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List of publications of AIIMS, New Delhi for the month of April, 2018
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1: A V T, Dinda AK, Koul V. Evaluation of nano hydrogel composite based on gelatin/HA/CS suffused with Asiatic acid/ZnO and CuO nanoparticles for second degree burns. Mater Sci Eng C Mater Biol Appl. 2018 Aug 1;89:378-386. doi: 10.1016/j.msec.2018.03.034. Epub 2018 Apr 9. PubMed PMID: 29752110.

In the present work, a hydrogel platform composed of biopolymer gelatin, and glycosaminoglycan's (Hyaluronic acid and Chondroitin sulfate) incorporated with Asiatic acid (a triterpenoid) and nanoparticles (Zinc oxide and Copper oxide) has been designed and developed to find out the efficacy of healing in second degree burn wounds in Wistar rats. The developed hydrogel composite has been characterized by physico-chemical methods such as; SEM, swelling, mechanical strength, degradation and drug release kinetics. Results showed that the morphology of composite scaffolds are porous with maximum water uptake capacity of 1068% and possessed tensile strength of ~0.196?MPa. Anti-microbial evaluation depicted increase in zone of inhibition with hydrogel containing gelatin?+?ZnO (5.3?±?0.2?mm in E. coli and 4.9?±?0.6?mm in S. aureus) and gelatin?+?CuO (4.8?±?0.7?mm in E. coli, 3.8?±?0.3?mm in S. aureus) in comparison to hydrogel composite scaffold. In-vitro cytocompatibility of developed hydrogel composite was assessed in terms of MTT and DNA quantification on L929 fibroblast cells. In-vivo studies for the composite scaffolds were evaluated on Wistar rats after second degree burn wounds were induced and studied for 28?days which showed the significant wound healing activity in comparison to the control (NeuSkin™ and Cotton guaze) in terms of DNA, total protein, hexosamine and hydroxyproline content. Histopathology studies showed the significant progress in re-epithelization, collagen fibers arrangement and angiogenesis in comparison to control. Additionally, a decrease of TNF-? and increase of MMP-2 expression on day 7 of animal experiment support healing. Furthermore, no toxicity was seen with the developed scaffolds suggesting their suitability to use as a wound dressing in second degree burns.

DOI: 10.1016/j.msec.2018.03.034
PMID: 29752110 [Indexed for MEDLINE]

2: Adhikari N, Biswas A, Gogia A, Sahoo RK, Garg A, Nehra A, Sharma MC, Bhasker S, Singh M, Sreenivas V, Chawla R, Joshi G, Kumar L, Chander S. A prospective phase II trial of response adapted whole brain radiotherapy after high dose methotrexate based chemotherapy in patients with newly diagnosed primary central nervous system lymphoma-analysis of acute toxicity profile and early clinical outcome. J Neurooncol. 2018 Aug;139(1):153-166. doi: 10.1007/s11060-018-2856-y. Epub 2018 Apr 9. PubMed PMID: 29633112.

BACKGROUND: The treatment of primary CNS lymphoma (PCNSL) comprises high dose methotrexate (HDMTX) based chemotherapy followed by whole brain radiotherapy (WBRT), the major drawback of which is long term neurotoxicity. We intended to assess the feasibility of response adapted WBRT in PCNSL in the Indian setting. METHODS: We screened 32 patients and enrolled 22 eligible patients with PCNSL from 2015 to 2017 in a prospective phase II trial. The patients underwent five 2-weekly cycles of induction chemotherapy with rituximab, methotrexate, vincristine, procarbazine. Patients with complete response(CR) to induction chemotherapy were given reduced dose WBRT 23.4 Gy/13 fractions/2.5 weeks while those with partial response (PR), stable or progressive disease (SD or PD) were given standard dose WBRT 45 Gy/25 fractions/5 weeks. Thereafter two cycles of consolidation chemotherapy with cytarabine were given. The primary endpoints of the study were assessment of response rate (RR) and progression free survival (PFS). The secondary endpoints of the study were assessment of overall survival

(OS), toxicity profile of treatment and serial changes in quality of life and neuropsychological parameters.
RESULTS: Out of 19 patients who completed HDMTX based chemotherapy, 10 (52.63%) patients achieved CR, 8 (42.11%) patients had PR and 1 patient had PD. After a median follow-up period of 11.25 months, the estimated median OS was 19 months. The actuarial rates of PFS and OS were respectively 94.1 and 68.2% at 1 year and 50.2 and 48.5% at 2 years. Three patients in reduced dose WBRT arm had recurrence and two of them died of progressive disease, whereas there was no recurrence or disease related death in standard dose WBRT arm. On univariate analysis of PFS, age???50 years and use of standard dose WBRT (45 Gy) led to significantly improved outcome (p value 0.03 and 0.02 respectively).
CONCLUSION: In patients with PCNSL, reduced dose WBRT after CR to HDMTX based chemotherapy may lead to suboptimal clinical outcome due to higher risk of recurrence, progression and early death. Trial Registration No CTRI/2015/10/006268.

DOI: 10.1007/s11060-018-2856-y
PMID: 29633112

3: Agarwal A, Raheja A, Borkar SA, Mahapatra AK. An Unusual Case of Split Cord Malformation with Simultaneous Ventral and Dorsal Bony Spur at a Single Site: A Technical Challenge. J Pediatr Neurosci. 2018 Apr-Jun;13(2):214-217. doi: 10.4103/jpn.JPN_99_17. PubMed PMID: 30090140; PubMed Central PMCID: PMC6057206.

Split cord malformation (SCM) with simultaneous ventral and dorsal bony spur at a single site is an extremely rare entity with only one other case reported so far. We present a second such case in a 13-month-old female child, who presented with a skin dimple over the lumbar region with overlying hairy patch without any associated lower limb weakness or urinary complaints. Imaging demonstrated a complex Type I SCM with simultaneous ventral and dorsal bony spur at L4-L5 level. Intraoperatively, the patient was confirmed to have a Type Ic SCM with a ventrally based bony spur going dorsally to attach on the hypertrophied posterior arch of L4 and a dorsal spur going ventrally to attach on the L4 vertebral body. After meticulous microsurgical excision of the spur, the child was stable and developed no fresh neurological deficits. We discuss the relevant surgical implications and possible embryological mechanisms involved in such a complex SCM.

DOI: 10.4103/jpn.JPN_99_17
PMCID: PMC6057206
PMID: 30090140

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

4: Agarwal K, Brunetto M, Seto WK, Lim YS, Fung S, Marcellin P, Ahn SH, Izumi N, Chuang WL, Bae H, Sharma M, Janssen HLA, Pan CQ, Ã‡elen MK, Furusyo N, Shalimar D, Yoon KT, Trinh H, Flaherty JF, Gaggar A, Lau AH, Cathcart AL, Lin L, Bhardwaj N, Suri V, Mani Subramanian G, Gane EJ, Buti M, Chan HLY; GS-US-320-0110; GS-US-320-0108 Investigators. 96â€¯weeks treatment of tenofovir alafenamide vs. tenofovir disoproxil fumarate for hepatitis B virus infection. J Hepatol. 2018 Apr;68(4):672-681. doi: 10.1016/j.jhep.2017.11.039. Epub 2018 Jan 17. PubMed PMID: 29756595.

BACKGROUND & AIMS: Tenofovir alafenamide (TAF) is a new prodrug of tenofovir developed to treat patients with chronic hepatitis B virus (HBV) infection at a lower dose than tenofovir disoproxil fumarate (TDF) through more efficient delivery of tenofovir to hepatocytes. In 48-week results from two ongoing, double-blind, randomized phase III trials, TAF was non-inferior to TDF in

efficacy with improved renal and bone safety. We report 96-week outcomes for both trials.
METHODS: In two international trials, patients with chronic HBV infection were randomized 2:1 to receive 25?mg TAF or 300?mg TDF in a double-blinded fashion. One study enrolled HBeAg-positive patients and the other HBeAg-negative patients. We assessed efficacy in each study, and safety in the pooled population.
RESULTS: At week 96, the differences in the rates of viral suppression were similar in HBeAg-positive patients receiving TAF and TDF (73% vs. 75%, respectively, adjusted difference -2.2% (95% CI -8.3 to 3.9%; p?=?0.47), and in HBeAg-negative patients receiving TAF and TDF (90% vs. 91%, respectively, adjusted difference -0.6% (95% CI -7.0 to 5.8%; p?=?0.84). In both studies the proportions of patients with alanine aminotransferase above the upper limit of normal at baseline, who had normal alanine aminotransferase at week 96 of treatment, were significantly higher in patients receiving TAF than in those receiving TDF. In the pooled safety population, patients receiving TAF had significantly smaller decreases in bone mineral density than those receiving TDF in the hip (mean % change -0.33% vs. -2.51%; p?<0.001) and lumbar spine (mean % change -0.75% vs. -2.57%; p?<0.001), as well as a significantly smaller median change in estimated glomerular filtration rate by Cockcroft-Gault method (-1.2 vs. -4.8?mg/dl; p?<0.001).
CONCLUSION: In patients with HBV infection, TAF remained as effective as TDF, with continued improved renal and bone safety, two years after the initiation of treatment. Clinicaltrials.gov number: NCT01940471 and NCT01940341.
LAY SUMMARY: At week 96 of two ongoing studies comparing the efficacy and safety of tenofovir alafenamide (TAF) to tenofovir disoproxil fumarate (TDF) for the treatment of chronic hepatitis B patients, TAF continues to be as effective as TDF with continued improved renal and bone safety. Registration: Clinicaltrials.gov number: NCT01940471 and NCT01940341.

DOI: 10.1016/j.jhep.2017.11.039
PMID: 29756595

5: Ahuja A, Tyagi S, Seth T, Pati HP, Gahlot G, Tripathi P, Somasundaram V, Saxena R. Comparison of Immunohistochemistry, Cytochemistry, and Flow Cytometry in AML for Myeloperoxidase Detection. Indian J Hematol Blood Transfus. 2018 Apr;34(2):233-239. doi: 10.1007/s12288-017-0849-1. Epub 2017 Jul 28. PubMed PMID: 29622864; PubMed Central PMCID: PMC5884971.

Acute Myeloid Leukemia (AML) as per World Health Organization (WHO 2008) classification is on the basis of the antigenic characterization, enzymes restriction in the neoplastic myeloid cells and the specific translocations/mutations. AML can be assessed and differentiated by flowcytometry (FCM)/immunohistochemistry (IHC)/cytochemistry techniques. Myeloperoxidase (MPO) is an unequivocal marker to differentiate AML from the acute lymphoblastic leukemia. Despite FCM popularity, it has its limitations, in form of 'dry-tap', cost, and inability of being performed by retrospective analysis. IHC, though an old technique has overcome these disadvantages of FCM. Cytochemistry, on the other hand has its own advantages in being cost-effective; technically easy to do while its disadvantages are its inability to be carried out in the old samples, 'dry-tap' conditions in aleukemic leukemia. There has been non-uniformity in the literature among these techniques especially concerning their sensitivity for MPO. A prospective study was done at All India Institute of Medical Sciences New Delhi from 01 July 2014 to 30 Nov 2015 to include 120 diagnosed acute myeloid leukemia cases. Myeloperoxidase stain was done by cytochemistry, immunohistochemistry and flow cytometry and results were compared. There were 28

cases which showed discrepancies. Out of these 28 cases immunohistochemistry showed positivity in majority (22 cases) followed by flow cytometry (14 cases). Therefore it is important to employ more than one technique and IHC must be included for detection of MPO in all suspected cases of AML especially when negative with FCM .

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PMID: 29622864

Conflict of interest statement: Compliance with Ethical StandardsThe authors declare that they have no conflict of interest.Informed consent was obtained from all individual participants included in the study.The present study is in compliance with Ethical Standards.

6: Akhter MZ, Sharawat SK, Kumar V, Kochat V, Equbal Z, Ramakrishnan M, Kumar U, Mathur S, Kumar L, Mukhopadhyay A. Aggressive serous epithelial ovarian cancer is potentially propagated by EpCAM(+)CD45(+) phenotype. Oncogene. 2018 Apr;37(16):2089-2103. doi: 10.1038/s41388-017-0106-y. Epub 2018 Jan 30. PubMed PMID: 29379166.

Epithelial ovarian carcinoma (EOC) patients often acquire resistance against common chemotherapeutic drugs like paclitaxel and cisplatin. The mechanism responsible for the same is ambiguous. We have identified a putative drug-resistant tumour cell phenotype (EpCAM+CD45+) in the ascitic fluid of EOC patients, which appears to originate from the primary tumour. These cells represent the major tumour burden and are more drug resistant compared to EpCAM+ tumour cells due to the over-expression of SIRT1, ABCA1 and BCL2 genes. We have found that the entire EpCAM+CD45+ population is highly invasive with signature mesenchymal gene expression and also consists of subpopulations of ovarian cancer stem cells (CD133+ and CD117+CD44+). Additionally, we demonstrate that the EpCAM+CD45+ tumour cells over-express major histocompatibility complex class I antigen, which enable them to evade the natural killer cell-mediated immune surveillance. Preliminary evidence obtained in OVCAR-5 cells suggests that exosomes, secreted by non-tumour cells of the ascitic fluid, play an important role in rendering drug resistance and invasive properties to the cancer cells. Identification of such aggressive tumour cells and deciphering their origin is important for designing better drug targets for EOC.

DOI: 10.1038/s41388-017-0106-y
PMID: 29379166

7: Arora G, Bandopadhyaya G. Paradigm shift in theranostics of neuroendocrine tumors: conceptual horizons of nanotechnology in nuclear medicine. Ann Nucl Med. 2018 Apr;32(3):151-164. doi: 10.1007/s12149-018-1235-2. Epub 2018 Jan 27. Review. PubMed PMID: 29374820.

We present a comprehensive review of Neuroendocrine Tumors (NET) and the current and developing imaging and therapeutic modalities for NET with emphasis on Nuclear Medicine modalities. Subsequently, nanotechnology and its emerging role in cancer management, especially NET, are discussed. The article is both educative and informative. The objective is to provide an insight into the developments made in nuclear medicine and nanotechnology towards management of NET, individually as well as combined together.

DOI: 10.1007/s12149-018-1235-2
PMID: 29374820 [Indexed for MEDLINE]

8: Arora U, Kedia S, Garg P, Bopanna S, Jain S, Yadav DP, Goyal S, Gupta V, Sahni P, Pal S, Dash NR, Madhusudhan KS, Sharma R, Makharia G, Ahuja V. Colonic Crohn's Disease Is Associated with Less Aggressive Disease Course Than Ileal or Ileocolonic Disease. Dig Dis Sci. 2018 Jun;63(6):1592-1599. doi: 10.1007/s10620-018-5041-4. Epub 2018 Apr 2. PubMed PMID: 29611078.

BACKGROUND: The literature on disease characteristics of colonic Crohn's disease (CD) is sparse, especially from Asia, where the burden of inflammatory bowel disease is on the rise. The present study aims to describe the disease characteristics of colonic CD, and compare it with that of ileal/ileocolonic disease.
METHODS: This retrospective study included adult patients of CD (diagnosed by standard criteria, follow-up duration?>?6 months) on follow-up between August 2004 and January 2016. The disease location was classified by Montreal classification. The data were recorded on demographic characteristics, smoking status, disease phenotype, disease course, treatment received, hospitalization and surgeries.
RESULTS: Of 406 CD patients, 123 had colonic [mean age (at onset) 30.4?±?13.2 years, 59.3% males] and 265 had ileal/ileocolonic disease [mean age (at onset) 32.9?±?13.8 years, 61.5% males] while 18 patients had isolated upper GI disease. The frequency of inflammatory behavior (B1 phenotype; 61.8 vs. 46.4%, p?=?0.003), perianal disease (23.6 vs. 4.5%, p?<?0.001), and extra-intestinal manifestation (42.3 vs. 30.2%, p?=?0.019) was higher in colonic than ileal/ileocolonic CD. Though not statistically significant, requirement of atleast one course of steroid was lower in colonic CD (72.7 vs. 84.2%, p?=?0.098). Although there was no difference in the frequency of hospitalization (30.1 vs. 27.1%, p?=?0.45), the overall requirement for surgery was significantly lower in colonic CD (17.1 vs. 26.1%, p?=?0.032) and patients with colonic disease had a lower cumulative probability of first surgery in the first 10 years of follow-up [Hazard ratio 0.556 (95% CI 0.313-0.985), p?=?0.045].
CONCLUSION: Colonic CD was associated with less aggressive disease behavior and lower requirement of surgery as compared to ileal/ileocolonic CD.

DOI: 10.1007/s10620-018-5041-4
PMID: 29611078 [Indexed for MEDLINE]

9: Bagri NK, Bagri N, Jana M, Gupta AK, Wadhwa N, Lodha R, Kabra SK, Chandran A, Aneja S, Chaturvedi MK, Sodhi J, Fitzwater SP, Chandra J, Rath B, Kainth US, Saini S, Black RE, Santosham M, Bhatnagar S. Efficacy of Oral Zinc Supplementation in Radiologically Confirmed Pneumonia: Secondary Analysis of a Randomized Controlled Trial. J Trop Pediatr. 2018 Apr 1;64(2):110-117. doi: 10.1093/tropej/fmx036. PubMed PMID: 28575379.

Objective: To evaluate the effect of zinc as an adjuvant therapy in radiologically confirmed pneumonia in children 2-24?months of age.
Patients and Methods: We analyzed data of 212 children with pneumonia for whom chest X-ray films were available at enrollment and at least two radiologists agreed on the diagnosis of pneumonia. We compared the time to recovery in the two groups (n?=?121, zinc group and n?=?91, placebo group) using a Cox proportional hazards regression model.
Results: Time to recovery was similar in both groups [median interquartile range: zinc, 84?h (64, 140?h); placebo, 85?h (65, 140?h)]. The absolute risk reduction for treatment failure was 5.2% (95% confidence interval: -4.8, 15.1) with zinc supplementation.
Conclusion: There was no significant beneficial effect of zinc on the duration of recovery or risk of treatment failure in children with radiologically confirmed pneumonia.

DOI: 10.1093/tropej/fmx036
PMID: 28575379

10: Balhara YPS, Harshwardhan M, Kumar R, Singh S. Extent and pattern of problematic internet use among school students from Delhi: Findings from the cyber awareness programme. Asian J Psychiatr. 2018 Apr;34:38-42. doi: 10.1016/j.ajp.2018.04.010. Epub 2018 Apr 3. PubMed PMID: 29631149.

