODUCTION: Anti-TNF agents are the mainstay of therapy in patients with moderate to severe ulcerative colitis (UC) not responding to 5-aminosalisylic acid, corticosteroids, immunmodulators and for patients dependent on corticosteroids. There is a therapeutic gap of 30%- 60% with infliximab and adalimumab, which is required to be bridged by newer agents. The present review summarizes the literature on the role of golimumab, a new anti TNF agent, in ulcerative colitis.
AREAS COVERED: Literature search was done on PubMed using the search terms 'golimumab' AND 'ulcerative colitis' from inception till March 2016. Golimumab, a fully human monoclonal antibody against TNF-α, was approved by FDA for clinical use in UC in 2013. In vitro studies showed golimumab to be better than infliximab and adalimumab in terms of affinity and neutralization of TNF-α and its conformational stability. Golimumab was found to be effective and safe in inducing and maintaining clinical remission, clinical response and mucosal healing in patients with UC in the two registration trials. Expert commentary: Although there is no difference in terms of efficacy between golimumab, infliximab and adalimumab, golimumab is better than infliximab in terms of route of administration (subcutaneous vs intravenous) and better than adalimumab in terms of frequency of dosing (4 weeks vs 2 weeks).

DOI: 10.1080/17512433.2016.1221759
PMID: 27498886 [Indexed for MEDLINE]

62: Khaiwal R, Singh T, Tripathy JP, Mor S, Munjal S, Patro B, Panda N. Assessment of noise pollution in and around a sensitive zone in North India and its non-auditory impacts. Sci Total Environ. 2016 Oct 1;566-567:981-7. doi: 10.1016/j.scitotenv.2016.05.070. PubMed PMID: 27318606.

Noise pollution in hospitals is recognized as a serious health hazard. Considering this, the current study aimed to map the noise pollution levels and to explore the self reported non-auditory effects of noise in a tertiary medical institute. The study was conducted in an 1800-bedded tertiary hospital where 27 sites (outdoor, indoor, road side and residential areas) were monitored for exposure to noise using Sound Level Meter for 24h. A detailed noise survey was also conducted around the sampling sites using a structured questionnaire to understand the opinion of the public regarding the impact of noise on their daily lives. The equivalent sound pressure level (Leq) was found higher than the permissible limits at all the sites both during daytime and night. The maximum equivalent sound pressure level (Lmax) during the day was observed higher (>80dB) at the emergency and around the main entrance of the hospital campus. Almost all the respondents (97%) regarded traffic as the major source of noise. About three-fourths (74%) reported irritation with loud noise whereas 40% of respondents reported headache due to noise. Less than one-third of respondents (29%) reported loss of sleep due to noise and 8% reported hypertension, which could be related to the disturbance caused due to noise. Noise levels in and around the hospital was well above the permissible standards. The recent Global Burden of Disease highlights the increasing risk of non communicable diseases. The non-auditory effects studied in the current work add to the risk factors associated with non communicable diseases. Hence, there is need to address the

issue of noise pollution and associated health risks specially for vulnerable population.

DOI: 10.1016/j.scitotenv.2016.05.070
PMID: 27318606

63: Khalil S, Mirdha BR, Paul J, Panda A, Makharia G, Chaudhry R, Bhatnagar S. Development and evaluation of molecular methods for detection of Cryptosporidium spp. in human clinical samples. Exp Parasitol. 2016 Nov;170:207-213. doi: 10.1016/j.exppara.2016.10.001. PubMed PMID: 27717773.

Cryptosporidiosis is predominantly a gastrointestinal disease of humans and other animals, caused by various species of protozoan parasites representing the genus Cryptosporidium. Detection of Cryptosporidium spp. in human clinical samples is central to the prevention, surveillance and control of cryptosporidiosis, particularly given that there is presently no broadly applicable treatment regimen for this disease. A non-radioactive, genus specific DNA dot blot hybridization assay was developed using Digoxigenin (DIG) labelled probes to detect Cryptosporidium DNA in human clinical samples. Four hundred fifty (n = 450) clinical samples were subjected to microscopic examination, Polymerase Chain Reaction assay (PCR), Dot blot hybridization assay and Real Time PCR assay. A total of forty-one (n = 41) samples were positive by microscopy, forty-two (n = 42) by both PCR assay and dot blot hybridization assay and forty-three (n = 43) by Real Time PCR assay. Dot blot hybridization assay with a sensitivity of 95.5% and specificity of 99.75% could be an ideal choice for routine investigation of a large number of samples in a clinical setting as well as field.

DOI: 10.1016/j.exppara.2016.10.001
PMID: 27717773 [Indexed for MEDLINE]

64: Kim TK, Phillips M, Bhandari M, Watson J, Malhotra R. What Differences in Morphologic Features of the Knee Exist Among Patients of Various Races? A Systematic Review. Clin Orthop Relat Res. 2017 Jan;475(1):170-182. doi: 10.1007/s11999-016-5097-4. Review. Erratum in: Clin Orthop Relat Res. 2017 Mar 2;:. PubMed PMID: 27704318; PubMed Central PMCID: PMC5174057.

BACKGROUND: Most TKA prostheses are designed based on the anatomy of white patients. Individual studies have identified key anthropometric differences between the knees of the white population and other major ethnic groups, yet there is limited understanding of what these findings may indicate if analyzed collectively.
QUESTION/PURPOSE: What are the differences in morphologic features of the distal femur and proximal tibia among and within various ethnicities?
METHODS: A systematic review of the PubMed database and a hand-search of article bibliographies identified 235 potentially eligible English-language studies. Studies were excluded if they did not include morphology results or had insufficient data for analysis, were unrelated to the distal femur or proximal tibia, were conducted in pediatric patients or those undergoing unicondylar knee arthroplasty, or bone surface measurements were obtained for trauma products. This left 30 eligible studies (9050 knees). Study quality was assessed and reported as good, fair, or poor according to the NIH Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies. Morphometric data for the distal femur and proximal tibia were available for four ethnic groups: East Asian (23 studies; 5543 knees), white (11 studies; 3111 knees), Indian (three studies; 283 knees), and black (three studies; 113 knees). Although relatively underrepresented, the knees from the Indian and black studies were maintained for hypothesis-generating purposes and to highlight crucial gaps in the data. The two

key dimensions for selecting a suitable implant based on a patient's unique anatomy-AP length and mediolateral (ML) width-were assessed for the femur and tibia, in addition to aspect ratio, calculated by dividing the ML width by the AP length. Study measurement techniques were compared visually when possible to ensure that each pooled study conducted a similar measurement process. Any significant measurement outliers were reviewed for eligibility to determine if the measurement techniques and landmarks used were comparable to the other studies included.
RESULTS: White patients had larger femoral AP measurements than East Asians (62 mm, [95% CI, 57-66 mm] vs 59 mm, [95% CI, 54-63 mm]; mean difference, 3 mm; $p < 0.001$), a smaller femoral aspect ratio than East Asians (1.20, [95% CI, 1.11-1.29] vs 1.25, [95% CI, 1.16-1.34]; mean difference, 0.05; $p = 0.001$), and a larger tibial aspect ratio than black patients (1.55, [95% CI, 1.40-1.71] vs 1.49, [95% CI, 1.33-1.64]; mean difference, 0.06; $p = 0.005$).
CONCLUSIONS: This analysis uncovered differences of size (AP height and ML width of the femur and tibia) and shape (tibial and femoral aspect ratios) among knees from white, East Asian, and black populations. Future research is needed to understand the clinical implications of these discrepancies and to provide additional data with underrepresented groups.

DOI: 10.1007/s11999-016-5097-4
PMCID: PMC5174057
PMID: 27704318

65: Kirola L, Behari M, Shishir C, Thelma BK. Identification of a novel homozygous mutation Arg459Pro in SYNJ1 gene of an Indian family with autosomal recessive juvenile Parkinsonism. Parkinsonism Relat Disord. 2016 Oct;31:124-128. doi: 10.1016/j.parkreldis.2016.07.014. PubMed PMID: 27496670.

BACKGROUND: A novel homozygous missense mutation (c.773G > A, p.Arg258Gln) in Synaptojanin 1 (SYNJ1, 21q22.2) has recently been reported in two Italian and one Iranian consanguineous families with autosomal recessive juvenile Parkinsonism (ARJP). Contribution of this synaptic gene related to Parkinsonism phenotypes in other populations still remains unidentified.
METHODS: An ARJP family with two affected siblings characterized by frequent tremor with bradykinesia and rigidity was recruited in this study. Both siblings showed intense dyskinesia and dystonia on administration of Syndopa. The family was analyzed for both mutations and exon dosage variations in PARKIN, PINK1 and DJ1. Further, whole exome sequencing was performed in two affected and one unaffected sibling in the family.
RESULTS: We identified a novel homozygous mutation (c.1376C > G, p.Arg459Pro) in SYNJ1 segregating in this family. This p.Arg459Pro mutation was not observed in 285 additional Parkinson disease (PD) samples (32 familial, 81 early onset and 172 late onset) screened by PCR-Sanger-sequencing. It was also absent in dbSNP, 1000 Genomes, ExAC, NHLBI-ESP database and in >250 ethnically matched exomes available in our laboratory. The arginine residue is highly conserved across species and predicted to be damaging by several in silico tools. As with the previous mutation p.Arg258Gln, p.Arg459Pro is also present in Sac 1 domain of SYNJ1 wherein p.Arg258Gln mutation has already been described to impair the phosphatase activity.
CONCLUSIONS: We report another novel mutation in SYNJ1 of an Indian consanguineous ARJP family. Finding an additional mutation in this gene further supports the involvement of SYNJ1 in PD pathogenesis across different ethnicities.

DOI: 10.1016/j.parkreldis.2016.07.014
PMID: 27496670

66: Kumar A, Misra S, Kumar P, Sagar R, Prasad K. Association between Beta-Fibrinogen C148T Gene Polymorphism and Risk of Ischemic Stroke in a North

Indian Population: A Case-Control Study. Pulse (Basel). 2017 Jan;4(4):165-171. doi: 10.1159/000449361. PubMed PMID: 28229050; PubMed Central PMCID: PMC5290428.

BACKGROUND AND PURPOSE: Stroke is a multifactorial disease influenced by both genetic and environmental factors. The aim of this case-control study was to determine the association between β-fibrinogen C148T (rs1800787) gene polymorphism and susceptibility to ischemic stroke (IS) in a North Indian population.
METHODS: In the present case-control study, genotyping was performed using the PCR-RFLP (polymerase chain reaction-restriction fragment length polymorphism) method on 250 IS patients and 250 age- and sex-matched controls. Frequency distributions of genotypes and alleles were compared between the cases and controls by conditional logistic regression.
RESULTS: Hypertension, diabetes, dyslipidemia, low socioeconomic status, and family history of stroke were found to be independent risk factors for IS. The mean age of the cases and controls was 52.83 ± 12.59 and 50.97 ± 12.70 years, respectively. Multivariate logistic regression analysis showed an independent association between β-fibrinogen C148T (rs1800787) polymorphism and risk of IS in dominant (OR = 2.19; 95% CI 1.23-3.90; p = 0.007) and allelic (OR = 1.66; 95% CI 1.19-2.33; p = 0.002) models. Based on the Trial of Org 10172 in Acute Stroke Treatment (TOAST) classification, an independent association of small vessel disease with risk of IS was observed in the dominant (OR = 2.09; 95% CI 1.10-3.96; p = 0.02) and allelic (OR = 1.75; 95% CI 1.12-2.75; p = 0.01) models, and a significant association of cardioembolic stroke with risk of IS was seen in the allelic model (OR = 2.11; 95% CI 1.07-4.17; p = 0.02). All the genotype frequencies observed were in accordance with Hardy-Weinberg equilibrium in both cases and controls.
CONCLUSION: The findings of the present study suggest that polymorphism in the C148T position of the β-fibrinogen gene might be a risk factor for IS mainly for the small vessel disease stroke subtype in a North Indian population. Further, large prospective studies are required to confirm these findings.

DOI: 10.1159/000449361
PMCID: PMC5290428
PMID: 28229050

67: Kumar A, Gaba S, Sud A, Mandlecha P, Goel L, Nayak M. Comparative study between staples and eight plate in the management of coronal plane deformities of the knee in skeletally immature children. J Child Orthop. 2016 Oct;10(5):429-37. doi: 10.1007/s11832-016-0758-0. PubMed PMID: 27417295; PubMed Central PMCID: PMC5033777.

PURPOSE: To compare two commonly used methods of temporary hemiepiphysiodesis (staples and figure of eight plate) in the management of coronal plane deformities of the knee in skeletally immature children.
METHODS: This prospective study was conducted between November 2012 and November 2015. A total of 40 patients with 67 affected knee joints, having at least 1 year of skeletal growth remaining, were included in the study. Angular correction was measured by recording the mechanical lateral distal femoral angle (mLDFA), mechanical medial proximal tibial angle (mMPTA), and anatomical tibio-femoral angle (TFA) (for the overall alignment of lower limbs). Implant removal was done after 5° of overcorrection was achieved. The rate of correction (° per month) and complications related to each technique were recorded.
RESULTS: The most common diagnosis was idiopathic genu valgum. The overall rate of correction (TFA) was 1.2° for staples and 1.4° for eight plate (p = 0.70, not statistically significant). The correction in mLDFA was statistically better in the eight plate group, whereas an opposite trend was recorded in mMPTA. Implant-related complications were present in two cases of the staples group.
CONCLUSION: Although the overall correction rate was similar in both groups, implant-related complications were lower with figure of eight plate. In idiopathic genu valgum (the most common diagnosis), the correction was statistically better in the eight plate group. We recommend figure of eight plate

over staples in managing these deformities.

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PMCID: PMC5033777
PMID: 27417295

Conflict of interest statement: Compliance with ethical standards Funding None. Conflict of interest None. No author has any financial conflict of interest with the implant, implant manufacturer, or implant distributor. Ethical approval All procedures performed in this study were in accordance with the ethical standards of the institution and with the 1964 Helsinki declaration and its later amendments. Informed consent Informed consent was obtained from all individual participants included in the study.

68: Kumar M, Bhoi S. Impaired hematopoietic progenitor cells in trauma hemorrhagic shock. J Clin Orthop Trauma. 2016 Oct-Dec;7(4):282-285. Review. PubMed PMID: 27857504; PubMed Central PMCID: PMC5106469.

Hemorrhagic shock (HS) is the major cause of death during trauma. Mortality due to HS is about 50%. Dysfunction of hematopoietic progenitor cells (HPCs) has been observed during severe trauma and HS. HS induces the elevation of cytokines, granulocyte-colony stimulating factor (G-CSF), peripheral blood HPCs, and circulating catecholamines, and decreases the expression of erythropoietin receptor connected with suppression of HPCs. Impaired HPCs may lead to persistent anemia and risk of susceptibility to infection, sepsis, and MOF. There is a need to reactivate impaired HPCs during trauma hemorrhagic shock.

DOI: 10.1016/j.jcot.2016.05.013
PMCID: PMC5106469 [Available on 2017-10-01]
PMID: 27857504

69: Kumar P, Yadav AK, Misra S, Kumar A, Chakravarty K, Prasad K. Prediction of upper extremity motor recovery after subacute intracerebral hemorrhage through diffusion tensor imaging: a systematic review and meta-analysis. Neuroradiology. 2016 Oct;58(10):1043-1050. PubMed PMID: 27438802.

INTRODUCTION: Early assessment of the pyramidal tracts is important for intracerebral hemorrhage (ICH) patients in order to decide the optimal treatment or to assess appropriate rehabilitation strategies, and management of patient expectations and goals. The purpose of this study was to systematically review and summarize the current available literature on the value of Fractional Anisotropy (FA) parameter of the diffusion tensor imaging (DTI) in predicting upper extremity (UE) motor recovery after subacute ICH.
METHODS: PubMed, EMBASE, MEDLINE, Google Scholar, and Cochrane CENTRAL searches were conducted from 1 January 1950 to 31 March 2016 which were supplemented with relevant articles identified in the references. Pooled estimate using correlation between DTI parameter FA and UE motor recovery was done using comprehensive meta-analysis software.
RESULTS: Out of 97 citations, only eight studies met the criteria for inclusion in the systematic review and six studies were included in the meta-analysis. A random effects model revealed that DTI parameter FA is a significant predictor for UE motor recovery after subacute ICH (correlation coefficient = 0.56; 95 % confidence interval 0.44 to 0.65, P value <0.001). However, moderate heterogeneity was observed between the studies (Tau-squared = 0.28, I-squared = 70.3).
CONCLUSION: The studies reported so far on correlation between FA parameter of DTI and UE motor recovery in ICH patients are few with small sample sizes. This meta-analysis suggests a strong correlation between DTI parameter FA and UE motor recovery in ICH patients. Further well-designed prospective studies embedded with larger sample size are needed to confirm these findings.

DOI: 10.1007/s00234-016-1718-6

PMID: 27438802

70: Kumar R, Das CJ, Seenu V, Seth A. Percutaneous removal of impacted double J stent in a transplant kidney. Indian J Radiol Imaging. 2016 Oct-Dec;26(4):466-468. doi: 10.4103/0971-3026.195787. PubMed PMID: 28104939; PubMed Central PMCID: PMC5201075.

Prophylactic double J (DJ) stent insertion has been adopted as a routine procedure in renal transplant patients for internal urinary diversion and for protecting ureteroneocystostomy anastomosis. The timely and early removal of stent has been proved to reduce the occurrence of stent-associated complications such as migration, encrustation, and infection. The most commonly used procedure of stent removal via retrograde cystoscopic approach can sometimes be technically very difficult leaving antegrade approach as another alternative to open surgery as the last resort. Here, we describe a case of antegradely removed impacted DJ stent by pushing it free into the urinary bladder followed by cystoscopic removal.

DOI: 10.4103/0971-3026.195787
PMCID: PMC5201075
PMID: 28104939

Conflict of interest statement: There are no conflicts of interest.

71: Kumar R, Gupta YK, Singh S, Patil A. Glorisa superba Hydroalcoholic Extract from Tubers Attenuates Experimental Arthritis by Downregulating Inflammatory Mediators, and Phosphorylation of ERK/JNK/p-38. Immunol Invest. 2016 Oct;45(7):603-18. doi: 10.1080/08820139.2016.1195406. PubMed PMID: 27603689.

Glorisa superba (GS) is a medicinal plant that has been traditionally used in the treatment of joint pain and rheumatoid arthritis (RA). The present study was carried out to investigate the antiarthritic activity of Glorisa superba hydroalcoholic extract (GSHE) in an adjuvant-induced arthritis (AIA) rat model. Arthritis was induced by sub-plantar administration of complete Freund's adjuvant (CFA) and GSHE (25, 50, or 100 mg/kg/day) was administered orally for 21 consecutive days. Joint diameter was measured on Days 0, 3, 7, 14, and 21. GSHE dose dependently attenuates the increased joint diameter and serum tumor necrosis factor (TNF)-α level following induction of arthritis by adjuvant. This attenuation was well substantiated with reduced mRNA expression of interleukin (IL)-1β, IL-6, TNF-α, and NF-κB. Additionally, GSHE inhibited phosphorylation of the mitogen-activated protein kinases (MAPK) signaling pathway as there was decreased protein expression of MAPK (p-p38/p38 and p-ERK/ERK p-JNK/JNK ratio). Moreover, GSHE in a dose-dependent fashion normalized the redox status of ankle joint (GSH, malonaldialdehyde [MDA], and NO levels and superoxide dismutase [SOD] and catalase [CAT] activities) and displayed decreased inflammatory cell infiltration in histopathological findings. Taken together, these findings indicate that GSHE protects against AIA by modulating MAPK.

DOI: 10.1080/08820139.2016.1195406
PMID: 27603689 [Indexed for MEDLINE]

72: Kumar V, Salunkhe N, Ravani R, Chandra P, Kumar A. Dissociated optic nerve fibre layer after Nd:YAG laser membranotomy for premacular hemorrhage. Can J Ophthalmol. 2016 Oct;51(5):e139-e141. doi: 10.1016/j.jcjo.2016.05.009. PubMed PMID: 27769335.

73: Kumari N, Kumar R, Mishra V, Yadav S. Polyclonal Antibody Development Against Purified CC-NBS-LRR like Protein Fragment from Mature Lageneria siceraria Seeds and Immunolocalization. Protein J. 2016 Oct;35(5):379-390. PubMed PMID: 27766508.

CC-NBS-LRR (CNL) plant proteins are related with highly conserved family of disease resistance protein distinguished by a coiled-coil domain, which plays an

important role in innate immunity. The present study reports the purification and identification of CNL like protein fragment (CNL-LPF) by two step chromatography and matrix-assisted laser desorption ionization time-of-flight (MALDI-TOF/MS), respectively. Furthermore, current study also illustrated the development of polyclonal antibody against purified CNL-LPF, which was used for immunolocalization of CNL-LPF in cytoplasm of cotyledon, using Fluorescence microscopy and Transmission electron microscopy. Lastly, present study also demonstrates in vitro oligomerization of purified CNL-LPF with multiple bands on 4-10 % gradient native-PAGE; each band representing a small fraction of each oligomer population as evident by immunoblots. In conclusion, the current study deals with the purification and polyclonal antibody development against CNL-LPF.

DOI: 10.1007/s10930-016-9683-9
PMID: 27766508

74: Lamy A, Devereaux PJ, Prabhakaran D, Taggart DP, Hu S, Straka Z, Piegas LS, Avezum A, Akar AR, Lanas Zanetti F, Jain AR, Noiseux N, Padmanabhan C, Bahamondes JC, Novick RJ, Tao L, Olavegogeascoechea PA, Airan B, Sulling TA, Whitlock RP, Ou Y, Gao P, Pettit S, Yusuf S; CORONARY Investigators.. Five-Year Outcomes after Off-Pump or On-Pump Coronary-Artery Bypass Grafting. N Engl J Med. 2016 Dec 15;375(24):2359-2368. PubMed PMID: 27771985.

Background We previously reported that there was no significant difference at 30 days or at 1 year in the rate of the composite outcome of death, stroke, myocardial infarction, or renal failure between patients who underwent coronary-artery bypass grafting (CABG) performed with a beating-heart technique (off-pump) and those who underwent CABG performed with cardiopulmonary bypass (on-pump). We now report the results at 5 years (the end of the trial). Methods A total of 4752 patients (from 19 countries) who had coronary artery disease were randomly assigned to undergo off-pump or on-pump CABG. For this report, we analyzed a composite outcome of death, stroke, myocardial infarction, renal failure, or repeat coronary revascularization (either CABG or percutaneous coronary intervention). The mean follow-up period was 4.8 years. Results There were no significant differences between the off-pump group and the on-pump group in the rate of the composite outcome (23.1% and 23.6%, respectively; hazard ratio with off-pump CABG, 0.98; 95% confidence interval [CI], 0.87 to 1.10; P=0.72) or in the rates of the components of the outcome, including repeat coronary revascularization, which was performed in 2.8% of the patients in the off-pump group and in 2.3% of the patients in the on-pump group (hazard ratio, 1.21; 95% CI, 0.85 to 1.73; P=0.29). The secondary outcome for the overall period of the trial - the mean cost in U.S. dollars per patient - also did not differ significantly between the off-pump group and the on-pump group ($15,107 and $14,992, respectively; between-group difference, $115; 95% CI, -$697 to $927). There were no significant between-group differences in quality-of-life measures. Conclusions In our trial, the rate of the composite outcome of death, stroke, myocardial infarction, renal failure, or repeat revascularization at 5 years of follow-up was similar among patients who underwent off-pump CABG and those who underwent on-pump CABG. (Funded by the Canadian Institutes of Health Research; CORONARY ClinicalTrials.gov number, NCT00463294 .).

DOI: 10.1056/NEJMoa1601564
PMID: 27771985 [Indexed for MEDLINE]

75: Mahapatra A, Gupta R. Role of psilocybin in the treatment of depression. Ther Adv Psychopharmacol. 2017 Jan;7(1):54-56. doi: 10.1177/2045125316676092. PubMed PMID: 28101325; PubMed Central PMCID: PMC5228719.

Psilocybin is a naturally occurring alkaloid, pharmacologically similar to the classic hallucinogen lysergic acid diethylamide (LSD). Although primarily used as a recreational drug or an entheogen in particular cultural settings, recent population based studies have shown that it does not lead to serious physical or mental health problems or dependent use. In view of recent work demonstrating

psilocybin's potential to increase subjective sense of wellbeing and because of its novel mechanism of 5-HT2A serotonin receptor agonism, it is being explored for possible therapeutic utility in mood and anxiety disorders.

DOI: 10.1177/2045125316676092
PMCID: PMC5228719
PMID: 28101325

Conflict of interest statement: The authors declare that there is no conflict of interest.

76: Mahapatra A, Sharma P, Sagar R. Aripiprazole induced Impulse Control Disorders: Where do we stand? Asian J Psychiatr. 2016 Oct;23:128-130. doi: 10.1016/j.ajp.2016.08.001. PubMed PMID: 27969070.

77: Maitra S, Som A, Bhattacharjee S, Arora MK, Baidya DK. Comparison of high-flow nasal oxygen therapy with conventional oxygen therapy and noninvasive ventilation in adult patients with acute hypoxemic respiratory failure: A meta-analysis and systematic review. J Crit Care. 2016 Oct;35:138-44. doi: 10.1016/j.jcrc.2016.05.013. Review. PubMed PMID: 27481749.

PURPOSE: The role of high-flow nasal oxygen (HFNO) therapy in adult patients with acute hypoxemic respiratory failure is controversial.
METHODS: This meta-analysis of prospective randomized controlled trials (RCTs) has been designed to compare HFNO with noninvasive ventilation (NIV) and conventional oxygen therapy in such patients.
RESULTS: Initial database searching revealed 336 RCTs, of which 7 were included in this meta-analysis. Five RCTs compared HFNO with standard oxygen therapy, one compared HFNO with NIV, and one compared all three. HFNO did not decrease the requirement of higher respiratory support compared with control group. HFNO was associated with improved respiratory rate and dyspnea score, and better comfort in 3 RCTs, whereas other studies did not find any difference.
CONCLUSION: High-flow nasal oxygen does not offer any benefit over NIV or conventional oxygen therapy in terms of requirement of higher respiratory support.

DOI: 10.1016/j.jcrc.2016.05.013
PMID: 27481749

78: Malik S, Suchal K, Bhatia J, Khan SI, Vasisth S, Tomar A, Goyal S, Kumar R, Arya DS, Ojha SK. Therapeutic Potential and Molecular Mechanisms of Emblica officinalis Gaertn in Countering Nephrotoxicity in Rats Induced by the Chemotherapeutic Agent Cisplatin. Front Pharmacol. 2016 Oct 3;7:350. PubMed PMID: 27752245; PubMed Central PMCID: PMC5045924.

Emblica officinalis Gaertn. belonging to family Euphorbiaceae is commonly known as Indian gooseberry or "Amla" in India. It is used as a 'rejuvenating herb' in traditional system of Indian medicine. It has been shown to possess antioxidant, anti-inflammatory and anti-apoptotic effects. Thus, on the basis of its biological effects, the present study was undertaken to evaluate the protective effect of the dried fruit extract of the E. Officinalis (EO) in cisplatin-induced nephrotoxicity in rats and also to evaluate the mechanism of its nephroprotection. The study was done on male albino Wistar rats. They were divided into six groups (n = 6) viz. control, cisplatin-control, cisplatin and EO (150, 300, and 600 mg/kg; p.o. respectively in different groups) and EO only (600 mg/kg; p.o. only). EO was administered orally to the rats for a period of 10 days and on the 7th day, a single injection of cisplatin (8 mg/kg; i.p.) was administered to the cisplatin-control and EO treatment groups. The rats were sacrificed on the 10th day. Cisplatin-control rats had deranged renal function

parameters and the kidney histology confirmed the presence of acute tubular necrosis. Furthermore, there were increased oxidative stress, apoptosis and inflammation along with higher expression of MAPK pathway proteins in the rat kidney from the cisplatin-control group. Contrary to this, EO (600 mg/kg) significantly normalized renal function, bolstered antioxidant status and ameliorated histological alterations. The inflammation and apoptosis were markedly lower in comparison to cisplatin-control rats. Furthermore, EO (600 mg/kg) inhibited MAPK phosphorylation which was instrumental in preserving renal function and morphology. In conclusion, the results of our study demonstrated that EO attenuated cisplatin-induced nephrotoxicity in rats through suppression of MAPK induced inflammation and apoptosis.

DOI: 10.3389/fphar.2016.00350
PMCID: PMC5045924
PMID: 27752245

79: Manhas J, Bhattacharya A, Agrawal SK, Gupta B, Das P, Deo SV, Pal S, Sen S. Characterization of cancer stem cells from different grades of human colorectal cancer. Tumour Biol. 2016 Oct;37(10):14069-14081. PubMed PMID: 27507615.

Colorectal cancer (CRC) is one of the most common solid tumors worldwide. Recent evidence suggests that a population of cancer cells, called cancer stem cells (CSCs), is responsible for tumor heterogeneity, invasion, metastasis, therapeutic resistance, and recurrence of CRC. The isolation and characterization of CSCs using cell surface markers have been reported previously with varying results. In this study, we investigated a panel of four putative CSC markers, CD44, CD24, CD166, and EpCAM, to define CRC-CSC. Paraffin embedded tissue samples from different grades of primary, untreated CRC were analyzed for the expression of four CSC markers CD44, CD326, CD24, and CD166, using immunohistochemistry. Flow cytometric analysis of CRC-CSC from HT29 (low grade) and HCT116 (high grade) human colorectal cancer cell lines was done. Marker-based isolation of CSC and non-CSC-bulk-tumor cells from HT29 was done using FACS, and tumor sphere assay was performed. There was a statistically significant difference ($p < 0.05$) in the expression of CD44, CD326, and CD166 between cases and controls. A novel cutoff distribution of CD44 and CD166 was suggested to help for better immunohistochemical analysis of CRC. Higher prevalence of CSC was seen in high-grade CRC as compared to low-grade CRC. Sorted and cultured CD44+CD166+ cells formed tumor spheres, suggesting that these cells, having properties of self renewal and anchorage independent proliferation, were in fact CSC. Hence, CD44 and CD166 may serve as good CRC-CSC markers when used together with novel cutoff immunohistochemistry (IHC) expression levels.

DOI: 10.1007/s13277-016-5232-6
PMID: 27507615 [Indexed for MEDLINE]

80: Mankotia DS, Satyarthee GD, Singh B, Sharma BS. A rare case of giant occipital meningocele with Dandy Walker Syndrome: Can it grow bigger than this? J Pediatr Neurosci. 2016 Oct-Dec;11(4):344-347. doi: 10.4103/1817-1745.199471. PubMed PMID: 28217162; PubMed Central PMCID: PMC5314853.

Association of Dandy-Walker syndrome with occipital meningocele (OMC) is extremely rare and about thirty cases are reported till date in the Western literature. However, OMC is classified by Talamonti et al. into small, large, and giant categories with respective diameters were upto 5 cm in small, large with 5-9 cm, and giant with >9 cm. Usually the size of OMC progressively increases as raised intracranial pressure leads to compensatory cerebrospinal fluid escape into sac with the growth of children. Authors report an interesting case of an 18-month-old female child with extra-gigantic OMC, whose size was almost same since birth, representing the first case of its kind, who underwent successful surgical repair. Clinical presentation, radiological features, and surgical management options in literature are reviewed briefly for this rare disease association.

DOI: 10.4103/1817-1745.199471
PMCID: PMC5314853
PMID: 28217162

Conflict of interest statement: There are no conflicts of interest.

81: Maulik SK, Wilson V, Seth S, Bhargava B, Dua P, Ramakrishnan S, Katiyar CK. Clinical efficacy of water extract of stem bark of Terminalia arjuna (Roxb. ex DC.) Wight & Arn. in patients of chronic heart failure: a double-blind, randomized controlled trial. Phytomedicine. 2016 Oct 15;23(11):1211-9. doi: 10.1016/j.phymed.2016.02.007. PubMed PMID: 26988798.

BACKGROUND: The stem bark of Terminalia arjuna (Roxb. ex DC.) Wight and Arn. (Arjuna) is used in Indian system of medicine (Ayurveda) for treatment of various cardiac diseases, including heart failure. However, well designed clinical trials exploring its efficacy and safety in chronic heart failure (CHF) are lacking.
PURPOSE: To ascertain the add-on efficacy and safety of a standardized water extract of stem bark of Arjuna (Arjuna extract) in CHF patients on standard pharmacotherapy.
STUDY DESIGN: Double-blind, parallel, randomized, placebo-controlled add-on clinical trial.
METHODS: After approval of institutional ethics committee, 100 patients of CHF of New York Heart Association (NYHA) functional class II on standard pharmacotherapy having an echocardiographic left ventricular ejection fraction (LVEF) ≤ 40% were consecutively recruited with informed consent and randomized 1:1 to Arjuna extract 750 mg or matching placebo twice daily. The primary outcome measure was change in LVEF at 12 weeks. Secondary outcome measures included changes in (i) NYHA functional class, (ii) distance covered in 6 min walk test (6MWT), (iii) quality of life (QoL), as determined by the Kansas City Cardiomyopathy Questionnaire (KCCQ), (iv) plasma brain natriuretic peptide, (v) plasma cytokines (interleukin-6, high sensitivity C-reactive protein and tumour necrosis factor-α) and (vi) oxidative stress markers [serum thiobarbituric acid reactive substances (TBARS), red blood cell (RBC) superoxide dismutase (SOD), RBC catalase and RBC glutathione (GSH)] at 6 and 12 weeks. Safety assessment was done by adverse event monitoring and laboratory investigations. Results were expressed as mean ± SD or median (interquartile range) and analysed with intention-to- treat principle using appropriate two-sided statistical tests. A p-value < 0.05 was considered significant.
RESULTS: Arjuna extract was well-tolerated, but did not change LVEF (24.3 ± 7.1 versus 25.5 ± 7.7%; p = 0.4) or secondary outcome measures except preservation of RBC catalase activity [1275(104, 10350) versus 1243.5(104, 10350) U/g haemoglobin; p = 0.01] compared to placebo. Significantly greater percentage increases occurred in distance covered in 6 MWT, RBC-SOD, RBC catalase, RBC GSH and in symptom severity and stability domains of KCCQ in patients on Arjuna extract versus those on placebo, on a post-hoc analysis, between subgroups of patients who improved in these outcomes.
CONCLUSION: Arjuna extract did not improve LVEF in CHF patients over 12 weeks, although there was improvement in functional capacity, antioxidant reserves and symptom-related QoL domains in some patients.

DOI: 10.1016/j.phymed.2016.02.007
PMID: 26988798

82: Meena JP, Seth R, Chakrabarty B, Gulati S, Agrawala S, Naranje P. Neuroblastoma presenting as opsoclonus-myoclonus: A series of six cases and review of literature. J Pediatr Neurosci. 2016 Oct-Dec;11(4):373-377. doi: 10.4103/1817-1745.199462. PubMed PMID: 28217170; PubMed Central PMCID: PMC5314861.

The opsoclonus-myoclonus ataxia syndrome (OMAS) also called "Kinsbourne syndrome" or "dancing eye syndrome" is a rare but serious disorder characterized by opsoclonus, myoclonus, and ataxia, along with extreme irritability and behavioural changes. Data on its epidemiology, clinical features, and outcome are limited worldwide. The aim of the study was to evaluate the clinical profile and outcome of children with OMAS. A retrospective data of all children presented to Pediatric oncology clinic with a diagnosis of opsoclonus-myoclonus from 2013 to 2016 were collected. 6 patients with a diagnosis of OMAS were presented over a 4-year period. All 6 cases had paraneoplastic etiology. All Children had good outcome without any relapse. Paraneoplastic opsoclonus myoclonus had a good outcome in our experience.

DOI: 10.4103/1817-1745.199462
PMCID: PMC5314861
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Conflict of interest statement: There are no conflicts of interest.

83: Midha S, Chawla S, Garg PK. Modifiable and non-modifiable risk factors for pancreatic cancer: A review. Cancer Lett. 2016 Oct 10;381(1):269-77. doi: 10.1016/j.canlet.2016.07.022. PubMed PMID: 27461582.

Pancreatic ductal adenocarcinoma is associated with a poor prognosis and a high case-fatality rate. The reasons for poor prognosis are low rates of curative resection due to local infiltration and distant metastasis. To increase survival rates of patients with pancreatic cancer, early detection through surveillance and screening is important. However, screening could only be cost-effective in high-risk populations. Identification of significant risk factors therefore assumes significance. Risk factors could be non-modifiable or modifiable. Non-modifiable risk factors include increasing age, familial cancer syndromes, Afro-American race, hereditary and other forms of chronic pancreatitis, diabetes, and non-O blood group. Important modifiable risk factors include smoking, obesity, dietary factors such as non-vegetarian diet, and toxins. Preventive strategies at the population level and an effective screening program targeted at high-risk people may help in prevention and early detection of pancreatic ductal adenocarcinoma.

DOI: 10.1016/j.canlet.2016.07.022
PMID: 27461582

84: Mishra B, Joshi MK, Rattan A, Kumar S, Gupta A, Sagar S. Pneumopericardium. Bull Emerg Trauma. 2016 Oct;4(4):250-251. PubMed PMID: 27878134; PubMed Central PMCID: PMC5118581.

85: Mishra RK, Mahajan C, Bindra A, Goyal K. Postoperative visual loss following dorsal root entry zone rhizotomy: A dreaded complication after a benign procedure. Saudi J Anaesth. 2016 Oct-Dec;10(4):449-452. PubMed PMID: 27833493; PubMed Central PMCID: PMC5044734.

Postoperative visual loss (POVL) is a rare but grave postoperative complication. It has been mainly reported in patients undergoing cardiac and spinal surgeries. Dorsal root entry zone (DREZ) is pain relieving procedure performed in patients with refractory neuropathic pain with minimal complication rate. We present a case of unilateral POVL following DREZ rhizotomy in prone position in a patient having brachial plexus neuropathy. Exact etiology of vision loss was though not clear; hypotension, use of vasopressors and hemodilution may have led to vision loss in this patient. This case report highlights the associated risk factors for development of this hazardous complication.

DOI: 10.4103/1658-354X.177337

PMCID: PMC5044734
PMID: 27833493

86: Mittal S, M A, Shankar V, Singh S, Sharma P, Mittal R. Patellar inversion: 180 degree rotation of the patella around its vertical axis within the intercondylar notch. Knee. 2017 Jan;24(1):158-162. doi: 10.1016/j.knee.2016.10.005. PubMed PMID: 28029579.

BACKGROUND: Dislocation of the patella can occur around its vertical as well as horizontal axis. However, near 180 degree rotation of the patella around its vertical axis within the intercondylar notch without its complete dislocation has never been previously reported to the best of our knowledge. We report one such neglected case along with its management.
METHODS: The patient underwent open reduction and de-rotation of patella with repair of the medial and lateral patellar retinacula. The orientation of the patellar tendon intra-operatively was used as a guide for the reduction manoeuvre required.
RESULTS: The patient had a good functional result at more than one year of follow-up.
CONCLUSIONS: A skyline view of the knee in symptomatic patients with normal AP and lateral radiographs of the knee can be useful in diagnosing a rare intra-articular dislocation of the patella around its vertical axis. Neglected cases of such injuries can be easily treated with open reduction with the orientation of the patellar tendon guiding the manoeuvre to de-rotate the patella. Careful repair of lateral and medial retinacula in such cases is important in preventing future patellar instability.