The student population is likely to be vulnerable to problems associated with increased online activity. We present the findings on extent and pattern of problematic internet use based on observations from a cyber awareness initiative undertaken in national capital city of New Delhi. A total of 25 schools were enrolled in the first phase of the initiative. The students in the middle, high, secondary and senior secondary grades were eligible for inclusion in the initiative. The Generalized Problematic Internet Use Scale 2 was used to assess problematic internet use. Correlation analysis was done using Pearson's correlation. A binary logistic regression was carried to see how various variables predicted the GPIUS scores. The level of statistical significance was kept at p?<?0.05 for all the tests. A total of 6291 students participated in first phase. Around 19% of study participants reported problematic internet use and 37% used internet for mood regulation. Male gender, older age, studying in senior grades, and owning a personal device were associated with higher rates of problematic internet use. Use of internet for accessing social media, online gaming, and recreational surfing is associated with problematic internet use, while use of internet for educational activities was associated with lesser problems. There is a need to cover all students under cyber awareness program in order to facilitate safe and healthy use of internet.

DOI: 10.1016/j.ajp.2018.04.010
PMID: 29631149 [Indexed for MEDLINE]

11: Bansal R, Haque MA, Yadav P, Gupta D, Ethayathulla AS, Hassan MI, Kaur P. Estimation of structure and stability of MurE ligase from Salmonella enterica serovar Typhi. Int J Biol Macromol. 2018 Apr 1;109:375-382. doi: 10.1016/j.ijbiomac.2017.12.087. Epub 2017 Dec 16. PubMed PMID: 29258895.

MurE ligase catalyzes the assembly of peptide moiety, an essential component of bacterial cell wall. We have explored the conformational stability and unfolding equilibrium behaviour of the protein MurE ligase by determining the conformational free energy, entropy and enthalpy parameters under stress conditions. MurE from Salmonella enterica Serovar Typhi was cloned, expressed and purified. Conformational changes associated with increasing concentration of GdmCl- and urea-induced denaturation of MurE were monitored using Circular Dichroism (CD) and fluorescence spectroscopies. The secondary structural content of protein estimated by CD experiment is in close agreement with the predicted MurE ligase structure by homology modeling. Denaturant-induced transition curve was analyzed for thermodynamic parameters. Average values for MurE ligase of ?GD0?=?3.13?kcal?mol-1, m?=?1.52?kcal?mol-1?M-1 and Cm (=?GD0/m)?=?2.05?M were calculated in the presence of GdmCl whereas in the case of urea these were ?GD0?=?3.04?kcal?mol-1, m?=?1.20?kcal?mol-1?M-1 and Cm (=?GD0/m)?=?2.53?M. The observed superposition of normalized transition curve of two independent optical properties suggested that GdmCl- and urea-induced denaturation follow a two-state process.

DOI: 10.1016/j.ijbiomac.2017.12.087
PMID: 29258895 [Indexed for MEDLINE]

12: Barik M, Bajpai M, Malhotra A, Samantaray JC, Dwivedi S, Das S. Genome-Wide Association Study in Craniosynostosis Condition Using Innovative Systematic Bioinformatic Analysis Tools and Techniques: Future Prospective and Clinical Practice. J Pediatr Neurosci. 2018 Apr-Jun;13(2):170-175. doi: 10.4103/jpn.JPN_71_17. PubMed PMID: 30090130; PubMed Central PMCID: PMC6057197.

Background: Craniosynostosis (CS) conditions are included with the premature fusion of one or more multiple cranial sutures. As the second leading and most common craniofacial anomaly and orofacial clefts globally. Syndromic and nonsyndromic CS (NSCS) occur as a part of a genetic syndrome unlike Apert, Crouzon, Pfeiffer, Muenke, and Saethre-Chotzen syndromes. Approximately, 90% of the cases of CS arises from NSCS group and it is now a great challenge for the researcher and neurosurgeon for Indian-origin children, a great burden worldwide. Material and Methods: Study design: Prospective study of analysis sequence pattern on CS and NSCS from January 2007 to 2018 was carried out.Inclusion criteria: Diagnosed cases in syndromic and NSCS patients between 3 months and 14 years of age either preoperative or postoperative were included in the study of both groups (syndromic and NSCS).Exclusion criteria: Patients with primary microcephaly (secondary CS), postural plagiocephaly, incomplete data, no visual perception, and who were lost to follow-up, and who had no interest to participate the study were excluded from the study.Bioinformatic analysis: We have performed systematic bioinformatic analysis for all responsible genes by combining with using through the GeneDecks, Gene Runner, DAVID, and STRING databases.Genes testing: FGF family genes, MSX genes, such as Irf6, TP63, Dlx2, Dlx5, Pax3, Pax9, Bmp4, Tgf-beta2, and Tgf-beta3 were found to be involved in Cleft lip and cleft palate (CL/P), and Fgfr2, Fgfr1, Fgfr3, and TWIST, MSX, MSX1, 2 were found to be involved in both the groups of CS (SCS + NSCS). Results: FGFR, MSX, Irf6, TP63, Dlx2, Dlx5, Pax3, Pax9, Bmp4, Tgf-beta2, and Tgf-beta3 demonstrated and find out that in CL/P, and Fgfr2, Fgfr1, Fgfr3, and Twist1 had accurate sequence data with more than accuracy of 95% reported with proper order with additional anomalies CS through newly developed tools. Conclusion: Newly developed techniques of GeneDecks, Gene Runner, DAVID, and STRING databases gave better picture to analyze the larger population, patients (SCS + NSCS) with complex genetic, maternal, parental age, environmental, and stochastic factors contributing to NSCS networking, signaling, and pathways involvement. This bioinformatic tools analyzed better prediction of CS and NSCS sequences guiding us the newer invention modalities of pattern of screening and further development of recent future application.

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PMCID: PMC6057197
PMID: 30090130

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

13: Barwad A, Ramteke PP, Gamanagatti S. Papillary Carcinoma Thyroid Presenting as Huge Scalp Metastases. J Cytol. 2018 Apr-Jun;35(2):126-127. doi: 10.4103/JOC.JOC_133_17. PubMed PMID: 29643664; PubMed Central PMCID: PMC5885603.

14: Basnet B, Bhushan A, Khan R, Kumar G, Sharma VK, Sharma A, Gupta S. Plasma & urinary catecholamines & urinary vanillylmandelic acid levels in patients with generalized vitiligo. Indian J Med Res. 2018 Apr;147(4):384-390. doi: 10.4103/ijmr.IJMR_657_16. PubMed PMID: 29998874; PubMed Central PMCID:

PMC6057259.

Background & objectives: Vitiligo is an acquired skin disease characterized by depigmented areas of the skin. Increased release of catecholamines from autonomic nerve endings in microenvironment of melanocytes in affected skin might be involved in the aetiopathogenesis of vitiligo. Levels of catecholamines are considered as being related to onset or worsening of the disease. Therefore, in this study, the role of catecholamines was evaluated in mapping disease stability and outcome of vitiligo patients undergoing melanocyte transfer.
Methods: In this study, circulatory and urinary levels of catecholamine (CA) and vanillylmandelic acid (VMA) were determined in 45 individuals (30 vitiligo patients and 15 healthy controls) using ELISA.
Results: A significant increase for plasma and urinary catecholamines along with VMA was observed as compared to healthy controls. When the pre- and post-intervention levels were analyzed in responders and non-responders, respectively, only dopamine showed significant decline in urine, rest of the molecules in plasma as well as urine showed non-significant decline except VMA which showed insignificant increase.
Interpretation & conclusions: Levels of plasma/urinary epinephrine, and plasma dopamine, could not be established as biomarkers for disease stability or successful outcome of autologous melanocyte transfer in generalized vitiligo patients. However, dopamine (urine) might be of help in determining the stability in patients with generalized vitiligo undergoing melanocyte transfer. Further studies need to be done on a large sample of patients to confirm our findings.

DOI: 10.4103/ijmr.IJMR_657_16
PMCID: PMC6057259
PMID: 29998874

Conflict of interest statement: None

15: Bhalla AS, Das A, Naranje P, Goyal A, Guleria R, Khilnani GC. Author's Reply. Indian J Radiol Imaging. 2018 Apr-Jun;28(2):268-269. doi: 10.4103/ijri.IJRI_85_18. PubMed PMID: 30050256; PubMed Central PMCID: PMC6038226.

16: Bhardwaj N, Kakkar A, Irugu DVK. Small Cell Neuroendocrine Carcinoma: A Rare Nasopharyngeal Malignancy with Aggressive Clinical Course. Indian J Otolaryngol Head Neck Surg. 2018 Sep;70(3):454-458. doi: 10.1007/s12070-018-1344-1. Epub 2018 Apr 12. PubMed PMID: 30211108; PubMed Central PMCID: PMC6127052.

Primary small cell neuroendocrine carcinoma is uncommon in head and neck region, with occasional cases in nasopharynx. Distinction from other round cell tumors is imperative to ensure optimal patient management. We present a case of a 30-year-old woman who presented with a rapidly growing nasopharyngeal mass.

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PMCID: PMC6127052 [Available on 2019-09-01]
PMID: 30211108

Conflict of interest statement: The authors declare that they have no conflict of interest.This article is a case report and does not contain any studies with human participants or animals performed by any of the authors.Informed consent was obtained from the patient included in the study.

17: Bhardwaj S, Goyal S, Yadav AK, Goyal A. Multi-organ IgG4-related disease: Demystifying the diagnostic enigma. J Postgrad Med. 2018 Apr-Jun;64(2):119-122. doi: 10.4103/jpgm.JPGM_778_16. PubMed PMID: 29067928; PubMed Central PMCID:

PMC5954809.

IgG4-related disease (IgG4-RD) is a multisystemic mass forming immune-mediated disease entity, commonly creating confusion and diagnostic challenges. We present a case of a 25-year-old female who presented with bilateral orbital masses, lymphadenopathy, paraspinal and renal masses, which clinicoradiologically simulated lymphoma. The lymph node biopsy revealed interfollicular sheets of plasma cells creating confusion with Castleman's disease and marginal zone lymphoma. The orbital biopsy revealed ductular destruction, periductular plasma cells, and fibrosis, mimicking Sjogren's syndrome and Castleman's disease. However, the correlation of the clinical features with histopathological findings, IgG4 immunopositivity, and serum studies helped in clinching the diagnosis. This case presents an uncommon combination of clinical features infrequently reported in literature. Furthermore, and more importantly, it highlights the need to keep a differential of IgG4-RD in mind, to aid early and correct treatment of the disease.

DOI: 10.4103/jpgm.JPGM_778_16
PMCID: PMC5954809
PMID: 29067928

Conflict of interest statement: There are no conflicts of interest

18: Bhatnagar S. Silver Jubilee Conference of Indian Association of Palliative Care-A Reflection. Indian J Palliat Care. 2018 Apr-Jun;24(2):125-126. doi: 10.4103/IJPC.IJPC_55_18. PubMed PMID: 29736111; PubMed Central PMCID: PMC5915875.

19: Bhoi D, Selvam V, Yadav P, Talawar P. Comparison of two different techniques of serratus anterior plane block: A clinical experience. J Anaesthesiol Clin Pharmacol. 2018 Apr-Jun;34(2):251-253. doi: 10.4103/joacp.JOACP_294_16. PubMed PMID: 30104841; PubMed Central PMCID: PMC6066876.

20: Borkar SA, Singh M, Kale SS, Suri A, Chandra PS, Kumar R, Sharma BS, Gaikwad S, Mahapatra AK. Spinal Cerebrospinal Fluid Drainage for prevention of Vasospasm in Aneurysmal Subarachnoid Hemorrhage: A Prospective, Randomized controlled study. Asian J Neurosurg. 2018 Apr-Jun;13(2):238-246. doi: 10.4103/1793-5482.228512. PubMed PMID: 29682015; PubMed Central PMCID: PMC5898086.

Introduction: Cerebral vasospasm following aneurysmal subarachnoid hemorrhage (SAH) is a major cause of mortality and morbidity. Despite various treatment modalities, the optimal management of vasospasm remains elusive. In this regard; we undertook a prospective, randomized controlled study to evaluate the effectiveness of lumbar cerebrospinal fluid drainage (LCSFD) for prevention of cerebral vasospasm and its sequelae.
Materials and Methods: Patients with aneurysmal SAH who met the inclusion criteria were randomized into two groups - Group I (30 patients) underwent LCSFD whereas Group II (30 patients) did not undergo LCSFD. All patients underwent aneurysmal clipping. Both the groups received standard neurosurgical treatment except for LCSFD. The outcome was measured in terms of (1) clinically evident vasospasm; (2) vasospasm-related cerebral infarction; (3) condition of the patient at the time of discharge; and (4) Glasgow outcome score (GOS) at 1- and 3-month follow-up.
Results: LCSFD conferred a statistically significant benefit reducing the incidence of clinical vasospasm from 63% (in non-LCSFD group) to 30% (in LCSFD group) (P = 0.01) and incidence of vasospasm-related cerebral infarction from 53%

(in non-LCSFD group) to 20% (in LCSFD group) (P = 0.007). Incidence of vasospasm was quantitatively lower in LCSFD group across all Hunt and Hess grades; however, it was statistically significant in SAH Grade III (P = 0.008). Mean duration of hospital stay was slightly lower in LCSFD group compared to non-LCSFD group; however, it did not reach statistical significance. A higher incidence of meningitis in LCSFD group was not statistically significant. A higher GOS was observed in LCSFD group at 1- and 3-month follow-up as compared to non-LCSFD group.
Conclusion: Drainage of CSF through a lumbar drain following aneurysmal SAH caused a statistically significant reduction in the incidence of clinical and radiological vasospasm and its sequelae. It also shortens the overall duration of hospital stay and improves the outcome as evidenced by a better GOS score at 1- and 3-month follow-up. The results of this prospective, randomized study establish the efficacy of LCSFD in prevention of vasospasm following aneurysmal SAH.

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PMCID: PMC5898086
PMID: 29682015

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

21: Bychkov A, Keelawat S, Agarwal S, Jain D, Jung CK, Hong S, Lai CR, Satoh S, Kakudo K. Impact of non-invasive follicular thyroid neoplasm with papillary-like nuclear features on the Bethesda system for reporting thyroid cytopathology: a multi-institutional study in five Asian countries. Pathology. 2018 Jun;50(4):411-417. doi: 10.1016/j.pathol.2017.11.088. Epub 2018 Apr 7. PubMed PMID: 29631726.

Several Western studies showed that the recent introduction of non-invasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP) significantly decreased risk of malignancy for cytological diagnostic categories. We aimed to determine the impact of NIFTP on risk of malignancy within a cohort of thyroid nodules from Asian countries, and to compare distribution of diagnostic categories between NIFTP and invasive encapsulated follicular variant of papillary thyroid carcinoma (eFV-PTC). Consecutive thyroid fine-needle aspirates from six institutions were retrospectively analysed. Histopathology slides with a diagnosis of eFV-PTC were reviewed and reclassified into invasive eFV-PTC and NIFTP. The risk of malignancy was calculated with and without NIFTP. Of 11,372 thyroid nodules, 2044 had available surgical follow-up. NIFTP was diagnosed in 59 cases, which constituted 2.9% of all excised nodules, and 5.3% of malignant nodules. Preoperative cytological diagnoses for NIFTP were non-diagnostic (10.2%), benign (18.6%), atypia of undetermined significance/follicular lesion of undetermined significance (22.0%), follicular neoplasm/suspicious for follicular neoplasm (FN/SFN) (32.2%), suspicious for malignancy (SM) (11.9%), and malignant (5.1%). The only category which showed a relative reduction in risk of malignancy after reclassification of more than 20%, was FN/SFN (24.4%). There was a significantly higher prevalence of benign cytology in NIFTP (p = 0.04) and SM/malignant in invasive eFV-PTC (p = 0.05). A majority of NIFTP cases were classified in indeterminate categories, which decreased the corresponding risk of malignancy. However, the magnitude of NIFTP impact was much lower than in the Western reports. Asian countries may not experience significant effects of NIFTP reclassification on the practice of thyroid cytopathology.

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PMID: 29631726

22: Chandola P, Gupta RM, Lall M, Sen S, Shergill SPS, Dutta V. Molecular detection of bla(NDM-1) (New Delhi metallobetalactamase-1) in nosocomial Enterobacteriaceae isolates by nested, multiplex polymerase chain reaction. Med J Armed Forces India. 2018 Apr;74(2):108-115. doi: 10.1016/j.mjafi.2017.02.009. Epub 2017 Mar 22. PubMed PMID: 29692474; PubMed Central PMCID: PMC5912111.

Background: Carbapenems are considered "drugs of last resort" in many life-threatening infections. Advent of carbapenemases like KPC, OXA-48, VIM, IMP, and NDM have greatly affected the efficacy of these drugs, posing serious threat to global health and infection control. NDM bears special significance to the India subcontinent, labeled as place of origin and reservoir. NDM tends to escape detection by routine phenotypic methods, requiring molecular confirmation. This study utilizes nested, multiplex polymerase chain reaction (PCR) for reliable detection of blaNDM-1 in nosocomial Enterobacteriaceae isolates.
Methods: This study was conducted to detect prevalence of blaNDM-1, blaIMP, blaVIMand blaKPC genes by multiplex PCR among multidrug/carbapenem-resistant nosocomial Enterobacteriaceae isolates. From March 2013 to April 2014, 100 consecutive non-repeat isolates of Enterobacteriaceae from various inpatient clinical samples were analyzed. Imipenem-resistant isolates identified by Kirby Bauer disk diffusion method with Clinical and Laboratory Standards Institute guidelines were further subjected to nested, multiplex PCR to simultaneously detect blaNDM-1, blaIMP, blaVIMand blaKPC genes.
Results: Out of 100 isolates, 17 (17%) were found to be imipenem-resistant. blaNDM-1 was detected in all 17 isolates by nested, multiplex PCR. blaVIM was co-carried in 4 isolates while one isolate co-harbored blaIMP with blaNDM-1. Imipenem resistance and NDM-1 carriage was predominant amongst Klebsiella isolates. Maximum NDM-1 producers were isolated from the intensive care unit (70.6%).
Conclusion: NDM-1 prevalence in nosocomial Enterobacteriaceae isolates in our hospital was found to be 17%. A nested, multiplex PCR was used for rapid detection of various carbapenemase genes with high sensitivity and specificity which is essential not only for favorable patient outcome but also for timely implementation of appropriate infection control practices to prevent further spread of such organisms.

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PMID: 29692474

23: Chaudhary A, Kumar V, Singh PK, Sharma P, Bairagya HR, Kaur P, Sharma S, Chauhan SS, Singh TP. A glycoprotein from mammary gland secreted during involution promotes apoptosis: Structural and biological studies. Arch Biochem Biophys. 2018 Apr 15;644:72-80. doi: 10.1016/j.abb.2018.03.006. Epub 2018 Mar 7. PubMed PMID: 29524427.

Secretory signalling glycoprotein (SPX-40) from mammary gland is highly expressed during involution. This protein is involved in a programmed cell death during tissue remodelling which occurs at the end of lactation. SPX-40 was isolated and purified from buffalo (SPB-40) from the samples obtained during involution. One solution of SPB-40 was made by dissolving it in buffer containing 25?mM Tris-HCl and 50?mM NaCl at pH 8.0. Another solution was made by adding 25% ethanol to the above solution. The biological effects of SPB-40 dissolved in above two solutions were evaluated on MCF-7 breast cancer cell lines. Free SPB-40 indicated significant pro-apoptotic effects while ethanol exposed SPB-40 showed considerably reduced effects on the apoptosis. SPB-40 was crystallized in the

native state. The crystals of SPB-40 were soaked in four separate solutions containing 25% acetone, 25% ethanol, 25% butanol and 25% MPD. Four separate data sets were collected and their structures were determined at high resolutions. In all the four structures, the molecules of acetone, ethanol, butanol and MPD respectively were observed in the hydrophobic binding pocket of SPB-40. As a result of which, the conformation of Trp78 was altered thus blocking the binding site in SPB-40 leading to the loss of activity.

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PMID: 29524427

24: Chauhan R, Tyagi S, Mirgh S, Mishra P, Seth T, Mahapatra M, Pati H, Saxena R. Expect the unexpected - Loss of surface CD3 on flow cytometry in hepatosplenic T-cell lymphoma: An eye opener. Indian J Pathol Microbiol. 2018 Apr-Jun;61(2):275-277. doi: 10.4103/IJPM.IJPM_442_17. PubMed PMID: 29676377.

Hepatosplenic T-cell lymphoma (HSTCL) is a rare extranodal T-cell lymphoma that shows preferential sinusoidal infiltration of spleen and liver. It usually shows bright expression of surface CD3 (sCD3) with restriction for ??-T cell receptors (TCR). We present a case of a 34-year-old male who presented with hepatosplenomegaly and B symptoms. His peripheral blood and bone marrow (BM) was involved by atypical lymphoid cells that were CD2+, CD7+, CD56+, cytoplasmic CD3+, and sCD3- on immunophenotyping by flow cytometry. As sCD3 is a lineage marker for T-cell lymphomas, the loss of sCD3 posed a diagnostic dilemma. However, typical pattern of sinusoidal BM and liver involvement by CD3+ cells and TCR gene rearrangement positivity led to final diagnosis of HSTCL. The differential diagnosis, workup, and clinical course of the case are discussed. To the best of our knowledge, only one case of de novo HSTCL with negative sCD3 has been reported before in the literature.

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PMID: 29676377 [Indexed for MEDLINE]

Conflict of interest statement: There are no conflicts of interest

25: Chauhan R, Sazawal S, Pati HP. Laboratory Monitoring of Chronic Myeloid Leukemia in Patients on Tyrosine Kinase Inhibitors. Indian J Hematol Blood Transfus. 2018 Apr;34(2):197-203. doi: 10.1007/s12288-018-0933-1. Epub 2018 Mar 13. Review. PubMed PMID: 29622860; PubMed Central PMCID: PMC5885003.

Chronic Myeloid Leukemia (CML) is a myeloproliferative neoplasm characterized by translocation of genetic material from chromosome 9 to chromosome 22 to form a fusion gene (BCR-ABL1) that is responsible for abnormal tyrosine kinase activity and alteration of various downstream signaling pathways. In addition to morphological diagnosis of CML phase, it is essential to detect BCR-ABL1 fusion by either metaphase cytogenetics or reverse transcriptase polymerase chain reaction that also determines type of mRNA transcript. Once treatment begins, monitoring the response to Tyrosine Kinase Inhibitor (TKI) using standardized techniques and guidelines is important to check for failure of response and thus, plan timely intervention by increasing the dose of TKI or opting for second line TKIs. The goal is to stop evolution of CML to accelerated phase or blast crisis that has poor response to treatment. Also, it is desirable to achieve good outcomes and even treatment free remission in patients of CML on TKI. Thus, molecular monitoring by reverse transcriptase quantitative PCR (RT-qPCR) is done at regular intervals. There are international recommendations and quality control measures to standardize the reporting of fusion gene transcript levels by

quantitative PCR (RT-qPCR) in CML to achieve and maintain sensitivity in molecular detection of CML disease burden. Various state-of-the-art molecular techniques have emerged to accurately determine the number of fusion-gene transcript levels. This review highlights various methodologies and their practical implications in management of CML patients on TKI.

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26: Chawla R, Tripathy K, Temkar S, Venkatesh P, Kumar A. An imaging-based treatment algorithm for posterior focal retinitis. Ther Adv Ophthalmol. 2018 Apr 26;10:2515841418774423. doi: 10.1177/2515841418774423. eCollection 2018 Jan-Dec. PubMed PMID: 29998221; PubMed Central PMCID: PMC6016964.

Background: In this paper, our aim was to describe an imaging-based empirical approach for categorizing and initiating treatment of immunocompetent patients with posterior focal retinitis, prior to the availability of results of expensive laboratory investigations.
Materials and methods: The hospital records of 13 patients with posterior focal retinitis were reviewed.
Results: Of the 13 patients, 9 were women and 4 were men. The mean age was 24 ± 8 years. Based on similarities in clinical presentation and imaging, we categorized our cases into three groups with different first-line therapeutic strategies. In the first group, patients had presumed toxoplasmosis (treated with oral cotrimoxazole); in the second group, patients had presumed viral (herpetic) etiology (treated with oral valacyclovir); and in the third group, patients had presumed nonherpetic, nontoxoplasma retinitis (treated with oral doxycycline). Positive serology results included Rickettsia (two patients), Borrelia (one patient), Toxoplasma (two patients), and herpes simplex virus (one patient).
Conclusion: An empirical approach for early initiation of therapy in retinitis cases based on imaging features is described.

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PMID: 29998221

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

27: Chawla R, Venkatesh P, Tripathy K, Chaudhary S, Sharma SK. Successful Management of Proliferative Diabetic Retinopathy and Multiple Choroidal Tubercles in a Patient with Miliary Tuberculosis. J Ophthalmic Vis Res. 2018 Apr-Jun;13(2):210-211. doi: 10.4103/jovr.jovr_203_16. PubMed PMID: 29719654; PubMed Central PMCID: PMC5905319.

28: Dabas Y, Mohan A, Xess I. Serum galactomannan antigen as a prognostic and diagnostic marker for invasive aspergillosis in heterogeneous medicine ICU patient population. PLoS One. 2018 Apr 23;13(4):e0196196. doi: 10.1371/journal.pone.0196196. eCollection 2018. PubMed PMID: 29684057; PubMed Central PMCID: PMC5912734.

OBJECTIVE: This study was conducted to get a complete clinical and mycological

picture of invasive aspergillosis (IA) in respiratory medicine ICU of a tertiary care hospital.
PATIENTS: From the cohort of 235 patients only one had proven IA. Based on AspICU algorithm, 21 had putative IA (8.9%), 12 were colonised (5.1%).
RESULTS: Adjusting the confounding factors, significant risk factors for IA were chronic obstructive pulmonary disease (COPD), temperature of ?38˚C, pneumonia and acute respiratory distress syndrome (ARDS). The best predictor of IA was AspICU algorithm (AUC, 1) followed by serum galactomannan antigen (GM) cut-off (?1.24) calculated based on AspICU algorithm (AUC, 0.822). For 37% of patients, IA diagnoses was made earlier with serum GM than radiology. There were 70/235 (29.8%) deaths within 30 days of enrolment in the study. Aspergillus culture positivity (34/235, 14.5%) was associated with very high mortality (27/34, 79.4%), ($p<0.05$). The best predictor of mortality was GM cut-off (?1.24) calculated based on AspICU algorithm (AUC, 0.835).
CONCLUSION: This study imparts the focus on relatively underestimated Aspergillus infections prevalent in ICUs. The AspICU algorithm was found to be useful over others for IA diagnosis. The prognostic usefulness of serum GM antigen detection test highlighted overlooking the same may not be rewarding for the outcome of IA suspected ICU subpopulation.

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PMID: 29684057 [Indexed for MEDLINE]

29: Damle NA, Bal C, Singh TP, Gupta R, Reddy S, Kumar R, Tripathi M. Anaplastic thyroid carcinoma on 68Â Ga-PSMA PET/CT: opening new frontiers. Eur J Nucl Med Mol Imaging. 2018 Apr;45(4):667-668. doi: 10.1007/s00259-017-3904-0. Epub 2018 Jan 2. PubMed PMID: 29294167.

30: Dar HY, Lone Y, Koiri RK, Mishra PK, Srivastava RK. Microcystin-leucine arginine (MC-LR) induces bone loss and impairs bone micro-architecture by modulating host immunity in mice: Implications for bone health. Environ Pollut. 2018 Jul;238:792-802. doi: 10.1016/j.envpol.2018.03.059. Epub 2018 Apr 4. PubMed PMID: 29626823.

Osteoporosis or enhanced bone loss is one of the most commonly occurring bone conditions in the world, responsible for higher incidence of fractures leading to increased morbidity and mortality in adults. Bone loss is affected by various environmental factors including diet, age, drugs, toxins etc. Microcystins are toxins produced by cyanobacteria with microcystin-LR being the most abundantly found around the world effecting both human and animal health. The present study demonstrates that MC-LR treatment induces bone loss and impairs both trabecular and cortical bone microarchitecture along with decreasing the mineral density and heterogeneity of bones in mice. This effect of MC-LR was found due to its immunomodulatory effects on the host immune system, wherein MC-LR skews both T cell (CD4+ and CD8+ T cells) and B cell populations in various lymphoid tissues. MC-LR further was found to significantly enhance the levels of osteoclastogenic cytokines (IL-6, IL-17 and TNF-?) along with simultaneously decreasing the levels of anti-osteoclastogenic cytokines (IL-10 and IFN-?). Taken together, our study for the first time establishes a direct link between MC-LR intake and enhanced bone loss thereby giving a strong impetus to the naïve field of "osteo-toxicology", to delineate the effects of various toxins (including cyanotoxins) on bone health.

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PMID: 29626823 [Indexed for MEDLINE]

31: Das CJ, Razik A, Sharma S. Magnetic Resonance Imaging-Transrectal Ultrasound Fusion Biopsy of the Prostate-An Update. Semin Roentgenol. 2018 Jul;53(3):219-226. doi: 10.1053/j.ro.2018.04.003. Epub 2018 Apr 5. PubMed PMID: 30031415.

32: Dhar P, Kaushal P, Kumar P. Antioxidant supplementation upregulates calbindin expression in cerebellar Purkinje cells of rat pups subjected to post natal exposure to sodium arsenite. Brain Res. 2018 Jul 1;1690:23-30. doi: 10.1016/j.brainres.2018.04.003. Epub 2018 Apr 6. PubMed PMID: 29630858.

Optimal cytoplasmic calcium (Ca2+) levels have been associated with adequate cell functioning and neuronal survival. Altered intracellular Ca2+ levels following impaired Ca2+ homeostasis could induce neuronal degeneration or even cell death. There are reports of arsenite induced oxidative stress and the associated disturbances in intracellular calcium homeostasis. The present study focused on determining the strategies that would modulate tissue redox status and calcium binding protein (CaBP) (Calbindin D28k-CB) expression affected adversely by sodium arsenite (NaAsO2) exposure (postnatal) of rat pups. NaAsO2 alone or along with antioxidants (AOXs) (alpha lipoic acid or curcumin) was administered by intraperitoneal (i.p.) route from postnatal day (PND) 1-21 (covering rapid brain growth period - RBGP) to experimental groups and animals receiving sterile water by the same route served as the controls. At the end of the experimental period, the animals were subjected to euthanasia and the cerebellar tissue obtained therefrom was processed for immunohistochemical localization and western blot analysis of CB protein. CB was diffusely expressed in cell body as well as dendritic processes of Purkinje cells (PCs) along the PC Layer (PCL) in all cerebellar folia of the control and the experimental animals. The multilayered pattern of CB +ve cells along with their downregulated expression and low packing density was significantly evident in the arsenic (iAs) alone exposed group as against the controls and AOX supplemented groups. The observations are suggestive of AOX induced restoration of CaBP expression in rat cerebellum following early postnatal exposure to NaAsO2.

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PMID: 29630858

33: Dhooria S, Mehta RM, Srinivasan A, Madan K, Sehgal IS, Pattabhiraman V, Yadav P, Sivaramakrishnan M, Mohan A, Bal A, Garg M, Agarwal R. The safety and efficacy of different methods for obtaining transbronchial lung cryobiopsy in diffuse lung diseases. Clin Respir J. 2018 Apr;12(4):1711-1720. doi: 10.1111/crj.12734. Epub 2017 Dec 12. PubMed PMID: 29105361.

INTRODUCTION: Most data on transbronchial lung cryobiopsy (TBLC) are from single centers, with little evidence on the outcome of different methods for performing TBLC.
OBJECTIVE: To report the diagnostic yield and safety of TBLC with different procedural techniques.
MATERIALS AND METHODS: Retrospective multicenter study of subjects who underwent TBLC for the diagnosis of diffuse parenchymal lung diseases (DPLDs). The procedure was performed using various methods: flexible or rigid bronchoscopy, with or without the use of fluoroscopy or occlusion balloon.
RESULTS: In total, 128 subjects (59% women) with a mean age of 48.9 years were

included. The overall diagnostic yield of TBLC was 78.1%, with a definite diagnosis on multidisciplinary discussion made in 57 (44.5%) subjects. On a multivariate analysis, the diagnostic yield was associated with the number of biopsies taken {ajdusted odds ratio [AOR] [95% confidence interval (CI)], 2.17 [1.29-3.67]}. The incidence of pneumothorax was lower in subjects who underwent TBLC with fluoroscopic guidance (5.9% vs 20.9%), [AOR (95% CI), 0.26 (0.07-0.94)]. Moderate-to-severe bleeding occurred less frequently when an occlusion balloon was used [1.8% vs 35.7%; AOR (95% CI), 0.02 (0.001-0.18)], after adjusting for age, use of fluoroscopy, number of biopsies obtained and number of lobes sampled. Four deaths occurred; 2 because of acute exacerbation of idiopathic pulmonary fibrosis.
CONCLUSIONS: Transbronchial lung cryobiopsy was found to offer a reasonable yield in the diagnosis of DPLDs. The incidence of pneumothorax and moderate-to-severe bleeding was lower with the use of fluoroscopy and an occlusion balloon, respectively.

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34: Drewes AM, Campbell CM, Ceyhan GO, Delhaye M, Garg PK, van Goor H, Laquente B, Morlion B, Olesen SS, Singh VK, SjÃ¸gren P, Szigethy E, Windsor JA, Salvetti MG, Talukdar R. Pain in pancreatic ductal adenocarcinoma: A multidisciplinary, International guideline for optimized management. Pancreatology. 2018 Jun;18(4):446-457. doi: 10.1016/j.pan.2018.04.008. Epub 2018 Apr 22. Review. PubMed PMID: 29706482.

Abdominal pain is an important symptom in most patients with pancreatic ductal adenocarcinoma (PDAC). Adequate control of pain is often unsatisfactory due to limited treatment options and significant variation in local practice, emphasizing the need for a multidisciplinary approach. This review contends that improvement in the management of PDAC pain will result from a synthesis of best practice and evidence around the world in a multidisciplinary way. To improve clinical utility and evaluation, the evidence was rated according to the GRADE guidelines by a group of international experts. An algorithm is presented, which brings together all currently available treatment options. Pain is best treated early on with analgesics with most patients requiring opioids, but neurolytic procedures are often required later in the disease course. Celiac plexus neurolysis offers medium term relief in a substantial number of patients, but other procedures such as splanchnicectomy are also available. Palliative chemotherapy also provides pain relief as a collateral benefit. It is stressed that the assessment of pain must take into account the broader context of other physical and psychological symptoms. Adjunctive treatments for pain, depression and anxiety as well as radiotherapy, endoscopic therapy and neuromodulation may be required in selected patients. There are few comparative studies to help define which combination and order of these treatment options should be applied. New pain therapies are emerging and could for example target neural transmitters. However, until better methods are available, management of pain should be individualized in a multidisciplinary setting to ensure optimal care.

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PMID: 29706482

35: Dutt V, Saini V, Gupta P, Kaur N, Bala M, Gujar R, Grewal A, Gupta S, Dua A, Mittal A. S-allyl cysteine inhibits TNFÎ±-induced skeletal muscle wasting through

suppressing proteolysis and expression of inflammatory molecules. Biochim Biophys Acta Gen Subj. 2018 Apr;1862(4):895-906. doi: 10.1016/j.bbagen.2017.12.015. Epub 2017 Dec 28. PubMed PMID: 29288771.