DOI: 10.1016/j.knee.2016.10.005
PMID: 28029579

87: Mokdad AH, Forouzanfar MH, Daoud F, El Bcheraoui C, Moradi-Lakeh M, Khalil I, Afshin A, Tuffaha M, Charara R, Barber RM, Wagner J, Cercy K, Kravitz H, Coates MM, Robinson M, Estep K, Steiner C, Jaber S, Mokdad AA, O'Rourke KF, Chew A, Kim P, El Razek MM, Abdalla S, Abd-Allah F, Abraham JP, Abu-Raddad LJ, Abu-Rmeileh NM, Al-Nehmi AA, Akanda AS, Al Ahmadi H, Al Khabouri MJ, Al Lami FH, Al Rayess ZA, Alasfoor D, AlBuhairan FS, Aldhahri SF, Alghnam S, Alhabib S, Al-Hamad N, Ali R, Ali SD, Alkhateeb M, AlMazroa MA, Alomari MA, Al-Raddadi R, Alsharif U, Al-Sheyab N, Alsowaidi S, Al-Thani M, Altirkawi KA, Amare AT, Amini H, Ammar W, Anwari P, Asayesh H, Asghar R, Assabri AM, Assadi R, Bacha U, Badawi A, Bakfalouni T, Basulaiman MO, Bazargan-Hejazi S, Bedi N, Bhakta AR, Bhutta ZA, Bin Abdulhak AA, Boufous S, Bourne RR, Danawi H, Das J, Deribew A, Ding EL, Durrani AM, Elshrek Y, Ibrahim ME, Eshrati B, Esteghamati A, Faghmous IA, Farzadfar F, Feigl AB, Fereshtehnejad SM, Filip I, Fischer F, Gankpé FG, Ginawi I, Gishu MD, Gupta R, Habash RM, Hafezi-Nejad N, Hamadeh RR, Hamdouni H, Hamidi S, Harb HL, Hassanvand MS, Hedayati MT, Heydarpour P, Hsairi M, Husseini A, Jahanmehr N, Jha V, Jonas JB, Karam NE, Kasaeian A, Kassa NA, Kaul A, Khader Y, Khalifa SE, Khan EA, Khan G, Khoja T, Khosravi A, Kinfu Y, Defo BK, Balaji AL, Lunevicius R, Obermeyer CM, Malekzadeh R, Mansourian M, Marcenes W, Farid HM, Mehari A, Mehio-Sibai A, Memish ZA, Mensah GA, Mohammad KA, Nahas Z, Nasher JT, Nawaz H, Nejjari C, Nisar MI, Omer SB, Parsaeian M, Peprah EK, Pervaiz A, Pourmalek F, Qato DM, Qorbani M, Radfar A, Rafay A, Rahimi K, Rahimi-Movaghar V, Rahman SU, Rai RK, Rana SM, Rao SR, Refaat AH, Resnikoff S, Roshandel G, Saade G, Saeedi MY, Sahraian MA, Saleh S, Sanchez-Riera L, Satpathy M, Sepanlou SG, Setegn T, Shaheen A, Shahraz S, Sheikhbahaei S, Shishani K, Sliwa K, Tavakkoli M, Terkawi AS, Uthman OA, Westerman R, Younis MZ, El Sayed Zaki M, Zannad F, Roth GA, Wang H, Naghavi M, Vos T, Al Rabeeah AA, Lopez AD, Murray CJ. Health in times of uncertainty in the eastern Mediterranean region, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet Glob Health. 2016 Oct;4(10):e704-13. doi: 10.1016/S2214-109X(16)30168-1. PubMed PMID: 27568068.

BACKGROUND: The eastern Mediterranean region is comprised of 22 countries: Afghanistan, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, the United Arab Emirates, and Yemen. Since our Global Burden of Disease Study 2010 (GBD 2010), the region has faced unrest as a result of revolutions, wars, and the so-called Arab uprisings. The objective of this study was to present the burden of diseases, injuries, and risk factors in the eastern Mediterranean region as of 2013.
METHODS: GBD 2013 includes an annual assessment covering 188 countries from 1990 to 2013. The study covers 306 diseases and injuries, 1233 sequelae, and 79 risk factors. Our GBD 2013 analyses included the addition of new data through updated systematic reviews and through the contribution of unpublished data sources from collaborators, an updated version of modelling software, and several improvements in our methods. In this systematic analysis, we use data from GBD 2013 to analyse the burden of disease and injuries in the eastern Mediterranean region specifically.
FINDINGS: The leading cause of death in the region in 2013 was ischaemic heart disease (90·3 deaths per 100 000 people), which increased by 17·2% since 1990. However, diarrhoeal diseases were the leading cause of death in Somalia (186·7 deaths per 100 000 people) in 2013, which decreased by 26·9% since 1990. The leading cause of disability-adjusted life-years (DALYs) was ischaemic heart disease for males and lower respiratory infection for females. High blood pressure was the leading risk factor for DALYs in 2013, with an increase of 83·3% since 1990. Risk factors for DALYs varied by country. In low-income countries, childhood wasting was the leading cause of DALYs in Afghanistan, Somalia, and Yemen, whereas unsafe sex was the leading cause in Djibouti. Non-communicable risk factors were the leading cause of DALYs in high-income and middle-income countries in the region. DALY risk factors varied by age, with child and maternal malnutrition affecting the younger age groups (aged 28 days to 4 years), whereas high bodyweight and systolic blood pressure affected older people (aged 60-80 years). The proportion of DALYs attributed to high body-mass index increased from 3·7% to 7·5% between 1990 and 2013. Burden of mental health problems and drug use increased. Most increases in DALYs, especially from non-communicable diseases, were due to population growth. The crises in Egypt, Yemen, Libya, and Syria have resulted in a reduction in life expectancy; life expectancy in Syria would have been 5 years higher than that recorded for females and 6 years higher for males had the crisis not occurred.
INTERPRETATION: Our study shows that the eastern Mediterranean region is going through a crucial health phase. The Arab uprisings and the wars that followed, coupled with ageing and population growth, will have a major impact on the region's health and resources. The region has historically seen improvements in life expectancy and other health indicators, even under stress. However, the current situation will cause deteriorating health conditions for many countries and for many years and will have an impact on the region and the rest of the world. Based on our findings, we call for increased investment in health in the region in addition to reducing the conflicts.
FUNDING: Bill & Melinda Gates Foundation.

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PMID: 27568068

88: Morey VM, Garg B, Kotwal PP. Glomus tumours of the hand: Review of literature. J Clin Orthop Trauma. 2016 Oct-Dec;7(4):286-291. Review. PubMed PMID: 27857505; PubMed Central PMCID: PMC5106475.

Glomus tumours are rare benign vascular neoplasms commonly found in the hand particularly in subungual region. Though, its aetiology remains largely unknown, several hypotheses have been made to explain the etiopathogenesis and cause of pain. These tumours usually present as a bluish or pinkish red discolouration of

the nail plate with classical triad of localised tenderness, severe pain, and cold sensitivity. Nevertheless, differential diagnosis of other painful tumours, such as leiomyoma, eccrine spiradenoma, haemangioma, neuroma, osteochondroma, or mucous cyst should always be kept in mind while evaluating a patient with severe pain in the tip of the finger. In addition to the different clinical tests including Love's pin test, Hildreth's test, and trans-illumination test, imaging studies such as magnetic resonance imaging (MRI), ultrasonography, and radiography are often helpful in the diagnosis. Complete surgical excision is a must to get complete relief from the symptoms and to avoid recurrence. Several approaches have been described in the literature. Different surgeons may have different choices and may prefer one approach over the other depending on the anatomical location of the tumours. The purpose of this article is to review the important aspects of glomus tumours in hand concerning their aetiology, clinical presentation, diagnosis, management, and recurrence.

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PMCID: PMC5106475 [Available on 2017-10-01]
PMID: 27857505

89: Mukherjee A, Singh H, Patel C, Sharma G, Roy A, Naik N. Normal values of cardiac mechanical synchrony parameters using gated myocardial perfusion single-photon emission computed tomography: Impact of population and study protocol. Indian J Nucl Med. 2016 Oct-Dec;31(4):255-259. PubMed PMID: 27833309; PubMed Central PMCID: PMC5041412.

PURPOSE OF THE STUDY: Normal values of cardiac mechanical synchrony parameters in gated myocardial perfusion single-photon emission computed tomography (GMPS) are well established in literature from the Western population. The aim of the study is to establish normal values of mechanical synchrony with GMPS in Indian population and to find out whether it differs significantly from established values.
PROCEDURE: We retrospectively analyzed 1 day low-dose stress/high-dose rest GMPS studies of 120 patients (sixty males, 52 ± 11.7 years) with low pretest likelihood of coronary artery disease and having normal GMPS study. In GMPS, first-harmonic fast Fourier transform was used to extract a phase array using commercially available software. Phase standard deviation (PSD) and phase histogram bandwidth (PHB) were used to quantify cardiac mechanical dyssynchrony.
RESULTS: The values obtained were as follows, PSD: In men, 14.3 ± 4.7 (stress) and 8.9 ± 2.9 (rest), in women 11 ± 4 (stress) and 7.7 ± 2.7 (rest), and PHB: In men, 40.1 ± 11.9 (stress) and 30.6 ± 7.6 (rest), in women, 34.7 ± 12.6 (stress) and 25.3 ± 8.6 (rest). The value of PSD and PHB was significantly less in Indian population as compared with established values in literature. We also observed that synchrony indices derived from the low-dose stress studies are higher than high-dose rest studies.
CONCLUSIONS: The value of synchrony parameters differs significantly according to population and methodology suggesting that specific population and methodology-based normal database for assessment of cardiac mechanical dyssynchrony should be established.

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PMCID: PMC5041412
PMID: 27833309

90: Mukherjee A, Patel CD, Roy A, Sharma G, Naik N. Interplay between right ventricular mechanical dyssynchrony and cardiac resynchronization therapy in patients with nonischemic dilated cardiomyopathy. Nucl Med Commun. 2016 Oct;37(10):1016-23. doi: 10.1097/MNM.0000000000000555. PubMed PMID: 27295307.

OBJECTIVE: The effect of cardiac resynchronization therapy (CRT) on right ventricular ejection fraction (RVEF) and intraright ventricular dyssynchrony (IRVD) is questionable. Furthermore, it is unclear whether baseline IRVD and RVEF influences response to CRT. The aim of this study is to evaluate the effects of

CRT on RVEF and IRVD and to investigate whether baseline IRVD and RVEF impacts response to CRT.
PATIENTS AND METHODS: Equilibrium radionuclide angiography and clinical evaluation were performed in 32 nonischemic dilated cardiomyopathy patients before and 3 months after CRT implantation. SD of the right ventricle mean phase angle expressed in degrees was used to quantify right intraventricular synchrony. RVEF was also evaluated.
RESULTS: There was no significant change in the RVEF and IRVD between the baseline and at 3 months after CRT equilibrium radionuclide angiography studies (RVEF: 40.5±10.6 vs. 40.4±10.4%, P=0.75; IRVD: 36.6±13.7 vs. 36.3±13.3°, P=0.35). Of 32 patients, 6/14 (43%) patients with baseline IRVD responded compared with 16/18 (89%) without baseline IRVD (P=0.02).
CONCLUSION: CRT did not cause any significant change in RVEF and IRVD. Patients with IRVD are less likely to respond to CRT.

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PMID: 27295307 [Indexed for MEDLINE]

91: Muralidhar K, Tempe D, Mehta Y, Kapoor PM, Mukherjee C, Koshy T, Tewari P, Shastri N, Misra S, Belani K. Guidelines of the Indian Association of Cardiovascular and Thoracic Anaesthesiologists and Indian College of Cardiac Anaesthesia for perioperative transesophageal echocardiography fellowship examination. Ann Card Anaesth. 2016 Oct;19(Supplement):S73-S78. doi: 10.4103/0971-9784.192626. Review. PubMed PMID: 27762250; PubMed Central PMCID: PMC5100245.

During current medical care, perioperative transesophageal echocardiography (TEE) has become a vital component of patient management, especially in cardiac operating rooms and in critical care medicine. Information derived from echocardiography has an important bearing on the patient's outcome. The Indian Association of Cardiovascular and Thoracic Anaesthesiologists (IACTA) has promoted the use of TEE during routine clinical care of patients undergoing cardiac surgery. An important mission of IACTA is to oversee training and certify anesthesiologists in the perioperative and intensive care use of TEE. The provision of "Fellowship" is by way of conducting IACTA - TEE fellowship (F-TEE) examination. This has been done annually for the past 7 years using well-established curriculums by accredited national and international societies. Now, with the transformation and reconstitution of IACTA education and research cell into the newly formed Indian College of Cardiac Anaesthesia, F-TEE is bound to meet international standards. To ensure that the examinations are conducted in a transparent and foolproof manner, the guideline committee (formulated in 2010) of IACTA has taken the onus of formulating the guidelines for the same. These guidelines have been formally reviewed and updated since 2010 and are detailed here to serve as a guide to both the examinee and examiner ensuring standardization, efficiency, and competency of the IACTA F-TEE certification process.

DOI: 10.4103/0971-9784.192626
PMCID: PMC5100245
PMID: 27762250

92: Murli L, Thukral A, Sankar MJ, Vishnubhatla S, Deorari AK, Paul VK, Sakariah A, Dolma, Agarwal R. Reliability of transcutaneous bilirubinometry from shielded skin in neonates receiving phototherapy: a prospective cohort study. J Perinatol. 2017 Feb;37(2):182-187. doi: 10.1038/jp.2016.189. PubMed PMID: 27763628.

OBJECTIVE: To determine the agreement between transcutaneous bilirubin (TcB) measured from shielded skin and serum total bilirubin (STB) in infants (34 to 41 weeks of gestation) with hyperbilirubinemia receiving phototherapy (PT).
STUDY DESIGN: In this prospective cohort study, we shielded a small area of skin on sternum using a commercial photo-opaque patch (BilEclipseTM, Philips Respironics, Murrysville, PA, USA). The TcB from the shielded skin (TcBs) and STB

were measured at four time points-before initiation, 12 and 24 h during and once after (12 h) cessation of PT. TcB was measured using multiwavelength transcutaneous bilirubinometer (BiliChek, Philips Children's Medical Ventures, Monroeville, PA, USA). The STB was measured in triplicate by spectrophotometry (Apel BR 5100, APEL, Japan). Bland and Altman plots were drawn to determine agreement between the TcBs and STB.
RESULTS: The gestation and birth weight of enrolled neonates were 37.0 (1.0) weeks and 2750 (458) g, respectively. The age at initiation and duration of PT were 75 (27 to 312) and 25.3 (4.4) h, respectively. Bland and Altman plot showed poor agreement between TcBs and STB at all time points. The gradient (median, range) between TcBs and STB at 0, 12, 24 h and 12 h after cessation of PT were -0.2 (-4.9 to 3.5), 1.4 (-4.7 to 4.0), 1.5 (-3.8 to 9.4) and 2 (-2.9 to 5.8) mg dl(-1). The proportions of TcBs values outside ±1.5 mg dl(-1) of STB ranged from 47 to 64% at four time points.
CONCLUSION: TcBs does not appear to be reliable for estimating serum bilirubin in late preterm and term neonates receiving PT.

DOI: 10.1038/jp.2016.189
PMID: 27763628

93: Nair N, Sreenivas M, Gupta AK, Kandasamy D, Jana M. Neonatal and infantile spinal sonography: A useful investigation often underutilized. Indian J Radiol Imaging. 2016 Oct-Dec;26(4):493-501. doi: 10.4103/0971-3026.195788. PubMed PMID: 28104945; PubMed Central PMCID: PMC5201081.

Sonography is an ideal, effective, noninvasive tool for evaluation of the spinal cord in neonatal and early infantile age groups owing to lack of ossification of the posterior elements of spine. Understanding normal anatomical appearances is a prerequisite for the interpretation of various pathologies of the spinal canal and its contents. This review elucidates normal appearances of the spinal cord in this age group, in both axial and sagittal planes. Usefulness of Doppler sonography is briefly discussed, and special emphasis is placed on normal anatomical variants that may mimic spinal abnormalities. Sonographic appearances of common intraspinal pathologies, both congenital and acquired, are exhaustively described. Key points regarding sonographic diagnosis of important spinal anomalies are emphasized and explained in detail. To conclude, spinal ultrasound is a reliable and widely available screening tool, albeit the usefulness of which is often underestimated.

DOI: 10.4103/0971-3026.195788
PMCID: PMC5201081
PMID: 28104945

Conflict of interest statement: There are no conflicts of interest.

94: Nair N, Satapathy AK, Gupta N, Kabra M, Gupta AK, Jana M. Spondylometaphyseal Dysplasia Corner Fracture (Sutcliffe) Type. Indian J Pediatr. 2016 Oct;83(10):1191-4. doi: 10.1007/s12098-016-2121-3. PubMed PMID: 27130511.

Spondylometaphyseal dysplasia corner fracture type (Sutcliffe) is an uncommon form of skeletal dysplasia which has some unique imaging features. The differential diagnoses include other forms of spondylometaphyseal dysplasias and non-accidental injury. The case report describes a child with typical imaging findings of this clinical entity with a brief discussion of the diagnostic clue and differential diagnoses.

DOI: 10.1007/s12098-016-2121-3
PMID: 27130511

95: Nambirajan A, Sharma MC, Rajeshwari M, Kakkar A, Suri V, Sarkar C. A Comparative Immunohistochemical Study of Epithelial Membrane Antigen and NHERF1/EBP50 in the Diagnosis of Ependymomas. Appl Immunohistochem Mol Morphol.

2016 Oct 7. [Epub ahead of print] PubMed PMID: 27753657.

Ependymomas are gliomas that recapitulate normal ependymal cells. The epithelial membrane antigen (EMA) shows "dot-like" and "ring-like" staining patterns, highlighting "microlumens" or intracytoplasmic rosettes, a pathognomonic ultrastructural feature. NHERF1/EBP50, an adaptor protein localized at the apical plasma membrane of human epithelia, has been found to localize to these microlumens. We aimed to analyze the staining patterns of EMA and EBP50 in ependymomas and other tumors, and thereby compare their diagnostic utility. Sixty-three ependymomas of different grades and 44 nonependymal tumors (meningiomas, 5; pilocytic astrocytoma, 2; paraganglioma, 2; neurocytoma, 4; pituitary adenoma, 3; papillary tumor of pineal region, 3; oligodendroglioma, 4; choroid plexus papilloma, 3; medulloblastoma, 2; schwannoma, 2; cellular hemangioblastoma, 2; subependymal giant cell astrocytoma, 1; glioblastoma multiforme, 8; diffuse astrocytoma, 1; anaplastic astrocytoma, 1; and pilomyxoid astrocytoma, 1) were included. Ring-like positivity was 100% specific for ependymomas, but showed a poor sensitivity (EMA, 29%; EBP50, 37%). Dot EMA positivity was more sensitive in grade III ependymomas (100%), whereas dot EBP50 positivity was more sensitive in grade I subependymomas (80%) and myxopapillary ependymomas (40%). Among grade II ependymomas, EBP50 labeled a significantly higher number of dots and rings, which may be of value in small biopsies. Focal dot positivity for EMA and EBP50 in glioblastoma multiforme and meningioma contributed to the lowered specificity (EMA, 84%; EBP50, 80%). Myxopapillary ependymomas (60%), choroid plexus papillomas (66%), and papillary tumors of pineal region (100%) showed membranous staining with EBP50. Although EPB50 appears to be a better diagnostic marker for grade I/II ependymomas, we recommend a combined panel of EMA and EBP50 for grade III ependymomas to compensate for the reduced sensitivity of EBP50 in this subgroup.