BACKGROUND: Elevated levels of inflammatory molecules are key players in muscle wasting/atrophy leading to human morbidity. TNFα is a well-known pro-inflammatory cytokine implicated in the pathogenesis of muscle wasting under diverse clinical settings. S-allyl cysteine (SAC), an active component of garlic (Allium sativum), has established anti-oxidant and anti-inflammatory effects in various cell types. However, the impact of SAC on skeletal muscle pathology remains unexplored. Owing to the known anti-inflammatory properties of SAC, we investigated whether pre-treatment with SAC has a protective role in TNFα-induced atrophy in cultured myotubes.
METHODS AND RESULTS: C2C12 myotubes were treated with TNFα (100ng/ml) in the presence or absence of SAC (0.01mM). TNFα treatment induced atrophy in myotubes by up-regulating various proteolytic systems i.e. cathepsin L, calpain, ubiquitin-proteasome E3-ligases (MuRF1/atrogin1), caspase 3 and autophagy (Beclin1/LC3B). TNFα also induced the activation of NFκB by stimulating the degradation of IκBα (inhibitor of NFκB), in myotubes. The alterations in proteolytic systems likely contribute to the degradation of muscle-specific proteins and reduce the myotube length, diameter and fusion index. The SAC supplementation significantly impedes TNFα-induced protein loss and protects myotube morphology by suppressing protein catabolic systems and endogenous level of inflammatory molecules namely TNFα, IL-6, IL-1β, TNF-like weak inducer of apoptosis (TWEAK), fibroblast growth factor-inducible 14 (Fn14) and Nox.
CONCLUSION AND GENERAL SIGNIFICANCE: Our findings reveal anti-atrophic role for SAC, as it prevents alterations in protein metabolism and protects myotubes by regulating the level of inflammatory molecules and multiple proteolytic systems responsible for muscle atrophy.

DOI: 10.1016/j.bbagen.2017.12.015
PMID: 29288771 [Indexed for MEDLINE]

36: Dutta D, Gupta PK, Sharma M, Damble NA, Madan R, Dogra S. (18)F-Fluorocholine-Positron Emission Tomography/Computerised Tomography is Useful in Localising (99m)Tc-Sesta-methoxyisobutylisonitrile-Negative Parathyroid Cyst Causing Normocalcemic Primary Hyperparathyroidism. Eur Endocrinol. 2018 Apr;14(1):56-58. doi: 10.17925/EE.2018.14.1.56. Epub 2018 Apr 18. PubMed PMID: 29922354; PubMed Central PMCID: PMC5954597.

Parathyroid cysts are extremely rare and are rarely associated with primary hyperparathyroidism (PHPT), which are difficult to localise, as they are 99mTc-sesta-methoxyisobutylisonitrile (sestaMIBI) negative. We report for the first time the utility of 18F-fluorocholinepositron emission tomography/computerised tomography (PC-PET/CT) in localising parathyroid cyst causing normocalcemic PHPT. A 76-year-old lady with progressively worsening osteoporosis from 2014-2017 (in spite of annual zolendronic acid infusions, daily calcium and vitamin-D supplementation) with persistently normal serum calcium and vitamin D, but elevated parathyroid hormone, had normal sestaMIBI scans of the neck on multiple occasions. FC-PET/CT finally revealed soft tissue uptake, suggestive of right superior parathyroid adenoma/ hyperplasia. Surgical removal of the culprit lesion resulted in resolution of hyperparathyroidism, histopathologic evaluation of which revealed a cystic lesion lined by chief cell variant parathyroid cells without any nuclear atypia, capsular or vascular invasion. FC-PET/CT is useful in localising culprit parathyroid lesions, especially when they are sestaMIBI negative. PC-PET/CT is useful in localising

parathyroid hyperplasia and ectopic parathyroids, which are frequently missed by sestaMIBI. There is an urgent need for comparative studies between sestaMIBI and FC-PET/CT in PHPT. We report for the first time the usefulness of FC-PET/CT in localising sestaMIBI-negative functional parathyroid cyst causing normocalcemic PHPT.

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Conflict of interest statement: Disclosure: Deep Dutta, Pradeep Kumar Gupta, Meha Sharma, Nishikant Avinash Damble, Renu Madan and Shruti Dogra have nothing to declare in relation to this article.

37: Dutta M, Singh B, Joshi M, Das D, Subramani E, Maan M, Jana SK, Sharma U, Das S, Dasgupta S, Ray CD, Chakravarty B, Chaudhury K. Metabolomics reveals perturbations in endometrium and serum of minimal and mild endometriosis. Sci Rep. 2018 Apr 24;8(1):6466. doi: 10.1038/s41598-018-23954-7. PubMed PMID: 29691425; PubMed Central PMCID: PMC5915433.

Endometriosis is a common benign gynecological disease, characterized by growth and proliferation of endometrial glands and stroma outside the uterus. With studies showing metabolic changes in various biofluids of endometriosis women, we have set upon to investigate whether endometrial tissue show differences in their metabolic profiles. 1H NMR analysis was performed on eutopic endometrial tissue of women with endometriosis and controls. Analysis was performed on spectral data and on relative concentrations of metabolites obtained from spectra using multivariate and univariate data analysis. Analysis shows that various energy, ketogenic and glucogenic metabolites have significant altered concentrations in various stages of endometriosis. In addition, altered tissue metabolites in minimal and mild stages of endometriosis were explored in serum of these patients to assess their role in disease diagnosis. For Stage I diagnosis alanine was found to have 90% sensitivity (true positives) and 58% specificity (true negatives). For Stage II diagnosis alanine, leucine, lysine, proline and phenylalanine showed significant altered levels in serum. While sensitivity of these serum metabolites varied between 69.2-100% the specificity values ranged between 58.3-91.7%. Further, a regression model generated with this panel of serum markers showed an improved sensitivity and specificity of 100% and 83%, respectively for Stage II diagnosis.

DOI: 10.1038/s41598-018-23954-7
PMCID: PMC5915433
PMID: 29691425

38: Farooque K, Yadav R, Chowdhury B, Gamanagatti S, Kumar A, Meena PK. Computerized Tomography-Based Morphometric Analysis of Subaxial Cervical Spine Pedicle in Asymptomatic Indian Population. Int J Spine Surg. 2018 Aug 3;12(2):112-120. doi: 10.14444/5017. eCollection 2018 Apr. PubMed PMID: 30276069; PubMed Central PMCID: PMC6159543.

Background: The purpose of this study was to analyze morphometry of the subaxial cervical spine pedicles in an Indian population based on computed tomography (CT), and thus assess the safety and feasibility of cervical pedicle screw in the subaxial cervical spine.
Methods: CT scans of 500 subaxial cervical spine vertebrae were analyzed from 100 patients presenting to our institution and undergoing cervical spine CT scan for an unrelated cause as part of ATLS protocol. Pedicle width (PW), pedicle axis length (PAL), pedicle transverse angulation (PTA), and lateral pedicle distance

(LPD) were calculated on axial CT scans, and pedicle height (PH), pedicle length (PL), superior pedicle distance (SPD), and pedicle sagittal angulation (PSA) were calculated on sagittal CT scans.
Results: The mean PW ranged from 4.3 mm at C3 to 5.7 mm at C7. Mean PH ranged from 5.5 mm at C3 to 6.1 mm at C7. Mean PTA ranged from 44.5° at C3 to 37.1° at C7. PSA ranged from 16.65° at C3 to 3.29° at C7. Mean LPD ranged from 1.6 mm at C3 to 3.4 mm at C6. Mean SPD ranged from 3.5 mm at C3 to 1.15 mm at C7. Mean PAL ranged from 29.6 mm at C3 to 33.04 mm at C7. Mean PL ranged from 5.2 mm at C3 to 5.78 mm at C7.
Conclusions: Our CT-based morphometric study confirms that cervical pedicle screw placement is possible in most of the Indian population except at C3 in females. A thorough understanding of pedicle anatomy with proper CT-based preoperative planning can mitigate the risk associated with pedicle screw placement in subaxial cervical spine.

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PMCID: PMC6159543
PMID: 30276069

Conflict of interest statement: Disclosures and COI: This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

39: Fehlings MG, Kopjar B, Ibrahim A, Tetreault LA, Arnold PM, Defino H, Kale SS, Yoon ST, Barbagallo GM, Bartels RHM, Zhou Q, Vaccaro AR, Zileli M, Tan G, Yukawa Y, Brodke DS, Shaffrey CI, Santos de Moraes O, Woodard EJ, Scerrati M, Tanaka M, Toyone T, Sasso RC, Janssen ME, Gokaslan ZL, Alvarado M, Bolger C, Bono CM, Dekutoski MB. Geographic variations in clinical presentation and outcomes of decompressive surgery in patients with symptomatic degenerative cervical myelopathy: analysis of a prospective, international multicenter cohort study of 757 patients. Spine J. 2018 Apr;18(4):593-605. doi: 10.1016/j.spinee.2017.08.265. Epub 2017 Sep 6. PubMed PMID: 28888674.

BACKGROUND CONTEXT: Degenerative cervical myelopathy (DCM) is a progressive degenerative spine disease and the most common cause of spinal cord impairment in adults worldwide. Few studies have reported on regional variations in demographics, clinical presentation, disease causation, and surgical effectiveness.
PURPOSE: The objective of this study was to evaluate differences in demographics, causative pathology, management strategies, surgical outcomes, length of hospital stay, and complications across four geographic regions.
STUDY DESIGN/SETTING: This is a multicenter international prospective cohort study.
PATIENT SAMPLE: This study includes a total of 757 symptomatic patients with DCM undergoing surgical decompression of the cervical spine.
OUTCOME MEASURES: The outcome measures are the Neck Disability Index (NDI), the Short Form 36 version 2 (SF-36v2), the modified Japanese Orthopaedic Association (mJOA) scale, and the Nurick grade.
MATERIALS AND METHODS: The baseline characteristics, disease causation, surgical approaches, and outcomes at 12 and 24 months were compared among four regions: Europe, Asia Pacific, Latin America, and North America.
RESULTS: Patients from Europe and North America were, on average, older than those from Latin America and Asia Pacific (p=.0055). Patients from Latin America had a significantly longer duration of symptoms than those from the other three regions (p<.0001). The most frequent causes of myelopathy were spondylosis and disc herniation. Ossification of the posterior longitudinal ligament was most prevalent in Asia Pacific (35.33%) and in Europe (31.75%), and hypertrophy of the ligamentum flavum was most prevalent in Latin America (61.25%). Surgical

approaches varied by region; the majority of cases in Europe (71.43%), Asia Pacific (60.67%), and North America (59.10%) were managed anteriorly, whereas the posterior approach was more common in Latin America (66.25%). At the 24-month follow-up, patients from North America and Asia Pacific exhibited greater improvements in mJOA and Nurick scores than those from Europe and Latin America. Patients from Asia Pacific and Latin America demonstrated the most improvement on the NDI and SF-36v2 PCS. The longest duration of hospital stay was in Asia Pacific (14.16 days), and the highest rate of complications (34.9%) was reported in Europe.
CONCLUSIONS: Regional differences in demographics, causation, and surgical approaches are significant for patients with DCM. Despite these variations, surgical decompression for DCM appears effective in all regions. Observed differences in the extent of postoperative improvements among the regions should encourage the standardization of care across centers and the development of international guidelines for the management of DCM.

DOI: 10.1016/j.spinee.2017.08.265
PMID: 28888674

40: Garg R, Bhan S, Vig S. Newer regional analgesia interventions (fascial plane blocks) for breast surgeries: Review of literature. Indian J Anaesth. 2018 Apr;62(4):254-262. doi: 10.4103/ija.IJA_46_18. Review. PubMed PMID: 29720750; PubMed Central PMCID: PMC5907430.

Surgical resection of the primary tumour with axillary dissection is one of the main modalities of breast cancer treatment. Regional blocks have been considered as one of the modalities for effective perioperative pain control. With the advent of ultrasound, newer interventions such as fascial plane blocks have been reported for perioperative analgesia in breast surgeries. Our aim is to review the literature for fascial plane blocks for analgesia in breast surgeries. The research question for initiating the review was 'What are the reported newer regional anaesthesia techniques (fascial plane blocks) for female patients undergoing breast surgery and their analgesic efficacy?.' The participants, intervention, comparisons, outcomes and study design were followed. Due to the paucity of similar studies and heterogeneity, the assessment of bias, systematic review or pooled analysis/meta-analysis was not feasible. Of the 989 manuscripts, the present review included 28 manuscripts inclusive of all types of published manuscripts. 15 manuscripts directly related to the administration of fascial plane blocks for breast surgery across all type of study designs and cases were reviewed for the utility of fascial plane blocks in breast surgeries. Interfascial blocks score over regional anaesthetic techniques such as paravertebral block as they have no risk of sympathetic blockade, intrathecal or epidural spread which may lead to haemodynamic instability and prolonged hospital stay. This review observed that no block effectively covers the whole of breast and axilla, thus a combination of blocks should be used depending on the site of incision and extent of surgical resection.

DOI: 10.4103/ija.IJA_46_18
PMCID: PMC5907430
PMID: 29720750

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

41: Goswami AK, Kalaivani M, Gupta SK, Nongkynrih B, Pandav CS. Relationship between height and arm span of elderly persons in an urban colony of New Delhi. Indian J Public Health. 2018 Apr-Jun;62(2):159-162. doi:

10.4103/ijph.IJPH_378_16. PubMed PMID: 29923545.

Anthropometric changes take place with increasing age. Progressive loss of height makes it difficult to use height for calculation of body mass index in nutritional screening of elderly persons. There is a need to find other alternative methods which could be used as proxy measurements of height in them. To assess the relationship of height and arm span and among elderly persons. A community-based cross-sectional study was conducted among elderly persons in urban colony of Delhi. Height and arm span of persons aged 60 years and above (n = 711) were measured according to standard methods. Correlation between arm span and height was calculated. The mean arm span was seen to be more than the mean height in all age-groups and both sexes. There was a linear relationship between height and arm-span in all age-groups. There was a strong correlation between arm span and height in all age groups. Arm span could be used instead of height as an alternative in the conventional body mass index in elderly persons.

DOI: 10.4103/ijph.IJPH_378_16
PMID: 29923545

Conflict of interest statement: There are no conflicts of interest

42: Goyal V. Multiple Sclerosis in India. Ann Indian Acad Neurol. 2018 Apr-Jun;21(2):95-97. doi: 10.4103/aian.AIAN_296_18. PubMed PMID: 30122832; PubMed Central PMCID: PMC6073974.

43: Gulati S, Sondhi V, Chakrabarty B, Jauhari P, Lodha R, Sankar J. High dose phenobarbitone coma in pediatric refractory status epilepticus; a retrospective case record analysis, a proposed protocol and review of literature. Brain Dev. 2018 Apr;40(4):316-324. doi: 10.1016/j.braindev.2017.11.009. Epub 2018 Jan 3. Review. PubMed PMID: 29306558.

BACKGROUND: Ongoing refractory status epilepticus is associated with significant morbidity and mortality. Therapeutic coma induction with midazolam, thiopentone, phenobarbitone or propofol is indicated when conventional antiepileptics fail to abort seizure. Of these, the most extensively studied is midazolam. Amongst the remaining three, phenobarbitone has the most favourable pharmacological profile, but has not been studied adequately, more so in the pediatric age group. The current retrospective case records analysis is an attempt to describe use of phenobarbitone coma in pediatric refractory status epilepticus.
METHODS: Case records of patients, admitted with status epilepticus to the pediatric inpatient services of a tertiary care teaching hospital of North India between January 2014 and December 2016 were reviewed. Those with refractory status epilepticus who failed to respond to midaolam infusion and phenobarbitone coma was used were included for analysis.
RESULTS: Overall, 108 children presented in status, of which 34 developed refractory status epilepticus. Of these 34, 21 responded to midazolam infusion and in 13 high dose phenobarbitone coma following a standardised protocol was used. Amongst these 13 (8 males and 5 females, median age 6 years, IQR: 2.5-9.5), 12 responded and 1 succumbed. The median time to clinical seizure resolution and desired electroencephalographic changes post phenobarbitone initiation were 16 (IQR: 12-25) and 72 h (IQR: 48-120) respectively.
CONCLUSION: High dose phenobarbitone appears to be an effective therapeutic modality in pediatric refractory status epilepticus. The current study provides a protocol for its use which can be validated in future studies with larger sample size.

DOI: 10.1016/j.braindev.2017.11.009
PMID: 29306558 [Indexed for MEDLINE]

44: Guleria P, Husain N, Shukla S, Kumar S, Parshad R, Jain D. PD-L1 immuno-expression assay in thymomas: Study of 84 cases and review of literature. Ann Diagn Pathol. 2018 Jun;34:135-141. doi: 10.1016/j.anndiagpath.2018.03.012. Epub 2018 Apr 4. PubMed PMID: 29661720.

BACKGROUND AND AIMS: Programmed death ligand 1 (PD-L1), an immune check point inhibitor, is known to be expressed in several malignancies and is being considered as a prognostic factor and a potential immunotherapeutic target. The aim of this study was to characterize PD-L1 expression in thymomas and to determine correlation with clinicopathological features and previously published studies in the literature.
METHODS: Tissue microarrays were prepared from selected blocks of thymomas and immunohistochemistry (IHC) for PD-L1 was performed. Cases were considered as PD-L1 positive or negative depending on whether the percentage of stained thymic epithelial cells were <25 or >25%. Results were compared clinically and with previously published studies using Google and Pubmed search engines.
RESULTS: Of 84 cases of thymoma, 69 (82.1%) revealed PD-L1 positivity in >25% cells. 94.23% of type B thymoma subtypes (B1/B2/B3) were PD-L1 positive ($P < 0.001$). There was no correlation of PD-L1 with age, gender, myasthenia gravis, the tumor size or stage of disease. Nine studies were available in the literature; most of which showed PD-L1 expression in higher stage and B subtype however percentage positivity varied from 53.7% to over 90%.
CONCLUSIONS: PD-L1 expression is frequent in type B (B1/B2/B3) thymomas. It can be easily evaluated by IHC even on small biopsies in unresectable cases, thereby enabling improved clinical evaluation as well as prognostic stratification of patients. It will serve as a potential indicator for benefit from anti-PD-L1 antibody immunotherapy in thymomas.

DOI: 10.1016/j.anndiagpath.2018.03.012
PMID: 29661720

45: Gunjan D, Gamanagatti S, Garg P. Endoscopic ultrasonography-guided obliteration of a left inferior phrenic artery pseudoaneurysm in a patient with alcoholic chronic pancreatitis. Endoscopy. 2018 Apr;50(4):449-450. doi: 10.1055/s-0043-124867. Epub 2018 Jan 19. PubMed PMID: 29351702.

46: Gupta A, Kumar L. 3q26 chromosomal anomalies in acute myeloid leukemia: First descriptions from India. J Postgrad Med. 2018 Apr-Jun;64(2):109-111. doi: 10.4103/jpgm.JPGM_727_16. PubMed PMID: 29067925; PubMed Central PMCID: PMC5954806.

Cytogenetic anomalies involving the 3q26 chromosomal region are rare in acute myeloid leukemia (AML). There is no such description of these anomalies from the Indian sub-continent. A total of 174 AML patients were admitted to our hospital for therapy between January 2001 and January 2008. Cytogenetic studies could be done in 115 patients; which revealed three cases with 3q26 anomalies. All were males. In the first two cases, the anomaly was detected in all the metaphases. The common features seen were the presence of only mild thrombocytopenia (relatively high platelet counts when assessed against the background of AML with high blast percentages), monosomy 7, myeloperoxidase positive blasts, mild eosinophilia, and poor therapeutic response. In the third case, the chromosome 3 anomaly was present in only one metaphase. Such an anomaly has not been reported.

Only the third patient responded to induction therapy but subsequently relapsed after being in complete remission for 15 months. 3q26 anomalies are associated with monosomy 7, relatively higher platelet counts at diagnosis as compared with other non-3q rearranged AML's and poor prognosis. The precise mechanisms underlying leukemogenesis need to be elucidated and better treatments devised since these patients respond poorly to therapy.

DOI: 10.4103/jpgm.JPGM_727_16
PMCID: PMC5954806
PMID: 29067925

Conflict of interest statement: There are no conflicts of interest

47: Gupta A, Shukla G, Afsar M, Poornima S, Pandey RM, Goyal V, Srivastava A, Vibha D, Behari M. Role of Positive Airway Pressure Therapy for Obstructive Sleep Apnea in Patients With Stroke: A Randomized Controlled Trial. J Clin Sleep Med. 2018 Apr 15;14(4):511-521. doi: 10.5664/jcsm.7034. PubMed PMID: 29609704; PubMed Central PMCID: PMC5886428.

STUDY OBJECTIVES: Obstructive sleep apnea (OSA) is an independent risk factor for stroke. The objective of this study was to assess the effect of continuous positive airway pressure (CPAP) treatment on prevention of new vascular events among patients with stroke and OSA.
METHODS: Consecutive conscious patients presenting with first imaging-confirmed arterial stroke were included, 6 weeks or more after ictus. All patients underwent clinical and polysomnography (PSG) testing. Patients with an apnea-hypopnea index (AHI) of > 15 events/h were randomized to posttitration nightly CPAP treatment and non-CPAP (received best medical treatment) groups. On follow-up at 3, 6, and 12 months from randomization, evaluation was carried out for any new vascular events as the primary outcome measure, and for clinical stroke outcomes (using the Barthel Index and modified Rankin scale) and neuropsychological parameters as the secondary outcome measures.
RESULTS: Among the 679 patients with stroke who were screened, 116 reported for PSG, 83 had AHI > 15 events/h, and 70 (34 in CPAP and 36 in non-CPAP) were randomized. Thirteen patients could not be randomized because of a lack of CPAP devices. Four patients crossed over from the CPAP to the non-CPAP group. Age (mean age 53.41 ± 9.85 in CPAP versus 52.69 ± 13.23 years in non-CPAP, P = .81) and sex distribution (24 males in CPAP versus 33 males in non-CPAP, P = .79) were similar in both groups. At 12-month follow-up, there was 1 vascular event (3.33%) in the CPAP group and 6 events (15%) in the non-CPAP group (P = .23). Modified Rankin scale score improvement by ≥ 1 at 12-month follow-up was found in significantly more patients in the CPAP group than in the non-CPAP group (53% versus 27%).
CONCLUSIONS: These findings suggest significantly better stroke outcomes and statistically nonsignificant favorable outcomes in terms of recurrence of vascular events for patients with stroke and OSA who use CPAP treatment.
CLINICAL TRIAL REGISTRATION: Registry: Clinical Trials Registry - India, CTRI Registration No: CTRI/2016/07.007104, Title: Sleep Disordered Breathing in stroke patients: Effect of treatment trial, URL: http://ctri.nic.in/Clinicaltrials/showallp.php?mid1=8682&EncHid=&userName=sleep%20disordered%20breathing.

DOI: 10.5664/jcsm.7034
PMCID: PMC5886428
PMID: 29609704

48: Gupta N, Verma G, Kabra M, Bijarnia-Mahay S, Ganapathy A. Identification of a case of SRD5A3-congenital disorder of glycosylation (CDG1Q) by exome sequencing. Indian J Med Res. 2018 Apr;147(4):422-426. doi: 10.4103/ijmr.IJMR_820_16. PubMed PMID: 29998879; PubMed Central PMCID: PMC6057243.

49: Gupta S, Upadhayay D, Sharma U, Jagannathan NR, Gupta YK. Citalopram attenuated neurobehavioral, biochemical, and metabolic alterations in transient middle cerebral artery occlusion model of stroke in male Wistar rats. J Neurosci Res. 2018 Jul;96(7):1277-1293. doi: 10.1002/jnr.24226. Epub 2018 Apr 15. PubMed PMID: 29656429.

Oxidative stress and inflammation are implicated as cardinal mechanisms of neuronal death following stroke. In the present study citalopram (Cit) was investigated in a 2 h middle cerebral artery occlusion (MCAo) model of stroke in male Wistar rats. Pretreatment, posttreatment (Post Cit) and pre plus posttreatment (Pre + Post Cit) with Cit were evaluated for its neuroprotective effect. In pretreatment protocol, effect of Cit at three doses (2, 4, and 8 mg/kg) administered i.p., 1 h prior to MCAo was evaluated using neurological deficit score (NDS), motor deficit paradigms, and cerebral infarction 24 h post-MCAo. In posttreatment and pre plus posttreatment protocol, the effective dose of Cit (4 mg/kg) was administered i.p., 0.5 h post-reperfusion (Post Cit) only, and 1 h prior to MCAo and again at 0.5 h post-reperfusion (Pre + Post Cit), respectively. These two groups were assessed for NDS and cerebral infarction. Though NDS was significantly reduced in both Post Cit and Pre + Post Cit groups, significant reduction in cerebral infarction was evident only in Pre + Post Cit group. Infarct volume assessed by magnetic resonance imaging was significantly attenuated in Pre + Post Cit group (10.6 ± 1.1%) compared to MCAo control group (18.5 ± 3.0%). Further, Pre + Post Cit treatment significantly altered 17 metabolites along with attenuation of malondialdehyde, reduced glutathione, matrix metalloproteinases, and apoptotic markers as compared to MCAo control. These results support the neuroprotective effect of Cit, mediated through amelioration of oxidative stress, inflammation, apoptosis, and altered metabolic profile.

DOI: 10.1002/jnr.24226
PMID: 29656429

50: Gupta S, Selvan H, Khokhar S. Hook and flip technique: for phacoemulsification in non-rotating nuclei and posterior polar cataracts. Int Ophthalmol. 2018 Apr 27. doi: 10.1007/s10792-018-0928-9. [Epub ahead of print] PubMed PMID: 29704132.

PURPOSE: We put forward a physical levitation method to hook and flip the chopped nuclear fragments that could not be solely drawn by vacuum during phacoemulsification, due to various reasons such as a non-rotating nuclei or posterior polar cataracts where hydrodissection was unsuccessful or contra-indicated, respectively.
METHOD: A Sinskey hook is insinuated through the crack of the divided nuclei into a plane behind the nuclear pie to 'hook and flip' the chopped piece, heading it towards the phacoemulsification probe. This simple step disassembles the nuclear chunk, thereby creating space to facilitate the dismantling of the rest of the fragments. The remnant epinuclear cushion guards the posterior capsule, mitigating the chances of serious intra-operative complications.
RESULT: We have employed this technique in 17 eyes during similar situations. No

specific intra-operative complications were observed; all surgeries were uneventful. A Sinskey hook utilised for this step ensures safety and familiarity, none encountered posterior capsular rent. This technique not only eases the surgery, but also decreases the anticipated intra-operative and post-operative complications.
CONCLUSION: 'Hook and flip technique' thus proves useful whenever dismantling difficulties are encountered during phacoemulsification.

DOI: 10.1007/s10792-018-0928-9
PMID: 29704132

51: Gupta S, Sankar J, Lodha R, Kabra SK. Comparison of Prevalence and Outcomes of Pediatric Acute Respiratory Distress Syndrome Using Pediatric Acute Lung Injury Consensus Conference Criteria and Berlin Definition. Front Pediatr. 2018 Apr 9;6:93. doi: 10.3389/fped.2018.00093. eCollection 2018. PubMed PMID: 29686979; PubMed Central PMCID: PMC5900438.

Objectives: Our objective was to compare the prevalence and outcomes of pediatric acute respiratory distress syndrome using the Pediatric Acute Lung Injury Consensus Conference (PALICC) criteria and Berlin definitions.
Methods: We screened case records of all children aged 1 month to 17 years of age admitted to the Pediatric Intensive Care Unit (PICU) over a 3-year period (2015-2017) for presence of any respiratory difficulty at admission or during PICU stay. We applied both PALICC and Berlin criteria to these patients. Data collection included definition and outcome related variables. Data were compared between the "PALICC only group" and the "Berlin with or without PALICC" group using Stata 11.
Results: Of a total of 615 admissions, 246 were identified as having respiratory difficulty at admission or during PICU stay. A total of 61 children (prevalence 9.9%; 95% CI: 7.8-12.4) fulfilled the definition of acute respiratory distress syndrome (ARDS) with either of the two criteria. While 60 children (98%) fulfilled PALICC criteria, only 26 children (43%) fulfilled Berlin definition. There was moderate agreement between the two definitions (Kappa: 0.51; 95% CI: 0.40-0.62; observed agreement 85%). Greater proportion of patients had severe ARDS in the "Berlin with or without PALICC group" as compared to the "PALICC only" group (50 vs. 19%). There was no difference between the groups with regard to key clinical outcomes such as duration of ventilation (7 vs. 8 days) or mortality [51.4 vs. 57.7%: RR (95% CI): 0.99 (0.64-1.5)].
Conclusion: In comparison to Berlin definition, the PALICC criteria identified more number of patients with ARDS. Proportion with severe ARDS and complications was greater in the "Berlin with or without PALICC" group as compared to the "PALICC only" group. There were no differences in clinical outcomes between the groups.

DOI: 10.3389/fped.2018.00093
PMCID: PMC5900438
PMID: 29686979

52: Gupta V, Arava S, Ramam M. Blaschkoid Acute Graft-vs-Host Disease. JAMA Dermatol. 2018 Apr 1;154(4):494-495. doi: 10.1001/jamadermatol.2017.6023. PubMed PMID: 29387872.

53: Gupta V, Ganesan VL, Kumar S, Chaurasia AK, Malhotra S, Gupta S. Visual Disability Among Juvenile Open-angle Glaucoma Patients. J Glaucoma. 2018 Apr;27(4):e87-e89. doi: 10.1097/IJG.0000000000000887. PubMed PMID: 29394204.

AIM: Juvenile onset primary open-angle glaucoma (JOAG) unlike adult onset primary

open-angle glaucoma presents with high intraocular pressure and diffuse visual field loss, which if left untreated leads to severe visual disability. The study aimed to evaluate the extent of visual disability among JOAG patients presenting to a tertiary eye care facility.
METHODS: Visual acuity and perimetry records of unrelated JOAG patients presenting to our Glaucoma facility were analyzed. Low vision and blindness was categorized by the WHO criteria and percentage impairment was calculated as per the guidelines provided by the American Medical Association (AMA).
RESULTS: Fifty-two (15%) of the 348 JOAG patients were bilaterally blind at presentation and 32 (9%) had low vision according to WHO criteria. Ninety JOAG patients (26%) had a visual impairment of 75% or more.
CONCLUSIONS: Visual disability at presentation among JOAG patients is high. This entails a huge economic burden, given their young age and associated social responsibilities.

DOI: 10.1097/IJG.0000000000000887
PMID: 29394204

54: Gupta V, Khandpur S, Arava S, Ramam M. Alternating histopathologic pattern in blaschkoid dermatoses with epidermal changes: A retrospective series of 61 cases. J Am Acad Dermatol. 2018 Apr;78(4):812-813. doi: 10.1016/j.jaad.2017.09.069. Epub 2017 Oct 7. PubMed PMID: 29017841.

55: Hadda V, Kumar R, Hussain T, Khan MA, Madan K, Mohan A, Khilnani GC, Guleria R. Reliability of ultrasonographic arm muscle thickness measurement by various levels of health care providers in ICU. Clin Nutr ESPEN. 2018 Apr;24:78-81. doi: 10.1016/j.clnesp.2018.01.009. Epub 2018 Feb 17. PubMed PMID: 29576368.

PURPOSE: Reliability of arm muscle thickness measurement using ultrasonography (USG) by operators of varied experience is unknown. Hence, we planned this study to determine the reliability of arm muscle thickness measured using USG by 5 observers with variable experience.
MATERIALS AND METHOD: This was a cross-sectional observational study which included critically ill patients with sepsis. Arm muscle thickness was measured in triplicate on Siemens ACUSON X300™ USG machine by each of 5 observers. Intra-class correlation coefficient (ICC) was computed to assess intra-observer and inter-observer variability of multiple observations.
RESULTS: This study included 45 (30 - male) patients. Mean (±SD) age, APACHE and SAPS score of the participants were 54.95 (±15.97) years, 14.66 (±4.57) and 2.6 (±1.37), respectively. There were 135 observations by each observer. ICC (95%CI) for intra-observer reliability study for observer 1, 2, 3, 4, and 5 were 0.997 (0.995-0.998), 0.996 (0.993-0.998), 0.997 (0.996-0.998), 0.997 (0.994-0.998) and 0.998 (0.986-0.999), respectively. ICC (95%CI) for inter-observer reliability study for 1st, 2nd and 3rd reading were 0.963 (0.943-0.977), 0.992 (0.988-0.995) and 0.992 (0.988-0.995), respectively.
CONCLUSIONS: There was an excellent intra- and inter-observer agreement among 5 observers for measurement of arm muscle thickness using bedside USG among patients with sepsis.

DOI: 10.1016/j.clnesp.2018.01.009
PMID: 29576368

56: Haffar S, Shalimar, Kaur RJ, Wang Z, Prokop LJ, Murad MH, Bazerbachi F. Acute liver failure caused by hepatitis E virus genotype 3 and 4: A systematic review

and pooled analysis. Liver Int. 2018 Apr 19. doi: 10.1111/liv.13861. [Epub ahead of print] PubMed PMID: 29675889.

BACKGROUND & AIMS: Acute liver failure caused by hepatitis E virus genotype 3 and 4 has been rarely described. Because of the presence of a short golden therapeutic window in patients with viral acute liver failure from other causes, it is possible that early recognition and treatment might reduce the morbidity and mortality. We performed a systematic review and pooled analysis of acute liver failure caused by hepatitis E virus genotype 3 and 4.
METHODS: Two reviewers appraised studies after searching multiple databases on June 12th, 2017. Appropriate tests were used to compare hepatitis E virus genotype 3 vs 4, suspected vs confirmed genotypes, hepatitis E virus-RNA positive vs negative, and to discern important mortality risk factors.
RESULTS: We identified 65 patients, with median age 58 years (range: 3-79), and a male to female ratio of 1.2:1. The median bilirubin, ALT, AST and alkaline phosphatase (expressed by multiplication of the upper limit of normal) levels were 14.8, 45.3, 34.8 and 1.63 respectively. Antihepatitis E virus IgG, antihepatitis E virus IgM and hepatitis E virus-RNA were positive in 84%, 91% and 86% of patients respectively. The median interval from symptoms onset to acute liver failure was 23 days, and 16 patients underwent liver transplantation. Final outcome was reported in 58 patients and mortality was 46%. Age was a predictor of poor prognosis in multivariate analysis. No important differences were found between patients infected with genotype 3 vs 4, patients with confirmed vs suspected genotypes, or patients with positive vs negative RNA.
CONCLUSION: Acute liver failure caused by hepatitis E virus genotype 3 and 4 is rare, similar between genotypes, occurs commonly in middle-aged/elderly patients and has a very high mortality. Age is predictive of poor prognosis in multivariate analysis.

DOI: 10.1111/liv.13861
PMID: 29675889

57: Islamuddin M, Khan WH, Gupta S, Tiku VR, Khan N, Akdag AI, Chaudhary S, Upadhyay A, Kumar P, Ghatwala G, Ray P. Surveillance and genetic characterization of rotavirus strains circulating in four states of North Indian children. Infect Genet Evol. 2018 Apr 23. pii: S1567-1348(18)30209-0. doi: 10.1016/j.meegid.2018.04.030. [Epub ahead of print] PubMed PMID: 29698770.

Acute gastroenteritis due to Rotavirus (RV) infection is a major cause of morbidity and mortality in infants and young children worldwide. In India, around 0.1 million death annually reported due to RV illness. So, to assess the disease burden continuous surveillance of the circulating genotypes is needed. This study aimed to ascertain the genetic variance of 429 rotavirus positive specimens observed during the period October 2013-September 2014 at four study centers from North India. Out of 1057 patients enrolled, 1018 stool samples were collected at four centers in four different states of North India. Children aged <5 years who showed the symptoms of severe diarrhea and needed hospitalization were enrolled. The stool samples collected were screened by Enzyme Immuno Assay (EIA), and the RV positive samples were characterized by semi-nested PCR. During the study period October 2013 through September 2014, ~42% patients were found to be rotavirus positive of 1018 collected specimen. In Delhi, Rohtak and Meerut we observed that Rotavirus is seasonal compared to Tanda (HP). The rate of rotavirus detection was significantly higher among children aged below 2 years, and a total of 21.5% of rotavirus infections comprised children aged <6 months. Genotype G1(48.0%) was predominant and frequently circulating strain whereas G12 (16.8%)

and G9 (10.0%) was second and third prevalent strain in the four states of North India. High frequency of G1 genotypes was detected under the age group of 6-11 months which is followed by G12, similarly high rate severe disease was observed due to G1 genotypes followed by P[8], P[6] and G12. The most common types of strains were G1P[8] (27.73% of strains), G12P[6] (13.28%), G9P[4] (7.23%) and G1P[6] (6.75%). The rare strain reported were G1P[9]; P[11] strain was detected in combination with G1, G2, and G12. These data emphasized G12 is the second most predominant strain circulating among Northern Indian children highlights the needs for inclusion in the future polyvalent vaccine to break the burden of rotavirus infection.