DOI: 10.1097/PAI.0000000000000384
PMID: 27753657

96: Nambirajan A, Mridha AR, Sharma MC, Panda A, Palaniswamy A. Primary intra-osseous myoepithelioma of phalanx mimicking an enchondroma. Skeletal Radiol. 2016 Oct;45(10):1453-8. doi: 10.1007/s00256-016-2452-1. PubMed PMID: 27524490.

Myoepitheliomas (MEs) are uncommon tumours of the soft tissue with an intermediate biological behaviour and uncertain differentiation. Primary intra-osseous MEs are rare and occur predominantly in the axial and proximal appendicular skeleton in middle-aged patients. The morphological variation of the tumour cells and stromal metaplasia may cause considerable diagnostic confusion, especially when it occurs in an unusual location. A wide panel of immunohistochemical markers is required to exclude other histological mimics. A 37-year-old male presented with a recurrent swelling in the right middle finger for 1-month duration. Radiographic images showed an expansile, lytic, intra-osseous lesion with high signal intensity on T2W fat-suppressed MR images in the proximal phalanx of the right middle finger without cortical breach, highly suggestive of an enchondroma. Histopathology revealed a lobulated tumour comprising of polygonal to spindle cells in groups and cords in a chondromyxoid stroma. No cellular atypia was noted. The tumour cells were immunopositive for epithelial membrane antigen (EMA), p63, S100 and smooth muscle actin (SMA), compatible with the diagnosis of an intraosseous ME. The proximal phalanx of the right middle finger was excised, revealing a similar tumour, and the patient has been on regular follow-up for the last 18 months without any recurrence. Primary intra-osseous MEs are extremely rare, and this is the second reported occurrence in small bones. A differential diagnosis of ME should be kept for enchondroma-like lesions of the bone for proper histopathological assessment and accurate diagnosis. Documentation of such cases and follow-up will enhance our understanding of their clinical course and prognosis.

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PMID: 27524490

97: Nambirajan A, Malgulwar PB, Sharma MC, Singh A, Pathak P, Satyarthee GD, Garg A. C11orf95-RELA fusion present in a primary intracranial extra-axial ependymoma: Report of a case with literature review. Neuropathology. 2016 Oct;36(5):490-495. doi: 10.1111/neup.12299. Review. PubMed PMID: 27121356.

Ependymomas are gliomas that recapitulate the ependymal cells microscopically and ultrastructurally. They commonly occur along the ventricular surfaces and central canal of the brain and spinal cord. Intracranial extra-axial ependymoma (IEAE) is a rare entity and is commonly misdiagnosed clinically and radiologically as a meningioma. The histogenesis of such IEAEs is obscure. A novel recurrent oncogenic fusion involving the C11orf95 and RELA genes was recently described in supratentorial ependymomas. A 9-year-old girl presented with a dural based parafalcine mass that, in addition to exhibiting classical immunohistochemical features of an ependymoma, also demonstrated C11orf95-RELA fusion, characteristic of supratentorial ependymomas. We suggest that IEAEs share their histogenesis with their intra-axial counterparts, arising either from dural extension of subcortical, subependymal rests or directly from ectopic dural rests.

DOI: 10.1111/neup.12299
PMID: 27121356 [Indexed for MEDLINE]

98: Nisa N, Talawar P, Vasudevan B. Anesthesia in a child with Kinsbourne syndrome: Does anesthesia technique matters? Saudi J Anaesth. 2016 Oct-Dec;10(4):468-470. PubMed PMID: 27833499; PubMed Central PMCID: PMC5044740.

Kinsbourne syndrome is a rare neurological paraneoplastic syndrome associated with neuroblastic tumors. There are very few literatures on its anesthetic management and interaction with anesthetic agents. The epileptogenic potential of certain anesthetic agents such as ketamine, etomidate, and meperidine might trigger opsoclonus and myoclonus and have an impact on the long-term neurological outcome. The objective of this case report is to discuss the safety of anesthetic agents and their relationship in a patient with Kinsbourne syndrome. We discuss our experience in the anesthetic management of a child with Kinsbourne syndrome with ganglioneuroblastoma in the thoracic paravertebral space.

DOI: 10.4103/1658-354X.179115
PMCID: PMC5044740
PMID: 27833499

99: Padhan RK, Kedia S, Garg SK, Bopanna S, Mouli VP, Dhingra R, Makharia G, Ahuja V. Long-Term Disease Course and Pregnancy Outcomes in Women with Inflammatory Bowel Disease: An Indian Cohort Study. Dig Dis Sci. 2016 Oct 26. [Epub ahead of print] PubMed PMID: 27785711.

BACKGROUND: The literature on interaction between pregnancy and inflammatory bowel disease (IBD) is inconsistent, and there are no reports on this aspect from Asia. This study evaluated the impact both IBD and pregnancy have on each other in a large cohort of Indian patients.
METHODS: In total, 514 females with ulcerative colitis (UC) or Crohn's disease (CD) aged between 18 and 45 years attending IBD clinic, at our institute, from July 2004 to July 2013 were screened, and patients with data on pregnancy status were included (n = 406). Pregnancies were categorized as either before, after or coinciding with disease onset. Long-term disease course was ascertained from prospectively maintained records. Pregnancy and fetal outcomes were recorded from antenatal records or individual interviews.
RESULTS: Of 406 patients (UC: 336, CD: 70), 310 became pregnant (UC: 256, CD: 54), with a total of 597 pregnancies (UC: 524, CD: 73). More UC patients with pregnancies were in long-term remission than non-pregnant patients (56.7 vs.

43.4 %, p = 0.04). Long-term remission was less frequent in UC patients in whom pregnancy coincided with disease onset than patients with pregnancies before and after/pregnancy after the disease onset (41.4 vs. 62.5 %, p = 0.023). Pregnancies after the disease onset were associated with more cesarean sections and adverse fetal outcomes than pregnancies before disease onset in both UC and CD patients. CONCLUSIONS: Long-term disease course in UC patients was better in pregnant as compared to non-pregnant patients. Among pregnant UC patients, disease course was worst when pregnancy coincided with disease onset. Pregnancy and fetal outcomes were worse in pregnancy after disease onset than pregnancy before disease onset.

DOI: 10.1007/s10620-016-4353-5
PMID: 27785711

100: Padma VM, Bhatia R, Kuruttukulam G, Alurkar A, Talwar KK, Khurana D, Kaul S, Suri V, Singh G, Huded V. A call for neurologists to take up stroke intervention. Ann Indian Acad Neurol. 2016 Oct-Dec;19(4):429-432. Review. PubMed PMID: 27994348; PubMed Central PMCID: PMC5144460.

Recent data have provided overwhelming evidence in favor of benefits of emergent endovascular intervention in large vessel acute ischemic stroke (AIS). India with its large population has a huge burden of AIS. Hence, neurologists need to gear up to the new challenge of providing interventional care to huge populations of AIS in the country. The best way to cover this unprecedented unmet need is to encourage neurologists to take up interventional subspecialty interests through new but sound training pathways.

DOI: 10.4103/0972-2327.194408
PMCID: PMC5144460
PMID: 27994348

Conflict of interest statement: There are no conflicts of interest.

101: Pakhre A, Krishnan A, Pattanayak RD, Khandelwal SK. Use of clozapine alongside chemotherapy in a treatment-resistant bipolar disorder patient with ovarian carcinoma: A case report and brief review. Indian J Psychiatry. 2016 Oct-Dec;58(4):462-466. doi: 10.4103/0019-5545.196711. PubMed PMID: 28197007; PubMed Central PMCID: PMC5270275.

Regular monitoring of blood counts ensures the safety of clozapine use; however, certain clinical situations may pose a dilemma for management such as use of clozapine in the presence of myelosuppressive chemotherapy. Further, there is very limited literature to guide such decisions. We report a case of a clozapine-stabilized, treatment-resistant bipolar disorder patient with ovarian carcinoma requiring chemotherapy. The clinical challenges are discussed in light of a brief review of the available reports.

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PMCID: PMC5270275
PMID: 28197007

Conflict of interest statement: There are no conflicts of interest.

102: Panda PK, Mohta S, Sharma SK, Ray A, Arava S, Vyas S. A case of pseudorheumatism with submasseteric abscess and HLH in a patient with visceral leishmaniasis: A diagnostic dilemma. J Vector Borne Dis. 2016 Oct-Dec;53(4):387-390. PubMed PMID: 28035119.

103: Panda PK, Wig N, Kumar S, Arava S. Invasive thymoma presenting as classic superior vena cava syndrome: a case of venous spread metastasis. BMJ Case Rep. 2016 Oct 26;2016. pii: bcr2016217695. doi: 10.1136/bcr-2016-217695. PubMed PMID: 27797848.

The approach to an intrinsic cause of superior vena cava syndrome (SVCS) is usually difficult but rewarding. We report a case of a middle-aged man who presented with progressive oedema of the upper half of the body, dyspnoea, cough and weight loss for a 1-year duration. He was a non-smoker without prior hospitalisation. Chest radiography showed right-sided pleural effusion with an apparent normal superior mediastinum. Contrast-enhanced CT of the chest revealed a right atrial mass extending and completely obliterating to superior vena cava. The differentials were tuberculosis, invasive fungal granuloma, sarcoidosis, primary vasculitis, chronic venous thrombosis, cardiac sarcoma/lymphoma and metastatic thyroid tumour or thymoma. He underwent transvenous (femoral approach) biopsy of the mass and then cardiothoracic surgery after haemodynamic instability. Pathology showed invasive thymoma type B3. This case highlights the approach to an intrinsic cause of SVCS, a complication of the transvenous approach, and importantly a noble finding of venous spread metastasis.

DOI: 10.1136/bcr-2016-217695
PMID: 27797848 [Indexed for MEDLINE]

Conflict of interest statement: Conflicts of Interest: None declared.

104: Pandit AK, Vibha D, Srivastava AK, Shukla G, Goyal V, Behari M. Complementary and alternative medicine in Indian Parkinson's disease patients. J Tradit Complement Med. 2015 Aug 20;6(4):377-382. PubMed PMID: 27774422; PubMed Central PMCID: PMC5067838.

Use of complementary and alternative medicine (CAM; bǔ chōng yǔ tì dài yī xué) in Parkinson disease (PD) ranged 40-70%. The objective of this study was to determine the frequency, types and factors associated with the use of CAM in Indian PD patients. PD patients, fulfilling UKPD-Society brain-bank diagnostic-criteria, attending Movement-disorders clinic of a tertiary-care teaching hospital in India from 1st May to 15th December 2012 were enrolled. Information on socio-demographic, clinical data and treatment along with factors (source of information, benefits, harms, reason for use and cost) associated with CAM use were recorded. Out of 233 consecutive PD patients, 106 (46%) used CAM. Mean ± SD age of CAM users was 56 ± 11.2 years. Among CAM users, 72% were males, with mean age-onset 49 ± 11.16 years (P = 0.042) and 73% receiving levodopa therapy (p = 0.006). Longer duration PD, higher education (graduates and above), urban residence, and fairly good perceived health were other factors seen among CAM users. Reasons for using CAM were 'feel good factor' (73%), 9% took CAM due to side effects from allopathic-medicines. Commonly used CAM were Ayurvedic, homeopathic medicines, and acupuncture (zhēn jiǔ) [74/106 (70%)]. Median CAM cost in Indian Rupees (INR) was 1000/month (USD16, range: 0-400USD/month in year 2012). Almost half of PD patients use CAM. Three-quarters of Indian CAM using PD patients believe that CAM is harmless, using it at a substantial cost. CAM-users are educated, young, urban dwellers, longer duration PD and receiving levodopa. Commonly used CAM was Ayurvedic, Homeopathic medicines and acupuncture.

DOI: 10.1016/j.jtcme.2015.03.009
PMCID: PMC5067838
PMID: 27774422

105: Pant K, Yadav AK, Gupta P, Rathore AS, Nayak B, Venugopal SK. Humic acid inhibits HBV-induced autophagosome formation and induces apoptosis in HBV-transfected Hep G2 cells. Sci Rep. 2016 Oct 6;6:34496. doi: 10.1038/srep34496. PubMed PMID: 27708347; PubMed Central PMCID: PMC5052648.

Hepatitis B Virus (HBV) utilizes several mechanisms to survive in the host cells and one of the main pathways being autophagosome formation. Humic acid (HA), one of the major components of Mineral pitch, is an Ayurvedic medicinal food,

commonly used by the people of the Himalayan regions of Nepal and India for various body ailments. We hypothesized that HA could induce cell death and inhibit HBV-induced autophagy in hepatic cells. Incubation of Hep G2.2.1.5 cells (HepG2 cells stably expressing HBV) with HA (100 μM) inhibited both cell proliferation and autophagosome formation significantly, while apoptosis induction was enhanced. Western blot results showed that HA incubation resulted in decreased levels of beclin-1, SIRT-1 and c-myc, while caspase-3 and β-catenin expression were up-regulated. Western blot results showed that HA significantly inhibited the expression of HBx (3-fold with 50 μM and 5-fold with 100 μM) compared to control cells. When HA was incubated with HBx-transfected Hep G2 cells, HBx-induced autophagosome formation and beclin-1 levels were decreased. These data showed that HA induced apoptosis and inhibited HBV-induced autophagosome formation and proliferation in hepatoma cells.

DOI: 10.1038/srep34496
PMCID: PMC5052648
PMID: 27708347

106: Parakh N, Karthikeyan G, Juneja R. Paradoxical Eisenmengerization Reversal of an obligatory shunt. Int J Cardiol. 2016 Oct 15;221:443-5. doi: 10.1016/j.ijcard.2016.07.019. PubMed PMID: 27409571.

107: Passah A, Agarwal KK, ArunRaj ST, Kumar R, Bal C. A rare site of hyoid bone metastasis in patients with renal cell carcinoma on (18)F-fluorodeoxyglucose-positron emission tomography/computed tomography scan. Indian J Nucl Med. 2016 Oct-Dec;31(4):319. PubMed PMID: 27833328; PubMed Central PMCID: PMC5041431.

108: Pathy S, Venkatesulu BP, Mallick S, Chander S. Radiation Therapy in Paediatric Orbital Granulocytic Sarcomas: Experience from a Tertiary Cancer Center. J Clin Diagn Res. 2016 Oct;10(10):XC01-XC05. PubMed PMID: 27891440; PubMed Central PMCID: PMC5121778.

INTRODUCTION: Orbital Granulocytic Sarcoma (OGS) is an uncommon manifestation associated with haematological malignancies. Chemotherapy remains the cornerstone of the treatment. The role of radiation is not well-defined.
AIM: To evaluate the effect of radiation in OGS and to define an optimal dose for achieving adequate local control.
MATERIALS AND METHODS: This was a retrospective analysis of 11 patients who received radiation therapy to orbit for Granulocytic Sarcoma (GS) between 2007 and 2014 at a tertiary cancer center in India. Radiotherapy was planned by three dimensional conformal (3DCRT) techniques. Demographic and disease characteristics, including clinical, imaging, histopathology and treatment details in this patient cohort were recorded and their response to therapy was assessed.
RESULTS: The median age was 7 years (Range: 2-16 years). There were 3 female and 8 male patients. Eight patients were diagnosed as Acute Myelogenous Leukemia (AML), two patients had Primary Orbital Granulocytic Sarcoma (POGS) and one had bi-phenotypic leukemia. Median dose was 24.5Gy (Range-15-45 Gy). Two anterior oblique field design were used most commonly. Out of 11 patients, 5 (45.4%) had complete response, 3 (27.27%) had partial response, 1 patient had stable disease (9%) and 2 developed progressive disease (18%). Median follow-up was 24 months (Range 24-84 months). At last follow-up, 7 (63.6%) patients were alive and 4 patients (37.4%) were dead due to progressive disease.
CONCLUSION: In patients with residual orbital disease after chemotherapy, low dose radiation can be used to improve local disease control and improve quality of life. Local conformal radiotherapy of 24-30 Gy in conventional fractionation appears optimal with excellent local control and minimal morbidity.

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PMCID: PMC5121778
PMID: 27891440

109: Prasad GL, Sharma MS, Kale SS, Agrawal D, Singh M, Sharma BS. Gamma Knife radiosurgery in the treatment of abducens nerve schwannomas: a retrospective study. J Neurosurg. 2016 Oct;125(4):832-837. PubMed PMID: 26824380.

OBJECTIVE Of the intracranial schwannomas, those arising from the vestibular nerves are the most common. Abducens nerve (AN) schwannomas are very rare, and there is limited literature on their optimal management. Therapeutic options include surgery and/or stereotactic radiosurgery. The aim of this study was to evaluate the role of Gamma Knife radiosurgery (GKRS) in these sixth cranial nerve (CN) schwannomas. METHODS The authors performed a retrospective analysis of patients who had undergone GKRS for intracranial tumors at their institute in the period from 2003 to 2010. Inclusion criteria were as follows: isolated AN paresis on presentation, a lesion along the course of the sixth CN, and imaging features characteristic of a schwannoma. Patients with other CN deficits and neurofibromatosis Type 2 were excluded. Symptomatic improvement was defined as the resolution of or an improvement in diplopia noted on a subjective basis or as an improvement in lateral eyeball excursion noted objectively on follow-up. A reduction in tumor volume by at least 20%, as noted by comparing the pre- and post-GKRS images, was deemed significant. RESULTS Six patients with a mean age of 37.1 years (range 17-55 years) underwent primary GKRS. There were 2 prepontine cistern, 3 cavernous sinus, and 1 cisterno-cavernous tumor. The mean duration of symptoms was 6.1 months (range 3-12 months). The mean tumor volume was 3.3 cm(3) (range 1.5-4.8 cm(3)). The mean tumor margin radiation dose was 12.5 Gy (range 12-14 Gy), while the median margin dose was 12 Gy (50% isodose line). The median number of isocenters used was 5 (range 4-8). The brainstem received an average 8.35-Gy radiation dosage (range 5.5-11 Gy). The mean follow-up duration was 44.3 months (range 24-78 months). Symptoms remained stable in 1 patient, improved in 3, and resolved in 2 (total improvement 83%). Magnetic resonance imaging at the last follow-up showed a stable tumor size in 3 patients (50%) and a reduction in the other 3. Thus, the tumor control rate achieved was 100%. No new CN deficits were noted. CONCLUSIONS Abducens nerve schwannomas are rare intracranial tumors. They can be cavernous, cisternal, or cisterno-cavernous in location. Excellent tumor control rates and symptomatic improvement can be achieved with GKRS, which appears to be a safe and effective, minimally invasive modality for the treatment of such lesions. Therefore, it is reasonable to consider GKRS as the initial treatment of choice for this rare pathology. Long-term follow-up will be essential for further recommendations.

DOI: 10.3171/2015.8.JNS151140
PMID: 26824380

110: Prasad GL, Sharma BS, Mahapatra AK. Ventral foramen magnum neurenteric cysts: a case series and review of literature. Neurosurg Rev. 2016 Oct;39(4):535-44. doi: 10.1007/s10143-015-0687-2. Review. PubMed PMID: 26662045.