DOI: 10.1016/j.meegid.2018.04.030
PMID: 29698770

58: Iyer KV, Hussain SY, Kumar A. Ultrasound as a guide to reposition a misdirected central venous catheter. Saudi J Anaesth. 2018 Apr-Jun;12(2):353-355. doi: 10.4103/sja.SJA_581_17. PubMed PMID: 29628859; PubMed Central PMCID: PMC5875237.

59: Jajodia A, Kaur H, Srivastava A, Kumari K, Baghel R, Guin D, Sood M, Satyamoorthy K, Jain S, Chadda RK, Kukreti R. Schizophrenia susceptibility and neuregulin signaling pathway genes: A rare haplotype combination based association study in Indian population. Psychiatry Res. 2018 Apr;262:628-630. doi: 10.1016/j.psychres.2017.10.005. Epub 2017 Oct 10. PubMed PMID: 29074073.

60: Jalota A, Kumar M, Das BC, Yadav AK, Chosdol K, Sinha S. A drug combination targeting hypoxia induced chemoresistance and stemness in glioma cells. Oncotarget. 2018 Apr 6;9(26):18351-18366. doi: 10.18632/oncotarget.24839. eCollection 2018 Apr 6. PubMed PMID: 29719610; PubMed Central PMCID: PMC5915077.

Hypoxia is a characteristic of solid tumors especially Glioblastoma and is critical to chemoresistance. Cancer stem cells present in hypoxic niches are known to be a major cause of the progression, metastasis and relapse. We tried to identify synergistic combinations of drugs effective in both hypoxia and normoxia in tumor cells as well as in cancer stem cells. Since COX-2 is over-expressed in subset of glioblastoma and is also induced in hypoxia, we studied combinations of a prototype Cyclooxygenase (COX-2) inhibitor, NS-398 with various drugs (BCNU, Temozolomide, 2-Deoxy-D-glucose and Cisplatin) for their ability to abrogate chemoresistance under both severe hypoxia (0.2% O2) and normoxia (20% O2) in glioma cells. The only effective combination was of NS-398 and BCNU which showed a synergistic effect in both hypoxia and normoxia. This synergism was evident at sub-lethal doses for either of the single agent. The effectiveness of the combination resulted from increased pro- apoptotic and decreased anti-apoptotic molecules and increased caspase activity. PGE2 levels, a manifestation of COX-2 activity were increased during hypoxia, but were reduced by the combination during both hypoxia and normoxia. The combination reduced the levels of epithelial-mesenchymal transition (EMT) markers. It also resulted in a greater reduction of cell migration. While single drugs could reduce the number of gliomaspheres, the combination successfully abrogated their formation. The combination also resulted in a greater reduction of the cancer stem cell marker CD133. This combination could be a prototype of possible therapy in a tumor with a high degree of hypoxia like glioma.

DOI: 10.18632/oncotarget.24839
PMCID: PMC5915077

PMID: 29719610

Conflict of interest statement: CONFLICTS OF INTEREST The authors disclose no potential conflicts of interest.

61: Joshi AP, Angel A, Angel B, Baharia RK, Rathore S, Sharma N, Yadav K, Thanvi S, Thanvi I, Joshi V. In-silico Designing and Testing of Primers for Sanger Genome Sequencing of Dengue Virus Types of Asian Origin. J Genomics. 2018 Apr 10;6:34-40. doi: 10.7150/jgen.22460. eCollection 2018. PubMed PMID: 29707045; PubMed Central PMCID: PMC5916874.

Rarity in reporting whole genome sequence of Dengue virus from dengue endemic countries leaves lacunae in understanding regional pattern of virus mutation and ultimately leading to non-understanding of transmission pattern and clinical outcomes emerging at regional levels. Due to inter-serotype genomic similarity and intra-serotype genomic diversity, appropriate designing of primer pairs appears as an exhaustive exercise. Present paper reports new Dengue virus type-specific primer which may help in characterizing virus specific to Asian origin. Genomes of dengue virus serotypes of Asian region were searched and using advanced bioinformatics tools, serotype specific primers were designed and tested for their targeted amplification efficiency. 19 primers sets for DENV-1, 18 primer sets for DENV-2, 17 for DENV-3 and 18 for DENV-4 were designed. In-silico and experimental testing of the designed primers were performed on virus isolated from both clinical isolates and passaged cultures. While all 17 and 18 primer sets of DENV-3 and DENV-2 respectively yielded good quality sequencing results; in case of DENV-4, 16 out of 18 primer sets and in DENV-1, 16 out of 19 primer sets yielded good results. Average sequencing read length was 382 bases and around 82% nucleotide bases were Phred quality QV20 bases (representing an accuracy of circa one miscall every 100 bases) or higher. Results also highlighted importance of use of primer development algorithm and identified genomic regions which are conservative, yet specific for developing primers to achieve efficiency and specificity during experiments.

DOI: 10.7150/jgen.22460
PMCID: PMC5916874
PMID: 29707045

Conflict of interest statement: Competing Interests: The authors have declared that no competing interest exists.

62: Kakkar A, Rajeshwari M, Sakthivel P, Sharma MC, Sharma SC. Biphenotypic sinonasal sarcoma: A series of six cases with evaluation of role of Î²-catenin immunohistochemistry in differential diagnosis. Ann Diagn Pathol. 2018 Apr;33:6-10. doi: 10.1016/j.anndiagpath.2017.11.005. Epub 2017 Nov 8. PubMed PMID: 29566950.

INTRODUCTION: Biphenotypic sinonasal sarcoma (BSNS) is a recently described mesenchymal tumor exclusive to the sinonasal region. It is a low grade sarcoma, displaying evidence of myogenic and neural differentiation. Role of β-catenin immunohistochemistry in distinguishing it from its morphological mimics is not well-established. We conducted this study to identify cases of BSNS from our archives, and to examine immunopositivity for β-catenin in them as well as in its close differential diagnosis.
METHODS: All cases of nasal cavity and paranasal sinus mesenchymal neoplasms were identified. Histopathological features were reviewed. Cases showing smooth muscle actin (SMA) and S-100 immunopositivity, and typical morphology were reclassified as BSNS. β-catenin immunoexpression was assessed.
RESULTS: Twenty-one mesenchymal tumors, including 12 sinonasal hemangiopericytoma

(SNHPC), five solitary fibrous tumors (SFT), three BSNS, and one synovial sarcoma were identified. Three SNHPC cases were reclassified as BSNS. BSNS patients included one male and five females, with mean age of 51years. Five BSNS cases (83.3%) showed nuclear β-catenin immunopositivity. SNHPC cases also were β-catenin positive (60%).
CONCLUSION: BSNS is a rare sinonasal neoplasm, frequently misdiagnosed as SNHPC and SFT. β-catenin immunopositivity is seen in majority of cases, indicating a role in pathogenesis. However, due to positivity in other tumors like SNHPC, it has limited role in differential diagnosis.

DOI: 10.1016/j.anndiagpath.2017.11.005
PMID: 29566950 [Indexed for MEDLINE]

63: Kapoor I, Prabhakar H, Mahajan C. Can Pediatric Bispectral Index Sensor Replace Adult Bispectral Index Sensor for Depth of Anesthesia Monitoring? Asian J Neurosurg. 2018 Apr-Jun;13(2):529-530. doi: 10.4103/1793-5482.228572. PubMed PMID: 29682080; PubMed Central PMCID: PMC5898151.

64: Karthik SDS, Kriplani A, Kachhawa G, Khadgawat R, Aggarwal N, Bhatla N. Comparison of Two Regimens of Gonadotropin-releasing Hormone Antagonists in Clomiphene-gonadotropin Induced Controlled Ovulation and Intrauterine Insemination Cycles: Randomized Controlled Study. J Hum Reprod Sci. 2018 Apr-Jun;11(2):148-154. doi: 10.4103/jhrs.JHRS_92_17. PubMed PMID: 30158811; PubMed Central PMCID: PMC6094528.

Context: Gonadotropin-releasing hormone (GnRH) antagonists in fixed or flexible regimens are used for prevention of premature luteinizing hormone (LH) surge, however, data comparing these regimens in stimulated intrauterine insemination (IUI) cycles are lacking.
Aims: The aim of this study is to evaluate the effectiveness of GnRH antagonists in fixed and flexible regimens on the rate of premature luteinization (PL) and ovulation rate in sequential clomiphene-gonadotropin controlled ovulation-IUI cycles.
Settings and Design: This study was conducted at tertiary care center; this was randomized controlled study.
Materials and Methods: A total of 45 infertile women randomized into three groups of 15 each received clomiphene citrate + human menopausal gonadotrophin. GnRH antagonist was added according to fixed (n = 15) and flexible (n = 15) protocol. No antagonist in control group (n = 15). PL was defined as LH level ≥10 mIU/ml and progesterone level ≥1.0 ng/ml.
Statistical Analysis: Mean values compared using the Student's t-test or one-way analysis of variance. Categorical variables distribution tested using either Pearson's Chi-square or Fisher's exact test as appropriate.
Results: Of a total of 45 women, 58% (n = 26) presented with primary and 42% (n = 19) secondary infertility with mean age of 30.8 ± 3.43 years and BMI 26.57 ± 3.22 kg/m2. Fixed regimen (3.7%) showed most reduction in PL compared to flexible (15.38%, P = 0.33) or control (36.67%, P = 0.004). On human chorionic gonadotropin day, mean LH (P = 0.002) and progesterone (P = 0.079) levels in fixed, flexible, and control groups were as follows: 5.04 ± 5.47 mIU/ml, 3.95 ± 4.16 mIU/ml, 9.57 ± 7.91 mIU/ml, and 0.409 ± 0.320 ng/ml, 0.579 ± 0.727 ng/ml, and 1.033 ± 1.022 ng/ml, respectively. Ovulation (P = 0.813) and pregnancy rates (P = 0.99) were 88.9%, 84.6%, and 90% and 22.2%, 19.23%, and 10% in fixed, flexible, and control groups, respectively.
Conclusions: Addition of antagonist in any regimen appears to lower PL rates and improve pregnancy rates in controlled ovarian stimulation and IUI cycles.

DOI: 10.4103/jhrs.JHRS_92_17
PMCID: PMC6094528
PMID: 30158811

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

65: Kaur A, Das R, Nigam MR, Elangovan R, Pandya D, Jha S, Kalyanasundaram D. Rapid Detection Device for Salmonella typhi in Milk, Juice, Water and Calf Serum. Indian J Microbiol. 2018 Sep;58(3):381-392. doi: 10.1007/s12088-018-0730-4. Epub 2018 Apr 30. PubMed PMID: 30013283; PubMed Central PMCID: PMC6023822.

A limit of detection of 200 CFU/mL of Salmonella typhi spiked in various sample matrices were achieved in 30 min. The sample matrices were raw/unprocessed milk, commercially available milk, juice from packed bottles, fresh juice from carts, potable water, turbid water and calf serum. The complete protocol comprised of three steps: (a) cell lysis (b) nucleic acid amplification and (c) an in situ optical detection. The cell lysis was carried out using a simple heating based protocol, while the loop-mediated isothermal amplification of DNA was carried out by an in-house designed and fabricated system. The developed system consists of an aluminum block fitted with two cartridge heaters along with a thermocouple. The system was coupled to a light source and spectrometer for a simultaneous in situ detection. Primers specific for STY2879 gene were used to amplify the nucleic acid sequence, isolated from S. typhi cells. The protocol involves 15 min of cell lysis and DNA isolation followed by 15 min for isothermal amplification and simultaneous detection. No cross-reactivity of the primers were observed at 106 CFU/mL of Escherichia coli, Vibrio cholerae, Salmonella typhimurium, Salmonella paratyphi A, Pseudomonas aeruginosa, Bacillus cereus, Lysteria monocytogenes, Clostridium botulinum, Staphylococcus aureus and Salmonella havana. In addition, the system was able to detect S. typhi of 200 CFU/mL in a concoction of 106 CFU/mL of E. coli, 106 CFU/mL of V. cholerae, and 106 CFU/mL of hepatocyte-derived cellular carcinoma HUH7 cells. The proposed rapid diagnostic system shows a promising future in the field of food and medical diagnostics.

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PMCID: PMC6023822 [Available on 2019-09-01]
PMID: 30013283

Conflict of interest statement: Compliance with Ethical StandardsAK declares that she has no conflict of interest. RD declares that she has no conflict of interest. MRN declares that he has no conflict of interest. RE declares that he has no conflict of interest. DP declares that she has no conflict of interest. SJ declares that he has no conflict of interest. DK declares that he has no conflict of interest.The study does not involve any human samples and there is no ethical clearance required for this work.

66: Kaur M, Titiyal JS, Falera R, Sinha R, Sharma N. Indications for explant of implantable collamer lens. Eye (Lond). 2018 Apr;32(4):838-840. doi: 10.1038/eye.2017.307. Epub 2018 Jan 12. PubMed PMID: 29328068; PubMed Central PMCID: PMC5898876.

67: Kaushal A, Kumar S, Mahajan C, Kapoor I, Prabhakar H. Post-operative seizures after spine surgery: A dilemma. Indian J Anaesth. 2018 Apr;62(4):315-317. doi: 10.4103/ija.IJA_786_17. PubMed PMID: 29720760; PubMed Central PMCID: PMC5907440.

68: Kaushal T, Satapathy S, Chadda RK, Bakhshi S, Sagar R, Sapra S. Hospital

Based Psychosocial Support Program for Children with ALL and their Families: A Comprehensive Triad's Perspective. Indian J Pediatr. 2018 Apr 21. doi: 10.1007/s12098-018-2679-z. [Epub ahead of print] PubMed PMID: 29679216.

OBJECTIVES: To elucidate potential target areas of intervention and mechanisms for implementation of intervention for children with cancer during the treatment phase.
METHODS: Focused group discussion (FGDs) served as a primary source of providing phenomenal perspectives to explore the key objective. Eight focus groups of 45-60 min each were held with 5-9 members in each discussion. The participants were either patients, their caregivers or health care providers. The focus group audio recordings were professionally transcribed after all identifiers were removed. Employing a constructivist paradigm with a phenomenological approach, also known as emergent-systematic focus group design the study reported on families' experiences of childhood cancer as construction of objective reality. Investigator triangulation method was adopted to ensure trustworthiness.
RESULTS: Using constant comparison analysis, multistage process analysis was done which resulted in 849 codes, 32 subthemes, 20 themes and 5 domains. A total of 64 participants participated: 4 FGDs with parents of children with ALL (n=31); 1 FGD with professionals working in the field of cancer (n=10) and 3 FGDs with children with ALL (n=23). Participant's mean age at the time of study was 10 y (+3.3) for children; 37 y (+4.93) for caregivers and 35 y (+3.5) for professionals. The number of participants and their age range at study varied slightly between the eight focus groups.
CONCLUSIONS: Caregivers presented care burden and compromised aspects of Quality of life (QOL). An effective and culturally sensitive psychosocial support for patients and their families during and post treatment, in addition to medical therapy, is strongly recommended.

DOI: 10.1007/s12098-018-2679-z
PMID: 29679216

69: Kedia S, Limdi JK, Ahuja V. Management of inflammatory bowel disease in older persons: evolving paradigms. Intest Res. 2018 Apr;16(2):194-208. doi: 10.5217/ir.2018.16.2.194. Epub 2018 Apr 30. Review. PubMed PMID: 29743832; PubMed Central PMCID: PMC5934592.

The incidence and prevalence of inflammatory bowel disease (IBD) is increasing, and considering the aging population, this number is set to increase further in the future. The clinical features and natural history of elderly-onset IBD have many similarities with those of IBD in younger patients, but with significant differences including a broader differential diagnosis. The relative lack of data specific to elderly patients with IBD, often stemming from their typical exclusion from clinical trials, has made clinical decision-making somewhat challenging. Treatment decisions in elderly patients with IBD must take into account age-specific concerns such as comorbidities, locomotor and cognitive function, and polypharmacy, to set realistic treatment targets in order to enable personalized treatment and minimize harm. Notwithstanding paucity of clinical data, recent studies have provided valuable insights, which, taken together with information gleaned from previous studies, can broaden our understanding of IBD. These insights may contribute to the development of paradigms for the holistic and, when possible, evidence-based management of this potentially vulnerable population and are the focus of this review.

DOI: 10.5217/ir.2018.16.2.194
PMCID: PMC5934592
PMID: 29743832

Conflict of interest statement: CONFLICT OF INTEREST: No potential conflict of interest relevant to this article was reported.

70: Khan MFJ, Little J, Abelli L, Mossey PA, Autelitano L, Nag TC, Rubini M. Muscle fiber diameter assessment in cleft lip using image processing. Oral Dis. 2018 Apr;24(3):476-481. doi: 10.1111/odi.12790. Epub 2017 Nov 1. PubMed PMID: 28975726.

OBJECTIVE: To pilot investigation of muscle fiber diameter (MFD) on medial and lateral sides of the cleft in 18 infants with cleft lip with or without cleft palate (CL/P) using image processing.
MATERIAL AND METHODS: Formalin-fixed paraffin-embedded (FFPE) tissue samples from the medial and lateral sides of the cleft were analyzed for MFD using an image-processing program (ImageJ). For within-case comparison, a paired Student's t test was performed. For comparisons between classes, an unpaired t test was used.
RESULTS: Image processing enabled rapid measurement of MFD with majority of fibers showing diameter between 6 and 11 μm. There was no significant difference in mean MFD between the medial and lateral sides, or between CL and CLP. However, we found a significant difference on the medial side ($p = .032$) between males and females.
CONCLUSION: The image processing on FFPE tissues resulted in easy quantification of MFD with finding of a smaller MFD on the medial side in males suggesting possible differences in orbicularis oris (OO) muscle between the two sexes in CL that warrants replication using larger number of cases. Moreover, this finding can aid subclinical phenotyping and potentially in the restoration of the anatomy and function of the upper lip.

DOI: 10.1111/odi.12790
PMID: 28975726 [Indexed for MEDLINE]

71: Khandelwal A, Kapoor I, Mahajan C, Prabhakar H. Effect of Positive End-Expiratory Pressure on Optic Nerve Sheath Diameter in Pediatric Patients with Traumatic Brain Injury. J Pediatr Neurosci. 2018 Apr-Jun;13(2):165-169. doi: 10.4103/jpn.JPN_112_17. PubMed PMID: 30090129; PubMed Central PMCID: PMC6057201.