Neurenteric cysts (NEC) are uncommon, benign, congenital lesions. Ventral foramen magnum (FM) location is very rare. The difficulties in diagnosis and management aspects are detailed with a review of the pertinent literature. We report four new cases of ventral FM NEC, all managed surgically and present a literature review of ventral FM NEC. A retrospective analysis of histopathologically confirmed cases of ventral FM NEC, operated from 2010-2013 at our institute, was performed. For review, only those cases of NEC extending from the lower clivus to the C2 level constituting the foramen magnum were included. Including our four cases, a total of 47 cases were identified. The male to female ratio was 1.2:1. Mean age was 33.5 years (range 1-60 years). Neck pain and occipital headache were the most common symptoms, followed by limb weakness and cranial nerve paresis. Recurrent meningitis was noted in three cases. Hyperintensity on both T1- and T2-weighted sequences with absent enhancement was the most common finding on MRI. Surgical approaches were as follows: suboccipital (n=21), far/extreme lateral

(n=18), retrosigmoid (n=6), and transoral (n=4). The extent of resection was as follows: total, 26; near total, 6; subtotal, 9; and partial, 3 cases. Cerebrospinal fluid diversion was done in four cases for intracranial hypertension. Mean follow-up duration was 26.8 months (range 1 month-9 years). Recurrence was noted in four (8.5 %) cases. One (2 %) case had malignant transformation. Mortality rate was 4 %. Foramen magnum neurenteric cysts are rare, benign tumors of the central nervous system. Accurate preoperative diagnosis can often be established with MRI. Surgical removal is the treatment of choice. Complete excision is ideal but often not possible. Near total removal would suffice with good progression-free periods. A long-term follow-up with radiological studies is necessary as delayed recurrences can occur.

DOI: 10.1007/s10143-015-0687-2
PMID: 26662045

111: Puri RD, Kabra M. Editorial: New Horizons in Genetic Diagnosis in Pediatric Practice: The Excitement and Challenges! Indian J Pediatr. 2016 Oct;83(10):1131-2. doi: 10.1007/s12098-016-2204-1. PubMed PMID: 27510613.

112: Rai N, Kumar R, Desai GR, Venugopalan G, Shekhar S, Chatterjee P, Tripathi M, Upadhyay AD, Dwivedi S, Dey AB, Dey S. Relative Alterations in Blood-Based Levels of Sestrin in Alzheimer's Disease and Mild Cognitive Impairment Patients. J Alzheimers Dis. 2016 Oct 4;54(3):1147-1155. PubMed PMID: 27567861.

Sestrins (sesn) are highly conserved proteins that play an important neuroprotective role, in part as a consequence of their antioxidative capacity, which prevents reactive oxygen species formation. In this study, we evaluated the concentrations of sesn1 and sesn2 in the serum of 41 Alzheimer's disease (AD) patients, 27 mild cognitive impairment (MCI), and 60 elderly controls, by surface plasmon resonance, which was validated by using western blot. Moreover, the mRNA level of sestrins in all the study groups was determined by real time polymerase chain reaction. The results showed significant overexpression of serum sesn2 protein and mRNA levels in the AD group compared to MCI and elderly control groups. A difference in serum sesn2 concentration between MCI and the control group was also evident. ROC analysis showed highly sensitive, selective cutoff values for sens2 in the differentiation of AD, MCI, and controls. No significant difference in sesn1 level was observed among the study groups. This study highlights the important role of sesn2 in the progression of the AD, indicating its potential utility as a protein marker in this devastating disease.

DOI: 10.3233/JAD-160479
PMID: 27567861

113: Rajak SK, Kumaresan A, Attupuram NM, Chhillar S, Baithalu RK, Nayak S, Sreela L, Singh RK, Tripathi UK, Mohanty TK, Yadav S. Age-related changes in transcriptional abundance and circulating levels of anti-Mullerian hormone and Sertoli cell count in crossbred and Zebu bovine males. Theriogenology. 2017 Feb;89:1-8. doi: 10.1016/j.theriogenology.2016.10.003. PubMed PMID: 28043339.

Age-related changes in peripheral anti-Mullerian hormone (AMH) concentrations and transcriptional abundance of AMH gene in testicular tissue were studied in crossbred (Holstein Friesian × Tharparkar) and Zebu (Tharparkar) males. In both the breeds, basal AMH concentrations were estimated using ELISA method in blood plasma obtained from six males each at 1, 6, 12, 18, and 24 months age. After blood collection at respective ages, all the males were castrated and expression and immunolocalization of AMH was performed in the testicular tissue. The concentration of AMH in blood plasma was found to be highest at 1 month of age in both crossbred and Zebu males, which subsequently decreased with advancing age. Significantly ($P < 0.05$) lower concentration of AMH was observed in crossbred as compared with Zebu males at 24 months of age. In line with peripheral AMH concentrations, the expression of AMH gene was also higher ($P < 0.05$) at 1 month

of age, which thereafter declined significantly with advancement of age in crossbred males. Furthermore, the expression of AMH gene differed significantly between Zebu and crossbred males at all the age groups studied. Immunolocalization of AMH in testicular tissue also revealed a stronger expression at 1 month age, which gradually decreased till 24 months of age. The true Sertoli cell count was significantly higher in Zebu compared with crossbred males at all age groups studied except at 6 months age. The relationship between Sertoli cell count and circulating AMH concentrations was negative and significant (r = -0.81; P = 0.004). In conclusion, expression of AMH gene in testicular tissue and peripheral blood concentrations of AMH were higher in young compared with adults in both crossbred and Zebu males; however, the transcriptional abundance and circulating levels of AMH were higher in Zebu compared with crossbred males.

DOI: 10.1016/j.theriogenology.2016.10.003
PMID: 28043339

114: Rajeshwari M, Suri V, Kaur K, Suri A, Garg A, Sharma MC, Sarkar C. Intracranial interhemispheric osteochondrolipoma: Diagnostic and surgical challenges in an extremely rare entity. Neuropathology. 2016 Oct;36(5):470-474. doi: 10.1111/neup.12294. PubMed PMID: 27195706.

Intracranial lipomas are rare developmental lesions, predominantly occurring in the interhemispheric location. Osteochondrolipoma is an extremely rare variant of lipoma with osseous and chondroid differentiation. We present a case of interhemispheric osteochondrolipoma, in a 2.5-years-old male child which was detected antenatally, in association with corpus callosum agenesis. The lesion progressively increased in size with resulting compression of surrounding structures, and was subjected to microsurgical decompression. To the best of our knowledge, this is the first case of intracranial interhemispheric osteochondrolipoma in the existing medical literature. Peculiarities of this case and the diagnostic and surgical challenges are discussed.

DOI: 10.1111/neup.12294
PMID: 27195706

115: Ramanujam B, Bharti K, Viswanathan V, Garg A, Tripathi M, Bal C, Chandra PS, Tripathi M. Can ictal-MEG obviate the need for phase II monitoring in people with drug-refractory epilepsy? A prospective observational study. Seizure. 2017 Feb;45:17-23. doi: 10.1016/j.seizure.2016.10.013. PubMed PMID: 27912111.

PURPOSE: To determine if ictal-magnetoencephalography (ictal-MEG) source localization (SL) added information towards delineating the ictal-onset zone (IOZ), whether and how it helped final decision-making in epilepsy-surgery.
METHODS: Definite focal clusters on ictal-MEG were available for 32 DRE-patients, data was analyzed (single equivalent current dipole (ECD) model), SL done. Clinical history, long-term video-EEG (VEEG) monitoring, epilepsy-protocol MRI, FDG-PET, ictal-SPECT and interictal-MEG were discussed at the multispeciality Epilepsy Surgery Case-conference (ESC). Cases were reviewed with ictal-MEG SL presented only at the last ESC (after decision using other available modalities). Patients were grouped as VEEG localization and MRI-lesion concordant (Group-A), discordant (Group-B), and no MRI-lesion (Group-C). Final hypothesis or decision, surgical outcome in those operated, and how ictal-MEG data influenced them were recorded.
RESULTS: Five lesion-negative patients had identification of lesions after review of MRI with ictal-MEG SL. The difference between numbers of patients cleared for surgery without and with ictal MEG data was statistically significant (p=0.0044); but the difference in those cleared for phase II monitoring was not (p=1.00).

Ictal MEG influenced decisions on possibility of surgery in 9 and converted decisions of phase II monitoring in 11 patients to electrocorticography-guided lesionectomy (20 in all; Group A-11, Group B-4, Group C-5); five were operated, with good seizure-control on follow-up.
CONCLUSIONS: Delineation of IOZ by ictal-MEG helped convert DRE patients unsuitable for surgery or planned for phase II monitoring into candidates suitable for surgery, even ECoG-guided resections, and resulted in favorable outcomes in those who were operated.

DOI: 10.1016/j.seizure.2016.10.013
PMID: 27912111 [Indexed for MEDLINE]

116: Ranganath P, Matta D, Bhavani GS, Wangnekar S, Jain JM, Verma IC, Kabra M, Puri RD, Danda S, Gupta N, Girisha KM, Sankar VH, Patil SJ, Ramadevi AR, Bhat M, Gowrishankar K, Mandal K, Aggarwal S, Tamhankar PM, Tilak P, Phadke SR, Dalal A. Spectrum of SMPD1 mutations in Asian-Indian patients with acid sphingomyelinase (ASM)-deficient Niemann-Pick disease. Am J Med Genet A. 2016 Oct;170(10):2719-30. doi: 10.1002/ajmg.a.37817. PubMed PMID: 27338287.

Acid sphingomyelinase (ASM)-deficient Niemann-Pick disease is an autosomal recessive lysosomal storage disorder caused by biallelic mutations in the SMPD1 gene. To date, around 185 mutations have been reported in patients with ASM-deficient NPD world-wide, but the mutation spectrum of this disease in India has not yet been reported. The aim of this study was to ascertain the mutation profile in Indian patients with ASM-deficient NPD. We sequenced SMPD1 in 60 unrelated families affected with ASM-deficient NPD. A total of 45 distinct pathogenic sequence variants were found, of which 14 were known and 31 were novel. The variants included 30 missense, 4 nonsense, and 9 frameshift (7 single base deletions and 2 single base insertions) mutations, 1 indel, and 1 intronic duplication. The pathogenicity of the novel mutations was inferred with the help of the mutation prediction software MutationTaster, SIFT, Polyphen-2, PROVEAN, and HANSA. The effects of the identified sequence variants on the protein structure were studied using the structure modeled with the help of the SWISS-MODEL workspace program. The p. (Arg542*) (c.1624C>T) mutation was the most commonly identified mutation, found in 22% (26 out of 120) of the alleles tested, but haplotype analysis for this mutation did not identify a founder effect for the Indian population. To the best of our knowledge, this is the largest study on mutation analysis of patients with ASM-deficient Niemann-Pick disease reported in literature and also the first study on the SMPD1 gene mutation spectrum in India. © 2016 Wiley Periodicals, Inc.

DOI: 10.1002/ajmg.a.37817
PMID: 27338287

117: Rani L, Mathur N, Gogia A, Vishnubhatla S, Kumar L, Sharma A, Dube D, Kaur P, Gupta R. Immunoglobulin heavy chain variable region gene repertoire and B-cell receptor stereotypes in Indian patients with chronic lymphocytic leukemia. Leuk Lymphoma. 2016 Oct;57(10):2389-400. doi: 10.3109/10428194.2016.1153086. PubMed PMID: 26942309.

In chronic lymphocytic leukemia (CLL), the geographical bias in immunoglobulin heavy-chain variable (IGHV) gene usage lead us to analyze IGHV gene usage and B-cell receptor stereotypy in 195 patients from India. IGHV3, IGHV4, and IGHV1 families were the most frequently used. 20.5% sequences had stereotyped BCR and were clustered in 12 pre-defined and 6 novel subsets. Unmutated IGHV was significantly associated with reduced time to first treatment ($p < 0.033$) and poor overall survival (OS; $p = 0.01$). We observed a significant difference in OS

between IGHV1, IGHV3, and IGHV4 family cases (p=0.045) in early stage patients. Regarding subfamily usage, only IGHV1-69 expression was found to have statistically significant poor outcome (p=0.017). Our results from the analysis of various molecular and clinical features suggest that the expression of specific IGHV gene influences the outcome in early stage CLL, and hence its assessment may be added to the clinical leukemia laboratory armamentarium.

DOI: 10.3109/10428194.2016.1153086
PMID: 26942309

118: Rao N, Ramachandran R, Tandon N, Singh P, Kumar R. Laparoscopic adrenalectomy for pheochromocytoma-does size matter? A single surgeon comparative study. Transl Androl Urol. 2016 Oct;5(5):780-783. PubMed PMID: 27785436; PubMed Central PMCID: PMC5071191.

BACKGROUND: Surgical difficulty in laparoscopic adrenalectomy for pheochromocytoma increases with tumor size. We compared single surgeon outcomes of laparoscopic adrenalectomy for pheochromocytomas in patients with tumors smaller or greater than 4 cm to assess safety of the procedure.
METHODS: A retrospective review was performed of laparoscopic adrenalectomies for pheochromocytoma by a single surgeon over a 3-year period. All patients underwent lateral transperitoneal surgery. Operative and outcome data was retrieved and compared for tumors >4 cm versus smaller tumors.
RESULTS: We performed 28 laparoscopic adrenalectomies on 24 patients including four simultaneous bilateral surgeries. Fifteen tumors were greater than 4 cm in size (mean 6.3 cm) while 13 were smaller (mean 2.9 cm). Both groups had similar operating time (138 vs. 116 min; P=0.2) and blood loss (181 vs. 143 mL; P=0.41). The small tumor group had four Clavien-Dindo grade 1 and one grade 3a complication while the large tumor group had three grade 1 complications. There were no conversions to open surgery. Eighteen patients (75%) did not require any anti-hypertensive medications post-operatively.
CONCLUSIONS: Tumor size does not impact outcomes of laparoscopic adrenalectomy for pheochromocytomas. Larger tumors are associated with similar operative time, blood loss and complications as smaller ones.

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PMCID: PMC5071191
PMID: 27785436

Conflict of interest statement: The paper has previously been presented at the Asian Congress of Urology and conference abstracts were published as R Kumar, N Rao, R Ramachandran, P Singh, N Tandon. Laparoscopic adrenalectomy for pheochromocytoma: comparative outcome analysis of small versus large tumors. Int J Urol 2014;19:S114.

119: Reeta Kh, Prabhakar P, Gupta YK. Anticonvulsant activity of the antidepressant drug, tianeptine, against pentylenetetrazole-induced seizures mitigates cognitive impairment in rats. Behav Pharmacol. 2016 Oct;27(7):623-32. doi: 10.1097/FBP.0000000000000257. PubMed PMID: 27561095.

Treatment of depression, a common comorbidity in patients with epilepsy, is restricted as certain antidepressants are considered to be proconvulsants. In contrast, anticonvulsant effects have been reported with some antidepressants. In the present study, the effect of tianeptine, an antidepressant, was evaluated against pentylenetetrazole (PTZ)-induced seizures, cognitive impairment and oxidative stress in rats. Tianeptine was administered in three doses (20, 40 and 80 mg/kg) 30 min before PTZ (60 mg/kg, intraperitoneally). MK801, an N-methyl-D-aspartate antagonist, and naloxone, an opioid receptor antagonist, were administered with tianeptine to evaluate the involvement of N-methyl-D-aspartate and opioid receptors, respectively. Morris water maze, elevated plus maze and passive avoidance tests were performed for behavioural assessment. Brain malondialdehyde and reduced glutathione levels were estimated

as markers of oxidative stress. Tianeptine showed dose-dependent protection against PTZ seizures. Coadministration of tianeptine with MK801 potentiated the anticonvulsant effect of tianeptine. The protective effect of tianeptine against PTZ seizures was mitigated when tianeptine was administered with naloxone. Impairment of learning and memory by PTZ was prevented by tianeptine. Tianeptine also attenuated the seizure-induced increased oxidative stress. Thus, tianeptine showed an anticonvulsant effect along with amelioration of seizure-induced cognitive impairment and oxidative stress. Hence, tianeptine could be a useful drug in epileptic patients with depression, with the advantage of having both antidepressant and antiepileptic effects.

DOI: 10.1097/FBP.0000000000000257
PMID: 27561095

120: Sahai P, Singh G, Mondal D, Suri V, Julka PK. Solitary fibrous tumor of the sellar region treated with adjuvant radiation therapy. Asian J Neurosurg. 2016 Oct-Dec;11(4):449. PubMed PMID: 27695561; PubMed Central PMCID: PMC4974982.

The solitary fibrous tumor of central nervous system is rare. Herein, a case of solitary fibrous tumor arising from sellar region is described. A 60-year-old man underwent subtotal excision of the tumor because of extensive infiltration of optical and vascular structures. In view of the presence of residual tumor, he was treated with adjuvant radiation therapy. After a follow-up period of 1 year, there was no progression of the lesion evident on magnetic resonance imaging of the brain. Solitary fibrous tumor should be considered as one of the differential diagnosis of a mass lesion arising in sellar region. Immunohistochemistry with CD34 is valuable for discerning the diagnosis. Complete surgery should be the goal of treatment and adjuvant radiation therapy may be considered for residual or recurrent disease.

DOI: 10.4103/1793-5482.145186
PMCID: PMC4974982
PMID: 27695561

121: Sahoo MK, Arunraj ST, Srivastava AK, Sahoo RK, Kumar R, Bal C. Paraneoplastic syndrome turned out to be non-Hodgkin's lymphoma on (18)F-fluorodeoxyglucose positron emission tomography/computed tomography. Indian J Nucl Med. 2016 Oct-Dec;31(4):292-294. PubMed PMID: 27833317; PubMed Central PMCID: PMC5041420.

Paraneoplastic neurological syndromes (PNSs) are commonly encountered with underlying malignant pathology. Though anti--neuronal antibodies play a major role in the diagnosis of the underlying malignant pathology but at many times it becomes inconclusive. As early detection of the primary cause and its treatment gives the best result in such situations, there arises an early and accurate diagnostic need. We present a 65--year--old patient presenting with rapidly progressive quadriparesis with both distal and proximal involvement. With all routine work--up tests within normal limits, 18F-fluorodeoxyglucose positron emission tomography/computed tomography (PET/CT) was done which revealed multiple findings that suggested a diagnosis of lymphoma. In our case, PET/CT proved to be an important modality for finding the underlying malignant pathology in a suspected case of PNS.

DOI: 10.4103/0972-3919.187465
PMCID: PMC5041420
PMID: 27833317

122: Sahu MK, Singal A, Menon R, Singh SP, Mohan A, Manral M, Singh D, Devagouru V, Talwar S, Choudhary SK. Early enteral nutrition therapy in congenital cardiac repair postoperatively: A randomized, controlled pilot study. Ann Card Anaesth. 2016 Oct-Dec;19(4):653-661. doi: 10.4103/0971-9784.191550. PubMed PMID: 27716696; PubMed Central PMCID: PMC5070325.

BACKGROUND AND OBJECTIVES: Adequate nutritional supplementation in infants with cardiac malformations after surgical repair is a challenge. Critically ill infants in the early postoperative period are in a catabolic stress. The mismatch between estimated energy requirement (EER) and the intake in the postoperative period is multifactorial, predisposing them to complications such as immune deficiency, more infection, and growth failure. This study aimed to assess the feasibility and efficacy of enriched breast milk feed on postoperative recovery and growth of infants after open heart surgery.
METHODOLOGY: Fifty infants <6 months of age were prospectively randomized in the trial for enteral nutrition (EN) postoperatively from day 1 to 10, after obtaining the Institute Ethics Committee's approval. They were equally divided into two groups on the basis of the feed they received: Control group was fed with expressed breast milk (EBM; 0.65 kcal/ml) and intervention group was fed with EBM + energy supplementation/fortification with human milk fortifier (7.5 kcal/2 g)/Simyl medium-chain triglyceride oil (7.8 kcal/ml). Energy need for each infant was calculated as per EER at 90 kcal/kg/day, as the target requirement. The intra- and post-operative variables such as cardiopulmonary bypass and aortic cross-clamp times, ventilation duration, Intensive Care Unit (ICU), and hospital length of stay and mortality were recorded. Anthropometric and hematological parameters and infection control data were recorded in a predesigned pro forma. Data were analyzed using Stata 14.1 software.
RESULTS: The duration of mechanical ventilation, length of ICU stay (LOIS), length of hospital stay (LOHS), infection rate, and mortality rate were lower in the intervention group compared to the control group although none of the differences were statistically significant. Infants in control group needed mechanical ventilation for about a day more (i.e., 153.6 ± 149.0 h vs. 123.2 ± 107.0 h; P = 0.20) than those in the intervention group. Similarly, infants in control group stayed for longer duration in the ICU (13.2 ± 8.9 days) and hospital (16.5 ± 9.8 days) as compared to the intervention group (11.0 ± 6.1 days; 14.1 ± 7.0 days) (P = 0.14 and 0.17, respectively). The LOIS and LOHS were decreased by 2.2 and 2.4 days, respectively, in the intervention group compared to control group. The infection rate (3/25; 5/25) and mortality rate (1/25; 2/25) were lower in the intervention group than those in the control group. The energy intake in the intervention group was 40 kcal more (i.e., 127.2 ± 56.1 kcal vs. 87.1 ± 38.3 kcal) than the control group on the 10th postoperative day.
CONCLUSIONS: Early enteral/oral feeding after cardiac surgery is feasible and recommended. In addition, enriching the EBM is helpful in achieving the maximum possible calorie intake in the postoperative period. EN therapy might help in providing adequate nutrition, and it decreases ventilation duration, infection rate, LOIS, LOHS, and mortality.