Background: The peak incidence of traumatic brain injury (TBI) has been reported in children and young adults. Intracranial pressure (ICP) as an important component can be measured with invasive technique, whereas noninvasive measurement of optic nerve sheath diameter (ONSD) is increasingly becoming popular. Positive end-expiratory pressure (PEEP) has been found to affect ICP. We aimed to compare the effect of different values of PEEP on ONSD and to obtain the correlation with ICP measurement.
Setting and Design: Neurointensive Care Unit, Trauma Center, AIIMS, New Delhi.
Materials and Methods: Pediatric patients with TBI, of either gender, between 1 and 18 years of age in whom ICP was measured using intraparenchymal Codman catheter admitted in neurointensive care unit were enrolled. For this crossover study, the sequence of PEEP (0 or 3 or 5 cm H_2O) was randomized and ONSD was measured. The mean of three ONSD values was taken as final value.
Statistical Method: The ONSD, ICP, peak airway pressure, and hemodynamic parameters at various stages were compared using two-way repeated measures analysis of variance with Bonferroni correction. A P value of <0.05 was considered to be significant.
Results: Ten patients (seven males, three females) participated in the study.

There was no significant increase in ONSD values when PEEP was increased from 0 to 3 cm H2O. However, increase in PEEP values from 3 to 5 cm H2O showed significantly increased ONSD values.
Conclusion: PEEP up to 3 cm H2O can be safely applied in pediatric patients following TBI. Further increment of PEEP might accentuate the ICP values.

DOI: 10.4103/jpn.JPN_112_17
PMCID: PMC6057201
PMID: 30090129

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

72: Khandelwal P, Birla S, Bhatia D, Puraswani M, Saini H, Sinha A, Hari P, Sharma A, Bagga A. Mutations in membrane cofactor protein (CD46) gene in Indian children with hemolytic uremic syndrome. Clin Kidney J. 2018 Apr;11(2):198-203. doi: 10.1093/ckj/sfx078. Epub 2017 Aug 10. PubMed PMID: 29644059; PubMed Central PMCID: PMC5888602.

Background: Mutations in the CD46 gene account for an important proportion of patients with atypical hemolytic uremic syndrome (aHUS) who characteristically show multiple relapses, no response to plasma exchange and low recurrence risk in allograft. We screened for mutations in CD46 in patients with and without circulating anti-factor H (FH) antibodies-associated aHUS.
Methods: We estimated CD46 surface expression by flow cytometry and sequenced the CD46 gene in 23 and 56 patients with and without circulating anti-FH antibodies, respectively. Human Splicing Finder and PolyPhen2 were used for in silico prediction of pathogenicity.
Results: Two novel and three known (c.286+2T>G, c.104G>A and c.565T>G) mutations in CD46 were found in nine (11.4%) patients; one patient had a variant of unknown significance and two patients presented during the first year of life. Novel intronic (c.1127+46C>G) and exonic (c.911C>T) mutations are proposed to activate cryptic splicing sites or alter protein conformation. Markedly reduced CD46 surface expression was found in homozygous states in five patients.
Conclusion: Patients with mutations in CD46 present at all ages, including the first year of life. Mutations in intron 2, (c.286+2T>G) may be a potential hot spot in Indian children. Flow cytometry for CD46 expression is a satisfactory screening tool enabling early diagnosis.

DOI: 10.1093/ckj/sfx078
PMCID: PMC5888602
PMID: 29644059

73: Khanna K, Bhatnagar V, Agarwala S, Srinivas M, Gupta SD. Ratio of Preoperative and Postoperative Serum Bilirubin Levels Predicts Early Outcome Following Biliary Atresia Surgery. J Indian Assoc Pediatr Surg. 2018 Apr-Jun;23(2):81-86. doi: 10.4103/jiaps.JIAPS_192_17. PubMed PMID: 29681698; PubMed Central PMCID: PMC5898209.

Aim: This study investigates the fall in total serum bilirubin levels within 1 week after surgery, as a marker to predict early outcome in biliary atresia (BA) patients post-Kasai portoenterostomy (KP).
Methods: The ratio of total serum bilirubin levels at the 7th postoperative day to the preoperative level (TB7/TB0) in patients undergoing KP was calculated (January 2011-July 2015). Patients were stratified after 3-months follow-up into outcome groups depending on the clinical clearance of jaundice and TB7/TB0 ratio was correlated to outcome and liver histopathological changes in these groups.
Results: Sixty-one patients (M:F = 44:17), median age 75 days were included. At

the end of 3 months, 27 (44.39%) were anicteric while 26 (42.6%) were still clinically jaundiced. Patients with a higher median value of TB7/TB0, that is, 0.856 were more likely to have jaundice at the end of 3 months as compared to patients with a lower median value of 0.615 ($P < 0.0001$). A cutoff TB7/TB0 ratio >0.723 predicted the KP outcome with 84.6% sensitivity and 81.5% specificity. The difference in TB7/TB0 ratio between patients with varying severity of liver histopathological changes was also significant, namely, cholestasis ($P = 0.01$), hepatocellular damage ($P = 0.03$), portal inflammation ($P = 0.04$), and portal fibrosis ($P = 0.02$).
Conclusions: The rapidity of fall in the total serum bilirubin levels within 1 week post-KP was able to predict the likely outcome in BA patients.

DOI: 10.4103/jiaps.JIAPS_192_17
PMCID: PMC5898209
PMID: 29681698

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

74: Khanna K, Tandon S, Yadav DK, Khanna V. Rapunzel syndrome: a tail too long to tell! BMJ Case Rep. 2018 Apr 5;2018. pii: bcr-2018-224756. doi: 10.1136/bcr-2018-224756. PubMed PMID: 29622718.

75: Khanna P, Chandralekha C, Pandey RK, Sharma A. Pain assessment in the critically ill mechanically ventilated adult patients: Comparison between skin conductance algesimeter index and physiologic indicators. Saudi J Anaesth. 2018 Apr-Jun;12(2):204-208. doi: 10.4103/sja.SJA_489_17. PubMed PMID: 29628828; PubMed Central PMCID: PMC5875206.

Background and Objectives: Critically ill patients are unable to communicate effectively, so it is difficult to assess their pain and analgesic requirement. Skin conductance algesimeter (SCA) index is a device that primarily measures changes in skin conductance real time to assess pain.
Methods: We planned this quantitative prospective observational study to assess pain in the critically ill mechanically ventilated patients in comparison to physiologic indicators such as blood pressure and heart rate. A repeated measures design was chosen, and a sample size of 180 was taken from 60 patients with sepsis, acute exacerbations of chronic obstructive pulmonary disease, community-acquired pneumonia, and postsurgical patients in the Intensive Care Unit (ICU). The two painful procedures chosen were tracheal suction and patient positioning. The data were collected at rest, at tracheal suctioning, 20 min later at positioning of the patient, and final reading 20 min later. Three testing periods, each including 4 assessments for a total of 12 pain assessments with sixty patients, were completed during each patient's ICU course. A total of six assessments were done with the patient at rest and three each with pain stimulus of tracheal suctioning and patient positioning.
Results: There was a significant increase in both hemodynamic variables during painful procedures except for the heart rate during positioning. The correlation between the SCA index and Ramsay scale was negative and significant.
Conclusions: This instrument might prove useful to measure pain in uncommunicative critically ill patients and to evaluate the effectiveness of analgesic treatment and adapt it.

DOI: 10.4103/sja.SJA_489_17
PMCID: PMC5875206
PMID: 29628828

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

76: Kilambi R, Singh AN. Duct-to-mucosa versus dunking techniques of pancreaticojejunostomy after pancreaticoduodenectomy: Do we need more trials? A systematic review and meta-analysis with trial sequential analysis. J Surg Oncol. 2018 Apr;117(5):928-939. doi: 10.1002/jso.24986. Epub 2018 Mar 25. Review. PubMed PMID: 29575015.

BACKGROUND: Pancreaticojejunostomy (PJ is the most widely used reconstruction technique after pancreaticoduodenectomy. Despite several randomized trials, the ideal technique of pancreaticojejunostomy remains debatable. We planned a meta-analysis of randomized trials comparing the two most common techniques of PJ (duct-to-mucosa and dunking) to identify the best available evidence in the current literature.
METHODS: We searched the Pubmed/Medline, Web of science, Science citation index, Google scholar and Cochrane Central Register of Controlled Trials electronic databases till October 2017 for all English language randomized trials comparing the two approaches. Statistical analysis was performed using Review Manager (RevMan), Version 5.3. Copenhagen: The Nordic Cochrane Center, The Cochrane Collaboration, 2014 and results were expressed as odds ratio for dichotomous and mean difference for continuous variables. P-value≤0.05 was considered significant. Trial sequential analysis was performed using TSA version 0.9.5.5 (Copenhagen: The Copenhagen Trial Unit, Center for Clinical Intervention Research, 2016).
RESULTS: A total of 8 trials were included, with a total of 1043 patients (DTM: 518; Dunking: 525). There was no significant difference between the two groups in terms of overall as well as clinically relevant POPF rate. Similarly, both groups were comparable for the secondary outcomes. Trial sequential analysis revealed that the required information size had been crossed without achieving a clinically significant difference for overall POPF; and though the required information size had not been achieved for CR-POPF, the current data has already crossed the futility line for CR-POPF with a 10% risk difference, 80% power and 5% α error.
CONCLUSION: This meta-analysis found no significant difference between the two techniques in terms of overall and CR-POPF rates. Further, the existing evidence is sufficient to conclude lack of difference and further trials are unlikely to result in any change in the outcome. (CRD42017074886).

DOI: 10.1002/jso.24986
PMID: 29575015 [Indexed for MEDLINE]

77: Knowles J, Kupka R, Dumble S, Garrett GS, Pandav CS, Yadav K, TourÃ© NK, Foriwa Amoaful E, Gorstein J. Regression Analysis to Identify Factors Associated with Urinary Iodine Concentration at the Sub-National Level in India, Ghana, and Senegal. Nutrients. 2018 Apr 21;10(4). pii: E516. doi: 10.3390/nu10040516. PubMed PMID: 29690505; PubMed Central PMCID: PMC5946301.

Single and multiple variable regression analyses were conducted using data from stratified, cluster sample design, iodine surveys in India, Ghana, and Senegal to identify factors associated with urinary iodine concentration (UIC) among women of reproductive age (WRA) at the national and sub-national level. Subjects were survey household respondents, typically WRA. For all three countries, UIC was significantly different ($p < 0.05$) by household salt iodine category. Other significant differences were by strata and by household vulnerability to poverty in India and Ghana. In multiple variable regression analysis, UIC was significantly associated with strata and household salt iodine category in India and Ghana ($p < 0.001$). Estimated UIC was 1.6 (95% confidence intervals (CI) 1.3, 2.0) times higher (India) and 1.4 (95% CI 1.2, 1.6) times higher (Ghana) among

WRA from households using adequately iodised salt than among WRA from households using non-iodised salt. Other significant associations with UIC were found in India, with having heard of iodine deficiency (1.2 times higher; CI 1.1, 1.3; p < 0.001) and having improved dietary diversity (1.1 times higher, CI 1.0, 1.2; p = 0.015); and in Ghana, with the level of tomato paste consumption the previous week (p = 0.029) (UIC for highest consumption level was 1.2 times lowest level; CI 1.1, 1.4). No significant associations were found in Senegal. Sub-national data on iodine status are required to assess equity of access to optimal iodine intake and to develop strategic responses as needed.

DOI: 10.3390/nu10040516
PMCID: PMC5946301
PMID: 29690505 [Indexed for MEDLINE]

78: Knowles J, Kupka R, Dumble S, Garrett GS, Pandav CS, Yadav K, Nahar B, TourÃ© NK, Amoaful EF, Gorstein J. Regression Analysis to Identify Factors Associated with Household Salt Iodine Content at the Sub-National Level in Bangladesh, India, Ghana and Senegal. Nutrients. 2018 Apr 19;10(4). pii: E508. doi: 10.3390/nu10040508. PubMed PMID: 29671774; PubMed Central PMCID: PMC5946293.

Regression analyses of data from stratified, cluster sample, household iodine surveys in Bangladesh, India, Ghana and Senegal were conducted to identify factors associated with household access to adequately iodised salt. For all countries, in single variable analyses, household salt iodine was significantly different ($p < 0.05$) between strata (geographic areas with representative data, defined by survey design), and significantly higher ($p < 0.05$) among households: with better living standard scores, where the respondent knew about iodised salt and/or looked for iodised salt at purchase, using salt bought in a sealed package, or using refined grain salt. Other country-level associations were also found. Multiple variable analyses showed a significant association between salt iodine and strata ($p < 0.001$) in India, Ghana and Senegal and that salt grain type was significantly associated with estimated iodine content in all countries ($p < 0.001$). Salt iodine relative to the reference (coarse salt) ranged from 1.3 (95% CI 1.2, 1.5) times higher for fine salt in Senegal to 3.6 (95% CI 2.6, 4.9) times higher for washed and 6.5 (95% CI 4.9, 8.8) times higher for refined salt in India. Sub-national data are required to monitor equity of access to adequately iodised salt. Improving household access to refined iodised salt in sealed packaging, would improve iodine intake from household salt in all four countries in this analysis, particularly in areas where there is significant small-scale salt production.

DOI: 10.3390/nu10040508
PMCID: PMC5946293
PMID: 29671774 [Indexed for MEDLINE]

79: Kumar A, Lodha R. Biomarkers for Diagnosing Ventilator Associated Pneumonia: Is that the Way Forward? Indian J Pediatr. 2018 Jun;85(6):411-412. doi: 10.1007/s12098-018-2672-6. Epub 2018 Apr 10. Review. PubMed PMID: 29637461.

80: Kumar A, Sharma DS, Verma M, Lamba AK, Gupta MM, Sharma S, Perumal V. Association between periodontal disease and gestational diabetes mellitus-A prospective cohort study. J Clin Periodontol. 2018 Apr 3. doi: 10.1111/jcpe.12902. [Epub ahead of print] PubMed PMID: 29611219.

AIM: This study aimed to determine the association between periodontal disease and gestational diabetes mellitus (GDM) and the effect of this association on pregnancy outcome in North Indian population.
MATERIALS AND METHODS: A total of 584 primigravidae were recruited at 12-14 weeks

of gestation. Their periodontal examination was carried out along with 75 g oral glucose load test at the time of recruitment. GDM was diagnosed as per the DIPSI (The Diabetes in Pregnancy Study group India) guidelines (≥140 mg/dl). Women with normal plasma glucose values underwent a repeat 75 g oral glucose load test at 24-28 weeks of gestation. All patients were followed up for pregnancy outcomes.
RESULTS: Of 584 primigravida, 184 (31.5%) had gingivitis and 148 (25.3%) had periodontitis. Overall, 332 (56.8%) pregnant women had periodontal disease. It was associated with GDM with adjusted hazard ratio (aHR) of 2.85 (95%CI = 1.47-5.53). The occurrence of pre-eclampsia was associated with periodontal disease with aHR of 2.20 (95%CI = 0.86-5.60). If primigravidae had periodontal disease along with GDM, the risk of pre-eclampsia had shown increased aHR of 18.79 (95% CI = 7.45-47.40).
CONCLUSIONS: The study shows a significant association of periodontal disease with GDM and an increased risk of developing pre-eclampsia due to this association.

DOI: 10.1111/jcpe.12902
PMID: 29611219

81: Kumar A, Mittal S, Mohan A, Madan K. Comparison of sedation regimens during flexible bronchoscopy. Clin Respir J. 2018 Apr;12(4):1775. doi: 10.1111/crj.12720. Epub 2017 Oct 22. PubMed PMID: 28976112.

82: Kumar L, Ganesan P. Induction therapy for multiple myeloma: more is not necessarily better! Br J Haematol. 2018 Jul;182(1):7-8. doi: 10.1111/bjh.15242. Epub 2018 Apr 20. PubMed PMID: 29676443.

83: Kumar R. What's inside. Indian J Urol. 2018 Apr-Jun;34(2):99-100. doi: 10.4103/iju.IJU_83_18. PubMed PMID: 29692501; PubMed Central PMCID: PMC5894298.

84: Kumar R, Arora R, Agarwal A, Gupta YK. Protective effect of Terminalia chebula against seizures, seizure-induced cognitive impairment and oxidative stress in experimental models of seizures in rats. J Ethnopharmacol. 2018 Apr 6;215:124-131. doi: 10.1016/j.jep.2017.12.008. Epub 2017 Dec 14. PubMed PMID: 29248452.

ETHNOPHARMACOLOGICAL RELEVANCE: Teminalia chebula (TC) has been traditionally used in the Ayurvedic system of medicine primarily for gastrointestinal disorders. Its fruit extract has also been used to treat epilepsy and other CNS disorders.
AIM OF THE STUDY: To evaluate the effect of hydroalcoholic fruit extract of Terminalia chebula (HETC) on experimental models of seizures, seizure-induced cognitive impairment and oxidative stress in rats.
MATERIALS AND METHODS: In vitro antioxidant activity of HETC was evaluated by using ABTS, NO and DPPH radical scavenging assay. For in-vivo study, seizures were induced in Wistar rats (200-225g) by pentylenetetrazole (PTZ) and maximal-electroshock. (MES). The anticonvulsant effect of the HETC (250, 500, and 1000mg/kg, orally) was evaluated in seizure models. The therapeutic and sub-therapeutic dose of valproate and phenytoin were also assayed. The potential effect of co-administration of HETC (500mg/kg) with sub-therapeutic dose of valproate and phenytoin were also evaluated in PTZ and MES seizures model respectively. Effect on cognition was assessed using elevated plus maze (EPM) and passive avoidance test (PA). The in- vivo oxidative stress parameters (malondialdehyde and glutathione) were assessed in the cerebral cortex and

hippocampus part of rat brain.
RESULTS: The IC50 value of HETC in in vitro antioxidant assays i.e. ABTS, DPPH and NO radical scavenging assay was found to be 2.27µg/ml, 6.04µg/ml and 4.37µg/ml respectively. In experimental study, PTZ and MES treated groups exhibited 100% seizures with increased oxidative stress ($p < 0.001$) and cognitive deficits ($p < 0.01$) as compared to control group. HETC at highest dose (1000mg/kg) showed 83.33% (5/6) protection in MES induced seizures while 66.66% (4/6) protection in PTZ induced seizures. However, HETC (1000mg/kg) and co-administration of sub-therapeutic dose of HETC with valproate and phenytoin showed complete protection. In addition, it also attenuated the seizure induced oxidative stress and cognitive impairment as indicated by significant ($p < 0.01$) improvement in the transfer latencies in EPM and PA as compared to PTZ and MES treated group.
CONCLUSIONS: The findings suggest that HETC exhibited significant anticonvulsant activity and also potentiated the subtherapeutic dose of phenytoin and valproate indicate its usefulness as an adjuvant to antiepileptic drugs with an advantage of preventing cognitive impairment and oxidative stress.