DOI: 10.4103/0971-9784.191550
PMCID: PMC5070325
PMID: 27716696

123: Saini L, Chakrabarty B, Kumar A, Gulati S. A genetically proven case of Pelizaeus-Merzbacher disease: Clinicoradiological clues. Ann Indian Acad Neurol. 2016 Oct-Dec;19(4):533-535. PubMed PMID: 27994374; PubMed Central PMCID: PMC5144486.

124: Shalimar., Saraswat V, Singh SP, Duseja A, Shukla A, Eapen CE, Kumar D, Pandey G, Venkataraman J, Puri P, Narayanswami K, Dhiman RK, Thareja S, Nijhawan S, Bhatia S, Zachariah U, Sonika U, Varghese T, Acharya SK. Acute-on-chronic liver failure in India: The Indian National Association for Study of the Liver consortium experience. J Gastroenterol Hepatol. 2016 Oct;31(10):1742-1749. doi: 10.1111/jgh.13340. PubMed PMID: 26989861.

BACKGROUND AND AIM: The aim of this study was to analyze etiologies and frequency of hepatic and extrahepatic organ failures (OFs) and outcome of acute-on-chronic liver failure (ACLF) at 10 tertiary centers in India.

METHODS: In this retrospective study (2011-2014), patients satisfying Asian Pacific Association for the Study of the Liver definition of ACLF were included. Etiology of acute precipitating insult and chronic liver disease and outcomes were assessed. Occurrence and severity of OF were assessed by chronic liver failure-sequential organ failure assessment score.
RESULTS: The mean (±SD) age of 1049 consecutive ACLF patients was 44.7 ± 12.2 years; Eighty-two percent were men. Etiology of acute precipitants included alcohol 35.7%, hepatitis viruses (hepatitis A, hepatitis B, and hepatitis E) 21.4%, sepsis 16.6%, variceal bleeding 8.4%, drugs 5.7%, and cryptogenic 9.9%. Among causes of chronic liver disease, alcohol was commonest 56.7%, followed by cryptogenic and hepatitis viruses. Predictors of survival were analyzed for a subset of 381 ACLF patients; OF's liver, renal, coagulation, cerebral, respiratory, and failure were seen in 68%, 32%, 31.5%, 22.6%, 14.5%, and 15%, respectively. Fifty-seven patients had no OF, whereas 1, 2, 3, 4, and 5 OFs were recorded in 126, 86, 72, 28, and 12 patients, respectively. The mortality increased progressively with increasing number of OFs (12.3% with no OF, 83.3% with five OFs). During a median hospital stay of 8 days, 42.6% (447/1049) of patients died. On multivariate analysis by Cox proportional hazard model, elevated serum creatinine (hazard ratio [HR] 1.176), advanced hepatic encephalopathy (HR 2.698), and requirement of ventilator support (HR 2.484) were independent predictors of mortality.
CONCLUSIONS: Alcohol was the commonest etiology of ACLF. Within a mean hospital stay of 8 days, 42% patients died. OFs independently predicted survival.

DOI: 10.1111/jgh.13340
PMID: 26989861

125: Sareen N, Gupta A, Kapil R. Effect of Supplementation with Iron Fortified Biscuits on the Hemoglobin Status of Children in Rural Areas of Shimoga, Karnataka: Correspondence. Indian J Pediatr. 2016 Oct;83(10):1214. doi: 10.1007/s12098-016-2122-2. PubMed PMID: 27165473.

126: Sarkar S, Sakey S, Mathan K, Bharadwaj B, Kattimani S, Rajkumar RP. Assessing catatonia using four different instruments: Inter-rater reliability and prevalence in inpatient clinical population. Asian J Psychiatr. 2016 Oct;23:27-31. doi: 10.1016/j.ajp.2016.07.003. PubMed PMID: 27969074.

BACKGROUND AND AIMS: The present study aimed to assess inter-rater reliability and prevalence of catatonia according to four diagnostic methods: Bush Francis Catatonia Rating Scale (BFCRS) both screening and complete scale, Braunig's Catatonia Rating Scale (CRS), ICD 10 and DSM5.
METHODS: For inter-rater reliability, different raters evaluated patients using the definitions provides by the four scales: BFCRS Screen and Total, CRS, ICD10 and DSM5. Kippendorff'α was used to compute the inter-rater reliability. Concordance between different systems was assessed using spearman correlation. Prevalence of catatonia was studied using the four definitions in a clinical sample of consecutive adult admissions in a psychiatry ward of a tertiary care hospital.
RESULTS: The inter-rater reliability was found to be good for BFCRS Total (α=0.779), moderate for DSM5 and BFCRS screen (α=0.575 and α=0.514 respectively) and low for CRS and ICD10 (α=0.111 and α=0.018 respectively). BFCRS Total and DSM5 definitions of catatonia had highest concordance (rs=0.892 p<0.001). In the prevalence sample of consecutive hospital admissions, the prevalence was found to be highest with the definitions of BFCRS Screen and ICD 10 (10.3%, confidence intervals [CI] 3.9% to 16.7%), followed by BFCRS Total and DSM5 definitions 6.9%, CI 1.6% to 12.2%) and while CRS yielded the lowest prevalence rate (3.4%, CI 0% to 7.2%).
CONCLUSION: Different methods used to determine catatonia in the clinical sample yield different prevalence of this condition.

DOI: 10.1016/j.ajp.2016.07.003
PMID: 27969074 [Indexed for MEDLINE]

127: Sarkari A, Borkar SA, Mahapatra AK. Anal extrusion of migrated ventriculo-peritoneal shunt catheter: An unusual complication and review of literature. Asian J Neurosurg. 2016 Oct-Dec;11(4):459. PubMed PMID: 27695576; PubMed Central PMCID: PMC4974997.

Authors present an unusual case of anal extrusion of peritoneal end of ventriculo-peritoneal shunt in a 2-year-old male child. Pertinent literature is reviewed regarding this rare complication of a very commonly performed neurosurgical procedure.

DOI: 10.4103/1793-5482.150002
PMCID: PMC4974997
PMID: 27695576

128: Satapathy AK, Jain V, Ellard S, Flanagan SE. Hyperinsulinemic Hypoglycemia of Infancy due to Novel HADH Mutation in Two Siblings. Indian Pediatr. 2016 Oct 8;53(10):912-913. PubMed PMID: 27771675.

BACKGROUND: Hyperinsulinemia is the commonest cause of persistent hypoglycemia in infancy. Inactivating mutations in the genes ABCC8 and KCNJ11 are the commonest cause. Mutation in the HADH gene, which encodes the short-chain-L-3-hydroxyacyl-CoA dehydrogenase, is a rare cause.
CASE CHARACTERISTICS: Two Indian sisters who presented with hyperinsulinemic hypoglycemia of infancy.
OBSERVATION/INTERVENTION: A novel homozygous missense mutation in the HADH gene was identified in both the sisters, while the parents were found to be heterozygous carriers.
OUTCOME: Establishment of molecular diagnosis, optimization of therapy and counseling of parents regarding risk of recurrence in future pregnancy.
MESSAGE: HADH mutations are rare causes of hypoglycemia and can be mitigated with diazoxide and appropriate dietary therapy if identified early.

PMID: 27771675

129: Satapathy S, Choudhary V, Sagar R. Tools to assess psychological trauma & its correlates in child sexual abuse: A review & current needs in Asia. Asian J Psychiatr. 2017 Feb;25:60-73. doi: 10.1016/j.ajp.2016.10.012. Review. PubMed PMID: 28262176.

Absence of visible physical symptoms and limited capacity to express trauma directly, pose significant challenges in assessment of its exact nature of trauma and its correlates in child sexual abuse. There are numerous assessment tools however, deciding upon the appropriateness is often challenging in Asian socio-cultural and health care set up. A review would provide a ready reference to the practioner regarding the exact clinically utility of the tools and also would guide them in the direction of culture specific modifications. Computerized databases namely Medline, PsycINFO, Health and Psychosocial Instruments, and Social Sciences Citation Index were used. 52 scales were obtained and analysed in terms of scale characteristics, reference to theory and DSM, and cultural competency. Despite of a wide variety of methods, and newer instruments, many of the traditionally used techniques of child's internal thinking and emotional assessment appear outdated while reviewing the recent theories of CSA related psychological trauma. An integrated format, incroporating child-parent-clinicain rating, with multiple domain speciafic items and verbal and non-verbal tasks, is the current need in the Asian region.

DOI: 10.1016/j.ajp.2016.10.012
PMID: 28262176 [Indexed for MEDLINE]

130: Satyarthee GD, Kumar A. Posttraumatic giant fronto-orbito encephalocele causing cosmetic disfiguring forehead swelling with proptosis: Management. J Pediatr Neurosci. 2016 Oct-Dec;11(4):341-343. doi: 10.4103/1817-1745.199476. PubMed PMID: 28217161; PubMed Central PMCID: PMC5314852.

Fracture of the anterior skull base can occur following head injury. Growing skull fracture is usually observed in children under age of 3-years. It commonly involves frontal and parietal regions. However, orbit involvement is extremely uncommon. Authors report a case of giant orbital encephalocele with a forehead disfiguring swelling in a 4-years boy, who sustained head injury about 3½ years back. However, such delayed presentation of traumatic encephalocele is extremely uncommon and represents the first case in the Western literature, who had a successful postoperative outcome.

DOI: 10.4103/1817-1745.199476
PMCID: PMC5314852
PMID: 28217161

Conflict of interest statement: There are no conflicts of interest.

131: Saxena A, Karmakar S, Narang R. Successful Percutaneous Device Closure of Right Ventricular Perforation During Pericardiocentesis. JACC Cardiovasc Interv. 2016 Nov 28;9(22):e221-e222. doi: 10.1016/j.jcin.2016.09.031. PubMed PMID: 28102822.

132: Sengupta T, Jaryal AK, Mallick HN. Effects of NMDA and non-NMDA ionotropic glutamate receptors in the medial preoptic area on body temperature in awake rats. J Therm Biol. 2016 Oct;61:1-7. doi: 10.1016/j.jtherbio.2016.07.020. PubMed PMID: 27712650.

Glutamate when microinjected at the medial preoptic area (mPOA) influences brain temperature (Tbr) and body temperature (Tb) in rats. Glutamate and its various receptors are present at the mPOA. The aim of this study was to identify the contribution of each of the ionotropic glutamatergic receptors at the mPOA on changes in Tbr and Tb in freely moving rats. Adult male Wistar rats (n=40) were implanted with bilateral guide cannula with indwelling styli above the mPOA. A telemetric transmitter was implanted at the peritoneum to record Tb and locomotor activity (LMA). A precalibrated thermocouple wire implanted near the hypothalamus was used to assess Tbr. Specific agonist for each ionotropic glutamate receptor was microinjected into the mPOA and its effects on temperature and LMA were measured in the rats. The rats were also microinjected with the respective ionotropic receptor antagonists, 15min prior to the microinjection of each agonist. Amongst amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid (AMPA), N-methyl-d-aspartate (NMDA) and kainic acid, AMPA increased Tb and LMA when injected at the mPOA. Specific antagonists for AMPA receptors was able to attenuate this increase ($p<0.005$). Pharmacological blockade of NMDA was able to lower Tbr only. Microinjection of kainic acid and its antagonist had no effect on the variables. The finding of the study suggests that activation of the AMPA receptors at the mPOA, leads to the rise in body temperature.

DOI: 10.1016/j.jtherbio.2016.07.020
PMID: 27712650

133: Shankar V, Sharma P, Mittal R, Mittal S, Kumar U, Gamanagatti S. Effectiveness of arthroscopic elbow synovectomy in rheumatoid arthritis patients: Long-term follow-up of clinical and functional outcomes. J Clin Orthop Trauma. 2016 Oct-Dec;7(Suppl 2):230-235. doi: 10.1016/j.jcot.2016.05.011. PubMed PMID: 28053390; PubMed Central PMCID: PMC5197050.

OBJECTIVE: To determine the long-term clinical and functional results of arthroscopic elbow synovectomy in rheumatoid arthritis patients with refractory elbow synovitis in terms of improvement in pain, function, and active range of motion (AROM) or arc of motion.
METHOD: Fifteen rheumatoid elbows in 13 patients, not responding to DMARD therapy and with radiological changes not more than Larsen grade 3 were taken, who underwent arthroscopic elbow synovectomy. The main outcome measured in forms of Mayo Elbow Performance Scale (MEPS) score, measurement of pain using a Visual Analogue Scale (VAS), radiological angles of elbow, disease activity score (DAS-28), arc of motions (AOM) and complications, which were assessed at follow-up periods of 6 months, 24 months, and 30 months. Statistical analysis was done both qualitatively and quantitatively. Mann-Whitney U test, chi-square test, and Student t test were used as the statistical test for determining significance.
RESULTS: In the study group, the improvement was sustained and significant as compared to baseline (VAS 1.28, MEPS 81.07 and mean flexion range 85°) (p value <0.001). No significant complications were encountered postoperatively after elbow synovectomy.
CONCLUSION: The study assesses the long-term results of arthroscopic synovectomy in elbow synovitis secondary to rheumatoid arthritis with significant results favoring arthroscopic synovectomy.

DOI: 10.1016/j.jcot.2016.05.011
PMCID: PMC5197050 [Available on 2017-10-01]
PMID: 28053390

134: Sharma A, Jagadesan P, Chaudhari P, Das S, Bhaskar S, Thakar A, Sharma A, Mohanti BK. Six-year analysis of compliance to weekly concurrent chemoradiotherapy in head and neck carcinomas. Clin Otolaryngol. 2016 Oct;41(5):442-7. doi: 10.1111/coa.12580. PubMed PMID: 26523400.

OBJECTIVES: To evaluate treatment compliance to weekly concurrent chemoradiotherapy (CRT) in head and neck squamous cell carcinoma (HNSCC).
STUDY DESIGN: Retrospective analysis.
SETTING: Tertiary care hospital.
MAIN OUTCOME MEASURES: Overall treatment time (OTT), acute radiation morbidity and treatment completion rate without prolongation of overall treatment time of more than 2 days.
RESULTS: Three hundred and seventy-eight head and neck carcinoma patients treated with radical CRT with 70 Gy/35 fractions of radiotherapy with weekly cisplatin 40 mg/m(2) were included in the study. Median age was 52 years (range 22-77 years), oropharynx was most commonly (54%) involved site, and 55% were in stage IV disease. Majority (86%) of patients were able to complete cancer-directed therapy, median OTT was 52 days (46-140 days). Nineteen per cent of patients completed treatment without prolongation of OTT beyond 2 days and 68% of patients there completed treatment prolongation of OTT beyond 7 days. Nearly, sixty-six of the patients experienced grade II or higher acute radiation morbidities.
CONCLUSIONS: Delivery of weekly low-dose concurrent CRT is safe and feasible. Two-thirds of the patients experienced treatment prolongation of more than 2 days and 14% could not complete treatment. Results within in the study suggest to a greater need to lay emphasis on continuity of a course of radical CRT for HNSCC.

DOI: 10.1111/coa.12580
PMID: 26523400

135: Sharma N, Sankaran P, Agarwal T, Arora T, Chawla B, Titiyal JS, Tandon R, Satapathy G, Vajpayee RB. Evaluation of Intracameral Amphotericin B in the Management of Fungal Keratitis: Randomized Controlled Trial. Ocul Immunol Inflamm. 2016 Oct;24(5):493-7. doi: 10.3109/09273948.2015.1057597. PubMed PMID: 26400628.

PURPOSE: To evaluate the efficacy and safety of intracameral amphotericin B (ICAMB) in the management of fungal keratitis.
METHODS: In total, 45 eyes with smear-confirmed fungal keratitis with hypopyon were randomized into three treatment groups: Group I (topical antifungal treatment + oral antifungal); Group II (topical antifungal treatment + ICAMB + oral antifungal); and Group III (topical antifungal treatment + drainage of hypopyon + ICAMB + oral antifungal). The main outcome measures were treatment success rate, time to heal, visual acuity gain, and presence of complications.
RESULTS: There were no differences in the treatment success rates (p = 0.66), time to healing (p = 0.18), or mean final visual acuity (logMAR) (p = 0.8) between the three groups. The major complication observed was increased incidence of cataract in group III (40%), though it was statistically insignificant.
CONCLUSIONS: ICAMB does not offer any benefit over topical antifungal therapy when performed alone or associated with drainage of hypopyon.

DOI: 10.3109/09273948.2015.1057597
PMID: 26400628

136: Sharma S, Gupta DK. Diversities of H-type anorectal malformation: a systematic review on a rare variant of the Krickenbeck classification. Pediatr Surg Int. 2017 Jan;33(1):3-13. doi: 10.1007/s00383-016-3982-2. Review. PubMed PMID: 27695999.

Congenital H-type fistula is a rare congenital rectourogenital connection with an external anal opening in a normal or ectopic position. A systematic review was done to study the anatomical types of congenital H-type fistula, embryology, clinical presentation, relative gender distribution, associated anomalies, investigative modalities, and recent advances in treatment of these lesions. A PubMed search included H-type anorectal malformation; H-type anorectal malformations; H-type anorectal; and H-type congenital anorectal that gave 9;43;76;26 abstracts, respectively. Relevant studies and cited articles were studied omitting duplicate search. The reported incidence is 0.1-16 % of all anorectal malformation. The H-type anorectal malformation is 2.5-6 times more common in females and usually associated with a normal anus. In males, the anomaly is usually a variant with an ectopic anus or a perineal fistula. Anatomical types include anovestibular; rectovestibular; rectovaginal fistula in females and rectourethral (bulbar, prostatic, bladder neck) and rectovesical fistula in males. Variants identified include H-type fistula with perineal fistula, perineal groove, H-type sinus, H-type canal, and acquired H-type fistula. This review compiles the available literature over last six decades. Various surgical corrective procedures have been described. The high recurrence decreases with a learning curve and experience.

DOI: 10.1007/s00383-016-3982-2
PMID: 27695999

137: Sharma S. What's New in Critical Illness and Injury Science? Coagulants for local application in the surgical armamentarium! Int J Crit Illn Inj Sci. 2016 Oct-Dec;6(4):161-162. doi: 10.4103/2229-5151.195388. PubMed PMID: 28149817; PubMed Central PMCID: PMC5225755.

138: Sharma VK, Gupta V, Pathak M, Ramam M. An open-label prospective clinical study to assess the efficacy of increasing levocetirizine dose up-to four times in chronic spontaneous urticaria not controlled with standard dose. J Dermatolog

Treat. 2016 Oct 25:1-17. [Epub ahead of print] PubMed PMID: 27779432.

OBJECTIVE: The EAACI/GA(2)LEN/EDF/WAO recommendation of increasing antihistamines' dose up-to 4-times in urticaria not adequately controlled with the standard dose is largely based on expert opinion. The objective of this study is to test the current urticaria guidelines of up-dosing antihistamines as second-line treatment.
METHODS: This was an open-label study conducted prospectively on 113 patients with chronic spontaneous urticaria. All patients were treated with sequentially increasing doses of levocetrizine (5mg, 10mg, 15mg and 20mg/day) every week till the patients became completely asymptomatic or dose of 20mg/day reached. Urticaria Activity Score (UAS)-7, urticaria-related quality-of-life (CU-Q2oL) and patients' global assessment were used to assess treatment response.
RESULTS: Twenty-one (18.58%) patients became asymptomatic with levocetirizine 5mg/day, while fifty required higher doses of levocetirizine for complete control: 29/92 (31.52%), 6/63 (9.52%) and 15/57 (26.31%) with 10mg, 15mg and 20mg/day, respectively. The percentage of patients experiencing >75% improvement increased with increasing doses of levocetirizine: 26.54%, 53.98%, 60.17% and 69.91% with 5mg, 10mg, 15mg and 20mg/day respectively. Sequential up-dosing of levocetirizine produced a progressive improvement in both urticaria control (UAS-7) as well as quality-of-life (CU-Q2oL) without significantly increasing somnolence.
CONCLUSIONS: Our results support the current recommendations of increasing antihistamines up-to 4-times the standard dose in patients who fail the first-line treatment. Clinical trial registry number (CTRI/2016/07/007099).

DOI: 10.1080/09546634.2016.1246705
PMID: 27779432

139: Shukla G, Gupta A, Agarwal P, Poornima S. Behavioral effects and somnolence due to levetiracetam versus oxcarbazepine - a retrospective comparison study of North Indian patients with refractory epilepsy. Epilepsy Behav. 2016 Nov;64(Pt A):216-218. doi: 10.1016/j.yebeh.2016.08.005. PubMed PMID: 27756024.

PURPOSE: Levetiracetam (LEV) is often chosen early in the treatment of refractory epilepsy; however, its adverse effects have largely been studied as part of clinical trials. Oxcarbazepine and valproate (VPA) are the other commonly used AEDs and, hence, serve as good comparators. This study was conducted to evaluate behavioral abnormalities and somnolence among patients with epilepsy being treated with LEV and/or OXC compared with those receiving VPA.
METHOD: Data of consecutive patients attending our intractable epilepsy clinic over a 2 1/2-year period were reviewed, and patients with at least one seizure a month, who had been initiated on either or a combination of LEV, VPA, or OXC, were included for analysis. Data regarding behavioral adverse effects, daytime somnolence (EDS), and weight changes were collected apart from those regarding any major effect necessitating dose reduction or discontinuation of the AED.
RESULTS: Among a total of 445 patients screened, 292 (93 F, median age: 21years [range: 8-54]; 237 focal and 55 generalized epilepsy) fulfilled inclusion criteria. Median epilepsy duration was 11years. Levetiracetam had been introduced in 114 patients, VPA in 134, and OXC in 151 during the study period. Twenty-three were on LEV+OXC, 27 on LEV+VPA, and 33 on VPA+OXC. Behavioral disturbances (irritability, obsessive manifestations, aggressiveness, and frank psychosis) were observed in 43 patients; 23 on introduction of LEV (20.2%); LEV was discontinued in 10 (9%). Daytime somnolence was reported by 28 patients, 15 on OXC (10%); 8 received oral modafinil for the same, while none discontinued this AED. Only one patient on LEV and 3 on VPA reported EDS. Menstrual disturbances were reported by 9, weight gain by 3, and severe hair loss by 2 females on VPA.
CONCLUSION: Behavioral disturbances with levetiracetam are common among patients with refractory epilepsy while somnolence is common with oxcarbazepine. Antiepileptic drugs should be selected with this in perspective.

DOI: 10.1016/j.yebeh.2016.08.005
PMID: 27756024

140: Singh A, Bairwa M, Goel S, Bypareddy R, Mithra P. Prevalence and Predictors of Unmet Needs among the Elderly Residents of the Rural Field Practice Area of a Tertiary Care Centre from Northern India. Malays J Med Sci. 2016 Sep;23(5):44-50. PubMed PMID: 27904424; PubMed Central PMCID: PMC5101985.

BACKGROUND: Surrogate markers simple enough to be used by primary care workers have not been closely investigated by the community experts in rural Uttar Pradesh. We assessed the physical disabilities in activities of daily living (ADL) and unmet need in physical disabilities among rural elderly. Predictors of unmet needs in physical disabilities among the elderly were also identified.
METHODS: A community based cross-sectional study was conducted among elderly residents of the rural field practice area of a tertiary care centre in rural Uttar Pradesh. Three hundred and thirty five (335) participants aged 60 years and above from 9 villages were selected using the Probability Proportional to Size (PPS) sampling technique. Study tools were the proforma regarding socio-demographic details, socio-economic status and Stanford Health Assessment Questionnaire. Multivariate logistic regression analysis was performed to identify predictors of unmet needs.
RESULTS: 185 (55.2%) had physical disability in one or more activity limitation. Gender wise elderly females had more physical disability in one or more ADL categories than elderly males (66.8% vs. 42.0%). Almost one third (32.5%) of subjects had unmet need for one or more physical disabilities. the predictors of unmet needs that were identified in the study were female gender (P = 0.046), elderly aged 70 years and above (P = 0.032), those living alone (P = 0.035), low monthly family income (P = 0.044), financially fully dependent elderly (P = 0.0002), and those having 3 or more physical disabilities (P = 0.033).
CONCLUSIONS: The findings of the study highlight that large number of needs of the disabled are still unmet. Greater, targeted efforts are needed to identify at-risk elderly people living in the community. These predictors would act as surrogate markers and can be easily used by primary care workers to plan and provide services to the elderly people in rural communities.

DOI: 10.21315/mjms2016.23.5.6
PMCID: PMC5101985
PMID: 27904424

Conflict of interest statement: Conflict of Interests No

141: Singh H, Chakrawarti A, Guruprasad P, Singh H, Gupta YK. Difference in occurrence of muscle-related adverse effects of statins among male and female geriatric patients: A cross-sectional observational study. Niger Postgrad Med J. 2016 Oct-Dec;23(4):202-208. doi: 10.4103/1117-1936.196262. PubMed PMID: 28000641.

BACKGROUND: Statins are the most widely used agents for the treatment of dyslipidaemias in geriatric patients. Muscle-related adverse effects (MRAE) are one of the most common toxicities of statins. Female gender has been mentioned as the risk factor for the development of MRAE of statins; however, there are inconclusive data regarding the difference in the occurrence of MRAE among male and female geriatric users.
OBJECTIVES: The main objective was to find the difference in the occurrence of MRAE of statins among male and female geriatric statin users.
METHODS: In this cross-sectional, observational, comparative study, relevant patient information and MRAE associated with statin use were noted. Creatine phosphokinase (CPK) levels were obtained for all patients as this is considered as the marker for statin-induced muscle damage. The parameters were compared among male and female geriatric statin users.
RESULTS: 172 geriatric patients (86 male and 86 female statin users) were enrolled in the study. 38 (22%) geriatric statin users were found to have MRAE

and significantly more number of female patients had MRAE as compared to male patients (25 vs. 13 P = 0.02). Significantly more number of female patients had elevated CPK as compared to male patients (20 vs. 8, P = 0.01). No significant difference was observed in CPK levels among male and female statin users. CONCLUSIONS: Statin-induced MRAE tend to occur with more frequency in geriatric female patients as compared to male geriatric patients; however, further research in the form of prospective studies is warranted.

DOI: 10.4103/1117-1936.196262
PMID: 28000641

142: Singh I, Shakya S, Singh RK, Ahmad I, Goyal V, Shukla G, Srivastava MV, Faruq M, Srivastava AK. Iron related hemochromatosis (HFE) gene mutations in Friedreich Ataxia patients. Parkinsonism Relat Disord. 2017 Jan;34:71-72. doi: 10.1016/j.parkreldis.2016.10.015. PubMed PMID: 27814974.

143: Singh PM, Borle A, Trikha A, Michos L, Sinha A, Goudra B. Role of Periarticular Liposomal Bupivacaine Infiltration in Patients Undergoing Total Knee Arthroplasty-A Meta-analysis of Comparative Trials. J Arthroplasty. 2017 Feb;32(2):675-688.e1. doi: 10.1016/j.arth.2016.09.042. Review. PubMed PMID: 28029532.

BACKGROUND: Over last 2 years, many trials have evaluated newly approved liposomal bupivacaine for periarticular infiltration in total knee arthroplasty (TKA) with mixed results. Our meta-analysis attempts to consolidate the results and make evidence-based conclusions.
METHODS: Trails comparing periarticular infiltration of liposomal bupivacaine to conventional analgesic regimens for total knee arthroplasty published till June 2016 were searched in medical database. Comparisons were made for length of stay (LOS), postoperative pain scores, range of motion, and opioid consumption. Meta-regression was performed for LOS to evaluate various analgesic control subgroups.
RESULTS: Sixteen trials were included in the final analysis. Liposomal bupivacaine group showed a shorter LOS (reported in 13 subgroups) than control group by 0.17 ± 0.04 days (random effects, $P < .001$, $I(2) = 84.66\%$). Meta-regression for various types of control showed a predictability ($R(2)$) of 73%, $\tau(2) = 0.013$ (random effects, $P < .001$, $I(2) = 45.16$). Only femoral block subgroup attained statistically significant shorter LOS on splitting the control group. Numeric pain scores were lower for pooled control group and local anesthetic infiltration subgroup in immediate postoperative phase. Second postoperative day analgesia was statistically superior to overall clubbed controls and femoral block subgroup. Superiority and/or inferiority of liposomal bupivacaine could not be proven for opioid consumption and range of motion because of a small pooled sample size. Publication bias is likely for LOS (Egger test, X intercept = 2.42, $P < .001$).
CONCLUSION: Liposomal bupivacaine infiltration has questionable clinical advantage, as it marginally shortens patient's hospital stay especially in comparison with patients receiving analgesic femoral nerve block. Compared with conventional regimens, it can provide slightly superior yet sustained (till second postoperative day) perioperative analgesia. High heterogeneity suggests need for standardization of infiltration techniques for better predictability of results.

DOI: 10.1016/j.arth.2016.09.042
PMID: 28029532

144: Singh PM, Borle A, Gouda D, Makkar JK, Arora MK, Trikha A, Sinha A, Goudra B. Erratum to "Efficacy of palonosetron in postoperative nausea and vomiting (PONV)-a meta-analysis" [J Clin Anesth 2016:34(459-482)]. J Clin Anesth. 2016

Dec;35:492. doi: 10.1016/j.jclinane.2016.10.001. PubMed PMID: 27871581.

145: Singh S, Gupta S, Daga A, Siddharth V, Wundavalli L. Cost analysis of a disaster facility at an apex tertiary care trauma center of India. J Emerg Trauma Shock. 2016 Oct-Dec;9(4):133-138. PubMed PMID: 27904258; PubMed Central PMCID: PMC5113079.

INTRODUCTION: For the Commonwealth Games 2010, Jai Prakash Narayan Apex Trauma Centre (JPNATC) of India had been directed by the Director General Health Services and Ministry of Health and Family Welfare, Government of India, to set up a specialized unit for the definitive management of the injured/unwell athletes, officials, and related personnel coming for the Commonwealth Games in October 2010. The facility included a 20-bedded fully equipped ward, six ICU beds with ventilator capacity, one very very important person observation area, one perioperative management cubicle, and one fully modular and integrated operating room.
OBJECTIVE: The objective of this study was to calculate the cost of disaster facility at JPNATC, All India Institute of Medical Sciences, New Delhi.
METHODOLOGY: Traditional (average or gross) costing methodology was used to arrive at the cost for the provisioning of these services by this facility.
RESULTS: The annual cost of providing services at disaster facility at JPNATC, New Delhi, was calculated to be INR 61,007,334.08 (US$ 983,989.258) while the per hour cost was calculated to be INR 7061.03 of the total cost toward the provisioning of services by disaster facility where 26% was the capital cost and 74% was the operating cost. Human resource caters to maximum chunk of the expenditures (47%).
CONCLUSION: The results of this costing study will help in the future planning of resource allocation within the financial constraints (US$ 1 = INR 62 in the year 2013).

DOI: 10.4103/0974-2700.193347
PMCID: PMC5113079
PMID: 27904258

146: Singh S, Gupta S, Singh IB, Madaan N. Awareness and Attitude of Select Professionals toward Euthanasia in Delhi, India. Indian J Palliat Care. 2016 Oct-Dec;22(4):485-490. PubMed PMID: 27803572; PubMed Central PMCID: PMC5072242.

INTRODUCTION: The topic of euthanasia has induced differences not only among professionals in the medical fraternity but also in other fields as well. The dying process is being lengthened by the new state of art technologies erupting as such higher pace, and it is at the expense of standard quality of life and of a gracious death.
AIM: To study the awareness and attitude toward euthanasia among select professionals in Delhi.
METHODOLOGY: It was a questionnaire-based descriptive cross-sectional study. The study population included doctors, nurses, judges, lawyers, journalist, and social activists of Delhi. Tool included a sociodemographic questionnaire, two questions to know awareness regarding euthanasia and a modified euthanasia attitude scale used to measure attitude toward euthanasia. Data were analyzed using Stata 11.2.
RESULTS: Through our study, it is evident that professionals who participated in the study (judges, advocates, doctors, nurses, journalists, and social activists) in Delhi were familiar with the term euthanasia. No significant difference was seen in the attitude of professionals of different age group and sex toward euthanasia.
CONCLUSION: Through this study, it is found that judiciary group most strongly endorsed euthanasia. The attitude of doctors was elicited from mixed group with doctors belonging to different specialties. Oncologists are not in favor of any form of euthanasia. However, doctors from other specialties did support euthanasia.

DOI: 10.4103/0973-1075.191856
PMCID: PMC5072242
PMID: 27803572

147: Singh S, Singh N, Gulati GS, Ramakrishnan S, Kumar G, Sharma S, Bahl VK. Dual-Source Computed Tomography for Chronic Total Occlusion of Coronary Arteries. Catheter Cardiovasc Interv. 2016 Oct;88(4):E117-E125. doi: 10.1002/ccd.25516. PubMed PMID: 24740894.

OBJECTIVES: We compared dual-source CT (DSCT) and conventional angiography (CA) in evaluation of chronic total occlusion (CTO) of coronary arteries.
BACKGROUND: Percutaneous coronary intervention (PCI) in CTO is technically difficult and has comparatively lower success rate than intervention in non-occluded artery. Accurate assessment of lesion morphology is an important determinant of PCI success in CTO.
METHODS: Nineteen symptomatic patients (18 men, age: 58.6±10.6 years) with a CTO on CA were subjected to a DSCT (Definition, Siemens, Germany). Heart rate (HR) control was not performed. Dedicated post-processing software was used for lesion analysis on both modalities. Presence of bridging collaterals, stump morphology, calcification, side branch, proximal tortuosity, occlusion length, distal vessel interpretability, and distal lesions were statistically compared.
RESULTS: There were 20 CTOs. HR during DSCT ranged from 53 to 131 bpm. Bridging collaterals were seen in 3/20 (15%) lesions on CA and in none on DSCT. Stump anatomy and side branch were identified equally well. Plaque calcification was identified in 5/20 (25%) lesions on CA and in 12/20 (60%) lesions on DSCT (P=0.025). Nature and extent of calcification were better visualized on DSCT. No proximal tortuosity was noted. Distal vessel was better interpretable on DSCT (15/20; 75%) compared to CA (9/20; 45%) (P=0.05). No significant difference in lesion length was noted.
CONCLUSION: DSCT performs as well as CA for most features of CTO. Avoidance of need to control HR, ability to better detect and characterize calcium and to interpret distal vessels make it a useful pre-intervention investigation. © 2014 Wiley Periodicals, Inc.

DOI: 10.1002/ccd.25516
PMID: 24740894

148: Singh SP. Strategies for blood conservation in pediatric cardiac surgery. Ann Card Anaesth. 2016 Oct-Dec;19(4):705-716. doi: 10.4103/0971-9784.191562. Review. PubMed PMID: 27716703; PubMed Central PMCID: PMC5070332.

Cardiac surgery accounts for the majority of blood transfusions in a hospital. Blood transfusion has been associated with complications and major adverse events after cardiac surgery. Compared to adults it is more difficult to avoid blood transfusion in children after cardiac surgery. This article takes into account the challenges and emphasizes on the various strategies that could be implemented, to conserve blood during pediatric cardiac surgery.

DOI: 10.4103/0971-9784.191562
PMCID: PMC5070332
PMID: 27716703

149: Som A, Maitra S, Bhattacharjee S, Baidya DK. Goal directed fluid therapy decreases postoperative morbidity but not mortality in major non-cardiac surgery: a meta-analysis and trial sequential analysis of randomized controlled trials. J Anesth. 2017 Feb;31(1):66-81. doi: 10.1007/s00540-016-2261-7. PubMed PMID: 27738801.

BACKGROUND AND AIMS: Optimum perioperative fluid administration may improve postoperative outcome after major surgery. This meta-analysis and systematic review has been aimed to determine the effect of dynamic goal directed fluid therapy (GDFT) on postoperative morbidity and mortality in non-cardiac surgical patients.
MATERIAL AND METHODS: Meta-analysis of published prospective randomized controlled trials where GDFT based on non-invasive flow based hemodynamic measurement has been compared with a standard care. Data from 41 prospective randomized trials have been included in this study.
RESULTS: Use of GDFT in major surgical patients does not decrease postoperative hospital/30-day mortality (OR 0.70, 95 % CI 0.46-1.08, p = 0.11) length of post-operative hospital stay (SMD -0.14; 95 % CI -0.28, 0.00; p = 0.05) and length of ICU stay (SMD -0.12; 95 % CI -0.28, 0.04; p = 0.14). However, number of patients having at least one postoperative complication is significantly lower with use of GDFT (OR 0.57; 95 % CI 0.43, 0.75; p < 0.0001). Abdominal complications (p = 0.008), wound infection (p = 0.002) and postoperative hypotension (p = 0.04) are also decreased with used of GDFT as opposed to a standard care. Though patients who received GDFT were infused more colloid (p < 0.0001), there is no increased risk of heart failure or pulmonary edema and renal failure.
CONCLUSION: GDFT in major non- cardiac surgical patients has questionable benefit over a standard care in terms of postoperative mortality, length of hospital stay and length of ICU stay. However, incidence of all complications including wound infection, abdominal complications and postoperative hypotension is reduced.

DOI: 10.1007/s00540-016-2261-7
PMID: 27738801

150: Srivastava A, Ko SR, Ahn CY, Oh HM, Ravi AK, Asthana RK. Microcystin Biosynthesis and mcyA Expression in Geographically Distinct Microcystis Strains under Different Nitrogen, Phosphorus, and Boron Regimes. Biomed Res Int. 2016;2016:5985987. PubMed PMID: 27803926; PubMed Central PMCID: PMC5075592.

Roles of nutrients and other environmental variables in development of cyanobacterial bloom and its toxicity are complex and not well understood. We have monitored the photoautotrophic growth, total microcystin concentration, and microcystins synthetase gene (mcyA) expression in lab-grown strains of Microcystis NIES 843 (reference strain), KW (Wangsong Reservoir, South Korea), and Durgakund (Varanasi, India) under different nutrient regimes (nitrogen, phosphorus, and boron). Higher level of nitrogen and boron resulted in increased growth (avg. 5 and 6.5 Chl a mg/L, resp.), total microcystin concentrations (avg. 1.185 and 7.153 mg/L, resp.), and mcyA transcript but its expression was not directly correlated with total microcystin concentrations in the target strains. Interestingly, Durgakund strain had much lower microcystin content and lacked microcystin-YR variant over NIES 843 and KW. It is inferred that microcystin concentration and its variants are strain specific. We have also examined the heterotrophic bacteria associated with cyanobacterial bloom in Durgakund Pond and Wangsong Reservoir which were found to be enriched in Alpha-, Beta-, and Gammaproteobacteria and that could influence the bloom dynamics.

DOI: 10.1155/2016/5985987
PMCID: PMC5075592
PMID: 27803926 [Indexed for MEDLINE]

151: Sudarshan S, Gupta N, Kabra M. Genetic Studies in Autism. Indian J Pediatr. 2016 Oct;83(10):1133-40. doi: 10.1007/s12098-015-1989-7. PubMed PMID: 26935198.

Autism is a complex neurodevelopmental disorder, which has captured the attention of not only pediatricians but also the parents. From the symptoms until the final diagnosis, parents undergo a diagnostic odyssey that involves a battery of tests without much yield. This has led to an increase in the referrals to the clinical geneticists to rule out the possible genetic etiology that can have implications

for the parents for future pregnancy. This chapter focuses on the various genetic causes and their appropriate application in the evaluation of a child with Autism Spectrum Disorders (ASDs).

DOI: 10.1007/s12098-015-1989-7
PMID: 26935198

152: Talukdar R, Sareen A, Zhu H, Yuan Z, Dixit A, Cheema H, George J, Barlass U, Sah R, Garg SK, Banerjee S, Garg P, Dudeja V, Dawra R, Saluja AK. Release of Cathepsin B in Cytosol Causes Cell Death in Acute Pancreatitis. Gastroenterology. 2016 Oct;151(4):747-758.e5. doi: 10.1053/j.gastro.2016.06.042. PubMed PMID: 27519471; PubMed Central PMCID: PMC5037034.

BACKGROUND & AIMS: Experimental studies in acute pancreatitis (AP) suggest a strong association of acinar cell injury with cathepsin B-dependent intracellular activation of trypsin. However, the molecular events subsequent to trypsin activation and their role, if any, in cell death is not clear. In this study, we have explored intra-acinar events downstream of trypsin activation that lead to acinar cell death.
METHODS: Acinar cells prepared from the pancreas of rats or mice (wild-type, trypsinogen 7, or cathepsin B-deleted) were stimulated with supramaximal cerulein, and the cytosolic activity of cathepsin B and trypsin was evaluated. Permeabilized acini were used to understand the differential role of cytosolic trypsin vs cytosolic cathepsin B in activation of apoptosis. Cell death was evaluated by measuring specific markers for apoptosis and necrosis.
RESULTS: Both in vitro and in vivo studies have suggested that during AP cathepsin B leaks into the cytosol from co-localized organelles, through a mechanism dependent on active trypsin. Cytosolic cathepsin B but not trypsin activates the intrinsic pathway of apoptosis through cleavage of bid and activation of bax. Finally, excessive release of cathepsin B into the cytosol can lead to cell death through necrosis.
CONCLUSIONS: This report defines the role of trypsin in AP and shows that cytosolic cathepsin B but not trypsin activates cell death pathways. This report also suggests that trypsin is a requisite for AP only because it causes release of cathepsin B into the cytosol.

DOI: 10.1053/j.gastro.2016.06.042
PMCID: PMC5037034 [Available on 2017-10-01]
PMID: 27519471

153: Tandon V, Bansal S, Chandra PS, Suri A, Tripathi M, Sharma MC, Sarkari A, Mahapatra AK. Ganglioglioma: Single-institutional experience of 24 cases with review of literature. Asian J Neurosurg. 2016 Oct-Dec;11(4):407-411. PubMed PMID: 27695546; PubMed Central PMCID: PMC4974967.

BACKGROUND: Ganglioglioma is a common seizure associated tumor. The goal of this study was to observe the postoperative outcome in patients with gangliogliomas.
MATERIAL AND METHODS: A total 24 patients with gangliogliomas who underwent surgery at our institute from 2008 to 2011 were included. There were 13 males (54%) in our study. A retrospective analysis for the demographic profile, surgery and outcome was performed using STATA software. Literature on this subject was also reviewed, MEDLINE and PUBMED databases were searched.
OBSERVATIONS: Sixteen patients presented with signs and symptoms of raised intracranial pressure and 12 patients had seizure disorder. Average age at surgery was 20 years (range 7-50 years). Twelve each were located in the temporal lobe and extra-temporal location. Intra-operative electrocorticography (ECoG) alone in three and image guidance alone were used in two patients, respectively. Both ECoG and image guidance were used in one patient and none of them was used in 18 patients. Gross total resection was achieved in 17 patients. After a mean follow-up of 1.6 years (range 3 months to 2.5 years), out of 12 patients with

preoperative seizures, 10 (83.3%) were seizure free (Engel class-I) and 2 (16.6%) belonged to Engel class-II. None of the factors, including age at surgery, seizure duration prior to surgery, type of seizures, use of intra-operative ECoG and image guidance, extent of tumor resection, and surgical strategy proved to have significant correlation with postoperative seizure outcome.
CONCLUSIONS: Surgical treatment is effective and safe for patients with gangliogliomas. Neither intra-operative ECoG nor image guidance necessarily leads to better seizure control, although they are useful adjunct for achieving safe and complete tumor resection.

DOI: 10.4103/1793-5482.153500
PMCID: PMC4974967
PMID: 27695546

154: Taywade S, Tripathi M, Tandon V, Das CJ, Damle NA, Shamim SA, Thukral P, Bal C. Tc-99m TRODAT uptake in an osteoid tumor of clivus. Indian J Nucl Med. 2016 Oct-Dec;31(4):309-310. PubMed PMID: 27833323; PubMed Central PMCID: PMC5041426.

Tc-99m TRODAT is cocaine analog and binds to the dopamine transporter in vivo. Tc-99m TRODAT single-photon emission computed tomography/computed tomography. (SPECT/CT) is useful for demonstrating presynaptic dopaminergic dysfunction in patients with Parkinsonism. However, few reports have shown extrastriatal uptake of Tc-99m TRODAT. We present the case of a 67-year-old male who underwent Tc-99m TRODAT SPECT/CT for evaluation of Parkinsonism. In addition to tracer binding in the striatum, tracer uptake was noted in an osteoid tumor of the clivus. Integrated SPECT/CT enabled precise localization and characterization of the extrastriatal site of tracer binding and emphasizes the importance of such coincidental findings.

DOI: 10.4103/0972-3919.190805
PMCID: PMC5041426
PMID: 27833323

155: Toshyan V, Chawla L, Verma S, Bharti J, Dalal V, Roy KK, Kumar S. Lymphangioma Circumscriptum: A Great Mimicker. J Obstet Gynaecol India. 2016 Oct;66(Suppl 2):669-671. PubMed PMID: 27803540; PubMed Central PMCID: PMC5080251. Conflict of interest statement: Authors declare that they have no conflict of interest.

156: Tripathy K, Chawla R, Vohra R. Evaluation of the fundus in poorly dilating diabetic pupils using ultrawide field imaging. Clin Exp Optom. 2016 Oct 5. doi: 10.1111/cxo.12484. [Epub ahead of print] PubMed PMID: 27704602.

157: Tripathy K. Is Helicobacter pylori the culprit behind central serous chorioretinopathy? Graefes Arch Clin Exp Ophthalmol. 2016 Oct;254(10):2069-2070. PubMed PMID: 27364118.

158: Vashist A, Kaushik A, Vashist A, Jayant RD, Tomitaka A, Ahmad S, Gupta YK, Nair M. Recent trends on hydrogel based drug delivery systems for infectious diseases. Biomater Sci. 2016 Oct 18;4(11):1535-1553. Review. PubMed PMID: 27709137; PubMed Central PMCID: PMC5162423.

Since centuries, the rapid spread and cure of infectious diseases have been a major concern to the progress and survival of humans. These diseases are a global burden and the prominent cause for worldwide deaths and disabilities. Nanomedicine has emerged as the most excellent tool to eradicate and halt their spread. Various nanoformulations (NFs) using advanced nanotechnology are in demand. Recently, hydrogel and nanogel based drug delivery devices have posed new prospects to simulate the natural intelligence of various biological systems. Owing to their unique porous interpenetrating network design, hydrophobic drug incorporation and stimulus sensitivity hydrogels owe excellent potential as targeted drug delivery systems. The present review is an attempt to highlight the

recent trends of hydrogel based drug delivery systems for the delivery of therapeutic agents and diagnostics for major infectious diseases including acquired immune deficiency syndrome (AIDS), malaria, tuberculosis, influenza and ebola. Future prospects and challenges are also described.

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PMCID: PMC5162423 [Available on 2017-10-18]
PMID: 27709137

Conflict of interest statement: Authors declare no conflict of interest

159: Vazirani J, Ali MH, Sharma N, Gupta N, Mittal V, Atallah M, Amescua G, Chowdhury T, Abdala-Figuerola A, Ramirez-Miranda A, Navas A, Graue-Hernández EO, Chodosh J. Autologous simple limbal epithelial transplantation for unilateral limbal stem cell deficiency: multicentre results. Br J Ophthalmol. 2016 Oct;100(10):1416-20. doi: 10.1136/bjophthalmol-2015-307348. PubMed PMID: 26817481.

PURPOSE: To report outcomes of autologous simple limbal epithelial transplantation (SLET) performed for unilateral limbal stem cell deficiency (LSCD) at multiple centres worldwide.
METHODS: In this retrospective, multicentre, interventional case series, records of patients who had undergone autologous SLET for unilateral LSCD, with a minimum of 6 months of follow-up, were reviewed. The primary outcome measure was clinical success, defined as a completely epithelised, avascular corneal surface. Kaplan-Meier survival curves were constructed and survival probability was calculated. A Cox proportional hazards analysis was done to assess association of preoperative characteristics with risk of failure. Secondary outcome measures included the percentage of eyes achieving visual acuity of 20/200 or better, percentage of eyes gaining two or more Snellen lines and complications encountered.
RESULTS: 68 eyes of 68 patients underwent autologous SLET, performed across eight centres in three countries. Clinical success was achieved in 57 cases (83.8%). With a median follow-up of 12 months, survival probability exceeded 80%. Presence of symblepharon (HR 5.8) and simultaneous keratoplasty (HR 10.8) were found to be significantly associated with a risk of failure. 44 eyes (64.7%) achieved a visual acuity of 20/200 or better, and 44 eyes (64.7%) gained two or more Snellen lines. Focal recurrences of pannus were noted in 21 eyes (36.8%) with clinical success.
CONCLUSION: Autologous SLET is an effective and safe modality for treatment of unilateral LSCD. Clinical success rates and visual acuity improvement are equal to or better than those reported with earlier techniques.

DOI: 10.1136/bjophthalmol-2015-307348
PMID: 26817481

160: Verma P, Verma KK, Khanna N, Gupta S, Bhari N. Effectiveness of weekly azathioprine pulse in the treatment of chronic plaque psoriasis: an open-label study. Clin Exp Dermatol. 2016 Oct;41(7):717-22. doi: 10.1111/ced.12887. PubMed PMID: 27663145.

BACKGROUND: Azathioprine is a potent immunosuppressive drug that has been used in many immune-mediated diseases. There are a few reports of its use in psoriasis; however, azathioprine weekly pulse doses have not been evaluated in this disease.
AIM: The objective of this study was to evaluate the therapeutic effectiveness of weekly oral pulse doses of azathioprine for the treatment of chronic plaque psoriasis, and to determine the side effects of this regimen both clinically and biochemically.

METHODS: In this open-label clinical trial, a 300 mg bolus dose of azathioprine was given once every week orally for 24 weeks to patients with chronic plaque psoriasis having body surface area involvement of ≥ 10% and Psoriasis Area and Severity Index (PASI) of ≥ 10. Patients were evaluated every 4 weeks for 24 weeks to determine the response to treatment and any adverse effects (AEs), and then followed up for a further period of 12 weeks to determine any relapse of the disease.
RESULTS: There were 50 patients in the study, of whom 28 (56%) completed the 24 weeks of treatment and 27 (54%) completed the 12-week post-treatment follow-up. Azathioprine 300 mg weekly pulse was effective in achieving PASI 75 in 42% of patients, PASI 90 in 36% of patients and PASI 100 in 22% of patients. In five patients (10%), the therapy had to be withdrawn due to AEs.
CONCLUSION: Weekly azathioprine pulse appears to be an effective treatment for chronic plaque psoriasis, and can be used as an alternative therapy to other available therapeutic agents.

DOI: 10.1111/ced.12887
PMID: 27663145

161: Vikram NK, Latifi AN, Misra A, Luthra K, Bhatt SP, Guleria R, Pandey RM. Waist-to-Height Ratio Compared to Standard Obesity Measures as Predictor of Cardiometabolic Risk Factors in Asian Indians in North India. Metab Syndr Relat Disord. 2016 Dec;14(10):492-499. PubMed PMID: 27740885.

OBJECTIVE: The aim of this study was to compare the discriminatory ability of body mass index (BMI), waist circumference (WC), waist-to-hip ratio (WHR), and waist-to-height ratio (WHtR) in identifying the presence of cardiometabolic risk factors in Asian Indians.
METHODS: This cross-sectional study involved 509 subjects (278 males and 231 females) aged 20-60 years from New Delhi, India. Measurements included complete clinical examination, blood pressure, weight, height, WC, BMI, WHR and WHtR, fasting blood glucose, lipid profile, and fasting insulin levels. Receiver operating characteristic curve analyses were performed to compare predictive validity of various adiposity measures against the cardiometabolic risk factors (dyslipidemia, hyperinsulinemia, impaired fasting glucose, hypertension, and metabolic syndrome). The odds ratio for the presence of individual cardiometabolic risk factors in the presence of overweight, abdominal obesity, and high WHtR were calculated using logistic regression analysis.
RESULTS: WC had the highest area under ROC for all other cardiometabolic risk factors except hyperinsulinemia in males and for dyslipidemia, metabolic syndrome and presence of at least one cardiometabolic risk factor in females. For metabolic syndrome, WC, followed by WHtR, was observed to be the better predictor than other measures of adiposity, and WHtR appeared to be the best predictor for hypertension in both genders, particularly in women.
CONCLUSIONS: In the northern Asian Indian population with high prevalence of cardiometabolic risk factors, a combination of WC and WHtR appeared to be having better clinical utility than BMI and WHR in identifying individuals with cardiometabolic risk factors.

DOI: 10.1089/met.2016.0041
PMID: 27740885

162: Wyber R, Boyd BJ, Colquhoun S, Currie BJ, Engel M, Kado J, Karthikeyan G, Sullivan M, Saxena A, Sheel M, Steer A, Mucumbitsi J, Zühlke L, Carapetis J. Preliminary consultation on preferred product characteristics of benzathine penicillin G for secondary prophylaxis of rheumatic fever. Drug Deliv Transl Res. 2016 Oct;6(5):572-8. doi: 10.1007/s13346-016-0313-z. PubMed PMID: 27465618.

Rheumatic fever is caused by an abnormal immune reaction to group A streptococcal infection. Secondary prophylaxis with antibiotics is recommended for people after

their initial episode of rheumatic fever to prevent recurrent group A streptococcal infections, recurrences of rheumatic fever and progression to rheumatic heart disease. This secondary prophylaxis must be maintained for at least a decade after the last episode of rheumatic fever. Benzathine penicillin G is the first line antibiotic for secondary prophylaxis, delivered intramuscularly every 2 to 4 weeks. However, adherence to recommended secondary prophylaxis regimens is a global challenge. This paper outlines a consultation with global experts in rheumatic heart disease on the characteristics of benzathine penicillin G formulations which could be changed to improve adherence with secondary prophylaxis. Characteristics included dose interval, pain, administration mechanism, cold chain independence and cost. A sample target product profile for reformulated benzathine penicillin G is presented.

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BACKGROUND: Hepatocyte Paraffin 1 (Hep Par 1) was being extensively used to recognize the hepatocellular carcinomas, until recognition of its expression in tumors without hepatocellular differentiation.
AIMS AND OBJECTIVES: The aim of this study was to analyze if Hep Par 1 stain can serve as a specific marker of the small intestinal (SI) adenocarcinomas, versus other gastrointestinal tract (GIT) primary tumors.
MATERIALS AND METHODS: In this retrospective cross-sectional study, normal GIT mucosa (n - 60), corresponding adenocarcinomas (n - 60) and nodal metastatic foci (n - 60) from the same patients, including 10 cases each from the esophagus, stomach, SI periampullary region, colon, rectum, and gall bladder were included. H-score was calculated by multiplying the stain distribution and intensity scores. The H-scores were compared with other clinical and histological parameters.
RESULTS: While normal SI mucosa showed diffuse strong Hep Par 1 staining, normal esophageal and gastric epitheliums were negative and normal colon, rectal, and biliary epithelium showed weak focal positivity. Adenocarcinomas from all these sites, however, showed Hep Par 1 expression, irrespective of the tumor type, site or origin, and tumor stage. The corresponding metastatic sites also showed variable Hep Par 1 positivity, without any site specificity.
CONCLUSION: Hep Par 1 stain cannot help to determine the exact site of origin of primary GIT tumors. Its expression in adenocarcinomas across the GIT and their metastatic foci proves that it cannot be regarded as a marker of SI differentiation, especially in malignancy.

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Conflict of interest statement: Authors Rinchen Zangmo, Sunesh Kumar, Neeta Singh and Jyoti Meena declare no conflict of interest. Ethical Approval All procedures performed involving the human participant were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical

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BACKGROUND: There are few contemporary data on the mortality and morbidity associated with rheumatic heart disease or information on their predictors. We report the 2-year follow-up of individuals with rheumatic heart disease from 14 low- and middle-income countries in Africa and Asia.
METHODS: Between January 2010 and November 2012, we enrolled 3343 patients from 25 centers in 14 countries and followed them for 2 years to assess mortality, congestive heart failure, stroke or transient ischemic attack, recurrent acute rheumatic fever, and infective endocarditis.
RESULTS: Vital status at 24 months was known for 2960 (88.5%) patients. Two-thirds were female. Although patients were young (median age, 28 years; interquartile range, 18-40), the 2-year case fatality rate was high (500 deaths, 16.9%). Mortality rate was 116.3/1000 patient-years in the first year and 65.4/1000 patient-years in the second year. Median age at death was 28.7 years. Independent predictors of death were severe valve disease (hazard ratio [HR], 2.36; 95% confidence interval [CI], 1.80-3.11), congestive heart failure (HR, 2.16; 95% CI, 1.70-2.72), New York Heart Association functional class III/IV (HR, 1.67; 95% CI, 1.32-2.10), atrial fibrillation (HR, 1.40; 95% CI, 1.10-1.78), and older age (HR, 1.02; 95% CI, 1.01-1.02 per year increase) at enrollment. Postprimary education (HR, 0.67; 95% CI, 0.54-0.85) and female sex (HR, 0.65; 95% CI, 0.52-0.80) were associated with lower risk of death. Two hundred and four (6.9%) patients had new congestive heart failure (incidence, 38.42/1000 patient-years), 46 (1.6%) had a stroke or transient ischemic attack (8.45/1000 patient-years), 19 (0.6%) had recurrent acute rheumatic fever (3.49/1000 patient-years), and 20 (0.7%) had infective endocarditis (3.65/1000 patient-years). Previous stroke and older age were independent predictors of stroke/transient ischemic attack or systemic embolism. Patients from low- and lower-middle-income countries had significantly higher age- and sex-adjusted mortality than patients from upper-middle-income countries. Valve surgery was significantly more common in upper-middle-income than in lower-middle- or low-income countries.
CONCLUSIONS: Patients with clinical rheumatic heart disease have high mortality and morbidity despite being young; those from low- and lower-middle-income countries had a poorer prognosis associated with advanced disease and low education. Programs focused on early detection and the treatment of clinical rheumatic heart disease are required to improve outcomes.

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