DOI: 10.1016/j.jep.2017.12.008
PMID: 29248452 [Indexed for MEDLINE]

85: Kumar V, Kumar P, Ravani R, Gupta P. Macular telangiectasia type II with pachychoroid spectrum of macular disorders. Eur J Ophthalmol. 2018 Apr 1:1120672118769527. doi: 10.1177/1120672118769527. [Epub ahead of print] PubMed PMID: 29676172.

PURPOSE: To report the cases with features of macular telangiectasia type II and pachychoroid spectrum of macular disorders simultaneously.
METHODS: It is a retrospective case series from a tertiary eye care center. Multimodal imaging features of these eyes including color fundus photographs, red free imaging, short-wave autofluorescence, fundus fluorescein angiography, indocyanine green angiography, and optical coherence tomography were studied.
RESULTS: Six eyes of three patients having combination of macular telangiectasia type II and pachychoroid group of disorders were found. Three eyes showed features of central serous chorioretinopathy, one eye had polypoidal choroidal vasculopathy, one eye had pachychoroid pigment epitheliopathy and one had thickened choroid.
CONCLUSION: This is the first report of macular telangiectasia type II in association with the pachychoroid spectrum of macular disorders and provides insight into possible common etiopathogenetic mechanisms.

DOI: 10.1177/1120672118769527
PMID: 29676172

86: Kumar V, Singh S. Multimodal imaging of choroidal nodules in neurofibromatosis type-1. Indian J Ophthalmol. 2018 Apr;66(4):586-588. doi: 10.4103/ijo.IJO_1095_17. PubMed PMID: 29582830; PubMed Central PMCID: PMC5892072.

Choroidal nodules in neurofibromatosis type-1 are common and are best imaged with near-infrared reflectance (NIR) imaging. The authors describe swept-source optical coherence tomography angiography (SSOCTA) of choroidal nodules. These nodules are seen as hyperflow areas on SSOCTA and correlate well to bright patches on NIR imaging. The utility of multicolor scanning laser imaging in detecting these abnormalities is also described.

DOI: 10.4103/ijo.IJO_1095_17

PMCID: PMC5892072
PMID: 29582830 [Indexed for MEDLINE]

Conflict of interest statement: There are no conflicts of interest

87: Kumar V, Bora GS, Kumar R, Jagannathan NR. Multiparametric (mp) MRI of prostate cancer. Prog Nucl Magn Reson Spectrosc. 2018 Apr;105:23-40. doi: 10.1016/j.pnmrs.2018.01.001. Epub 2018 Jan 31. Review. PubMed PMID: 29548365.

Prostate cancer (PCa) is one of the most prevalent cancers in men. A large number of men are detected with PCa; however, the clinical behavior ranges from low-grade indolent tumors that never develop into a clinically significant disease to aggressive, invasive tumors that may rapidly progress to metastatic disease. The challenges in clinical management of PCa are at levels of screening, diagnosis, treatment, and follow-up after treatment. Magnetic resonance imaging (MRI) methods have shown a potential role in detection, localization, staging, assessment of aggressiveness, targeting biopsies, etc. in PCa patients. Multiparametric MRI (mpMRI) is emerging as a better option compared to the individual imaging methods used in the evaluation of PCa. There are attempts to improve the reproducibility and reliability of mpMRI by using an objective scoring system proposed in the prostate imaging reporting and data system (PIRADS) for standardized reporting. Prebiopsy mpMRI may be used to detect PCa in men with elevated prostate-specific antigen or abnormal digital rectal examination and to enable targeted biopsies. mpMRI can also be used to decide on clinical management of patients, for example active surveillance, and may help in detecting only the pathology that requires detection. It can potentially not only guide patient selection for initial and repeat biopsy but also reduce false-negative biopsies. This review presents a description of the MR methods most commonly applied for investigations of prostate. The anatomical, functional and metabolic parameters obtained from these MR methods are discussed with regard to their physical basis and their contribution to mpMRI investigations of PCa.

DOI: 10.1016/j.pnmrs.2018.01.001
PMID: 29548365

88: Kumar V, Kumawat D, Bhari A, Chandra P. TWENTY-FIVE-GAUGE PARS PLANA VITRECTOMY IN COMPLEX RETINAL DETACHMENTS ASSOCIATED WITH GIANT RETINAL TEAR. Retina. 2018 Apr;38(4):670-677. doi: 10.1097/IAE.0000000000001592. PubMed PMID: 28333880.

PURPOSE: To study the structural and functional outcomes of 25-gauge pars plana vitrectomy in giant retinal tear-associated retinal detachments.
METHODS: Seventeen eyes of 17 patients with giant retinal tear, who underwent 25-gauge pars plana vitrectomy over a period of 15 months at a tertiary eye care center by a single surgeon, were recruited in this retrospective interventional study.
RESULTS: Giant retinal tears were mostly traumatic (35.3%) or associated with myopia (35.3%) and occurred in young (mean age 25.7 years) males (94.1%). Most eyes had best-corrected visual acuity ≤20/1,200 (in 82.3%), foveal detachment (in 88.2%), and proliferative vitreoretinopathy ≤Grade B (in 82.3%). The giant retinal tear extent was more than 180° in 29.4% and the fellow eye was involved in 35.2% of eyes. All eyes underwent 25-gauge pars plana vitrectomy with encircling band in 41.1%, perfluorocarbon liquid use in 82.3%, and endotamponade with sulphur hexafluoride (23.6%) or silicone oil (76.4%). At mean follow-up of 10.2 months, reattachment rate was 88.2%. Only 35.2% of eyes achieved final visual acuity ≥20/80 with a cause of poor vision being cataract, secondary

glaucoma, macular pucker, and corneal edema.
CONCLUSION: Twenty-five-gauge pars plana vitrectomy can achieve excellent attachment rates in eyes with giant retinal tear-associated retinal detachment. It can be as efficient as larger-gauge vitrectomy, at the same time retaining all advantages of smaller-gauge surgery.

DOI: 10.1097/IAE.0000000000001592
PMID: 28333880 [Indexed for MEDLINE]

89: Kumar V, Kumawat D. Multimodal imaging in a case of butterfly pattern dystrophy of retinal pigment epithelium. Int Ophthalmol. 2018 Apr;38(2):775-779. doi: 10.1007/s10792-017-0497-3. Epub 2017 Mar 15. PubMed PMID: 28299497.

AIMS: To report multi-modal imaging findings in a case of butterfly pattern dystrophy of retinal pigment epithelium.
METHODS: A middle-aged female with butterfly pattern dystrophy, who presented with progressive loss of vision, was examined using coloured fundus photographs, short wave autofluorescence, swept source optical coherence tomography (SS-OCT), fundus fluorescein angiography and enface optical coherence tomography.
RESULTS: Multi-modal imaging was useful in the characterization of the various disease features. Autofluorescence pattern was opposite to that of fluorescein angiogram and SS-OCT showed disruption in the outer retinal layers. Enface OCT images depicted the pigment deposition prominently.
CONCLUSION: The features of butterfly pattern dystrophy on these modalities correlated well with the histopathological findings described in the literature. Enface imaging highlights the deposition of pigment/lipofuscin and has never been described in BPD.

DOI: 10.1007/s10792-017-0497-3
PMID: 28299497 [Indexed for MEDLINE]

90: Kusuma YS, Kaushal S, Garg R, Babu BV. Birth preparedness and determinants of birth place among migrants living in slums and slum-like pockets in Delhi, India. Sex Reprod Healthc. 2018 Jun;16:160-166. doi: 10.1016/j.srhc.2018.04.004. Epub 2018 Apr 9. PubMed PMID: 29804761.

OBJECTIVE: The objective of this paper is to report birth preparedness and place of birth and its determinants among recent- and settled- migrant households living in slums of Delhi.
METHODS: In a cross-sectional survey, 458 migrant mothers with a child aged below one year of age were identified. Socio-demographic details, data on the place of childbirth, antenatal care (ANC) and birth preparedness in terms of planning for home birth or hospital birth, transport, saving money, knowledge of danger signs were collected through interviewer-administered pretested questionnaire. Logistic regression was carried out for the determinants of hospital birth.
RESULTS: The present study migrants are characterised by younger ages, low educational attainment, low incomes and represented by socioeconomically disadvantaged communities. They mainly relied on government healthcare services for maternal care. ANC seeking was not satisfactory with 16% of women with no ANC; 46% receiving 1-3 visits; and only 23% of women reported health worker visited them at home. 59% of the births took place at hospitals. Having ANC visits (Adjusted Odds Ratio (AOR) for having 4 or more ANC visits = 5.252), planning for hospital birth (AOR = 6.114), plan for transport (AOR = 1.989), mass media exposure (listening to radio; AOR = 2.871) and knowledge of danger signs (AOR = 3.872) resulted in significant chances of hospital birth.
CONCLUSION: Migrant women are at the risk of utilizing the services to a less extent. The health systems need to take measures to mitigate the disadvantage due

to migration through specific strategies to make them inclusive and outreach to the poor migrants.

DOI: 10.1016/j.srhc.2018.04.004
PMID: 29804761 [Indexed for MEDLINE]

91: Machanalli G, Bhalla AP, Baidya DK, Goswami D, Talawar P, Anand RK. Sono-anatomical analysis of right internal jugular vein and carotid artery at different levels of positive end-expiratory pressure in anaesthetised paralysed patients. Indian J Anaesth. 2018 Apr;62(4):303-309. doi: 10.4103/ija.IJA_716_17. PubMed PMID: 29720757; PubMed Central PMCID: PMC5907437.

Background and Aims: Increasing the cross-sectional area (CSA) of the internal jugular vein (IJV) improves the success rate of cannulation and decreases complications. Application of positive end-expiratory pressure (PEEP) may increase the CSA of IJV beyond that achieved in Trendelenburg position. However, the optimum PEEP to achieve maximal increase in CSA of IJV and the effect of PEEP on IJV and CA relationship is not known.
Methods: In this prospective, blinded, randomised controlled study, 120 anesthetised paralysed patients of the American Society of Anesthesiologists physical Status I-II were placed in 20° Trendelenburg position. Patients were randomised into four groups as follows: PEEP of 0, 5, 10 and 15 cmH2O. CSA, anteroposterior (AP) diameter and transverse diameter (Td) of IJV and overlapping of IJV with CA were assessed using two-dimensional ultrasound. Statistical analysis was performed in SPSS version 21.0 software using Chi-square/Fisher's exact test (categorical data) and analysis of variance (continuous data) tests and $P < 0.05$ was considered statistically significant.
Results: There was significant increase in AP diameter, CSA and Td with the application of PEEP 10-15 cmH2O. Increase in CSA up to 25% with PEEP 10 and 44% with PEEP 15 was noted. There was a significant decrease in the overlapping of the internal CA with an increase in PEEP. It ranged from 21% at P0 to 17% P15.
Conclusion: Application of PEEP 10-15 cmH2O in Trendelenburg position significantly increased CSA and AP diameter of IJV and decreased CA overlap of IJV in anesthetised paralysed patients.

DOI: 10.4103/ija.IJA_716_17
PMCID: PMC5907437
PMID: 29720757

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

92: Madaan P, Gulati S, Chakrabarty B, Sapra S, Sagar R, Mohammad A, Pandey RM, Tripathi M. Clinical spectrum of psychogenic non epileptic seizures in children; an observational study. Seizure. 2018 Jul;59:60-66. doi: 10.1016/j.seizure.2018.04.024. Epub 2018 Apr 27. PubMed PMID: 29754012.

PURPOSE: The current study was designed to analyze the clinical spectrum of Psychogenic non-epileptic seizures (PNES) in children.
METHODS: Children aged 6-16years with clinically suspected PNES, confirmed by short-term VEEG (STVEEG{video electroencephalogram}) and induction were classified as per Seneviratne classification. Stressors, associated co morbidities, Verbal IQ (Intelligence Quotient) and behavioral abnormalities were assessed using HTP(House tree person) test, DSM IV (Diagnostic and statistical manual of mental disorders) TR criteria, MISIC (Malin intelligence scale for Indian children) and CBCL (Child behaviour checklist).
RESULTS: Eighty children with PNES {45 boys; mean age: 10.5 (±1.6) years} were

enrolled. Median delay in diagnosis was 5 months {IQR(interquartile range)- 0.5 to 48 months}) and 45% patients were already on AEDs (antiepileptic drugs). Commonest semiology was dialeptic (42.5%), followed by mixed (28.8%), motor (15%) and nonepileptic aura (13.8%). Family stressors were the commonest followed by school related issues. The most common psychiatric comorbidity was adjustment disorder. Somatic complaints were observed in 50% children.
CONCLUSIONS: Dialeptic PNES is commonest in children. In resource constrained settings, STVEEG along with induction is a reliable method to diagnose PNES. A comprehensive assessment protocol (including assessment of stressors) is needed for holistic management of pediatric PNES.

DOI: 10.1016/j.seizure.2018.04.024
PMID: 29754012 [Indexed for MEDLINE]

93: Madan K, Biswal SK, Mittal S, Hadda V, Mohan A, Khilnani GC, Pandey RM, Guleria R. 1% Versus 2% Lignocaine for Airway Anesthesia in Flexible Bronchoscopy Without Lignocaine Nebulization (LIFE): A Randomized Controlled Trial. J Bronchology Interv Pulmonol. 2018 Apr;25(2):103-110. doi: 10.1097/LBR.0000000000000458. PubMed PMID: 29346249.

BACKGROUND: The ideal concentration of lignocaine for topical anesthesia in bronchoscopy remains investigational. In this randomized, double blind study, we compared 1% versus 2% lignocaine for topical anesthesia.
METHODS: Consecutive patients undergoing bronchoscopy were randomized to receive either 1% or 2% lignocaine solution by spray-as-you-go technique. All received 10% lignocaine spray to the oropharynx along with nasal 2% lignocaine gel. Nebulized lignocaine was not administered. Primary outcomes were operator-rated overall procedural satisfaction, visual analogue scale (VAS)-rated and operator-rated cough, VAS. Secondary objectives were total lignocaine dose administered, patient-rated pain on faces pain scale, cumulative dose of lignocaine and procedural complications.
RESULTS: A total of 500 patients (250 in each group) were randomized. Baseline characteristics were comparable. Operator-rated overall procedural satisfaction, VAS (72.05±20.16 and 72.20±21.96 in 1% and 2% group respectively; P=0.93) and operator-rated cough, VAS [1% group: 19.1 (12.6-34.6) and 2% group: 20.6 (12.5-36.9); P>0.05] were similar between the 2 groups. Cumulative dose of lignocaine used in 2% lignocaine group was greater (220.89±12.96mg in 1% and 319.55±19.32mg in 2% group; P<0.001). Patients receiving sedation were comparable between the 2 groups. (10% in 1% lignocaine group and 6% in 2% lignocaine group; P=0.13). Minor complications occurred in 2 patients in each group.
CONCLUSION: One percent lignocaine in flexible bronchoscopy is as efficacious as 2% lignocaine when administered using the spray as you go technique without concurrent lignocaine nebulization, at a significantly lower total dose of lignocaine administered.

DOI: 10.1097/LBR.0000000000000458
PMID: 29346249 [Indexed for MEDLINE]

94: Mahajan C, Rath GP, Singh GP, Mishra N, Sokhal S, Bithal PK. Efficacy and safety of dexmedetomidine infusion for patients undergoing awake craniotomy: An observational study. Saudi J Anaesth. 2018 Apr-Jun;12(2):235-239. doi: 10.4103/sja.SJA_608_17. PubMed PMID: 29628833; PubMed Central PMCID: PMC5875211.

Background: The goal of awake craniotomy is to maintain adequate sedation,

analgesia, respiratory, and hemodynamic stability and also to provide a cooperative patient for neurologic testing. An observational study carried out to evaluate the efficacy of dexmedetomidine sedation for awake craniotomy.
Materials and Methods: Adult patients with age >18 year who underwent awake craniotomy for intracranial tumor surgery were enrolled. Those who were uncooperative and had difficult airway were excluded from the study. In the operating room, the patients received a bolus dose of dexmedetomidine 1 μg/kg followed by an infusion of 0.2–0.7 μg/kg/h (bispectral index target 60–80). Once the patients were sedated, scalp block was given with bupivacaine 0.25%. The data on hemodynamics at various stages of the procedure, intraoperative complications, total amount of fentanyl used, intravenous fluids required, blood loss and transfusion, duration of surgery, Intensive Care Unit (ICU), and hospital stay were collected. The patients were assessed for Glasgow outcome scale (GOS) score and patient satisfaction score (PSS).
Results: A total of 27 patients underwent awake craniotomy during a period of 2 years. Most common intraoperative complication was seizures; observed in five patients (18.5%). None of these patients experienced any episode of desaturation. Two patients had tight brain for which propofol boluses were administered. The average fentanyl consumption was 161.5 ± 85.0 μg. The duration of surgery, ICU, and hospital stays were 231.5 ± 90.5 min, 14.5 ± 3.5 h, and 4.7 ± 1.5 days, respectively. The overall PSS was 8 and GOS was good in all the patients.
Conclusion: The use of dexmedetomidine infusion with regional scalp block in patients undergoing awake craniotomy is safe and efficacious. The absence of major complications and higher PSS makes it close to an ideal agent for craniotomy in awake state.

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PMCID: PMC5875211
PMID: 29628833

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

95: Mahajan S, Agarwal S, Kocheri N, Jain D, Mathur SR, Iyer VK. Cytopathology of non-invasive follicular thyroid neoplasm with papillary-like nuclear features: A comparative study with similar patterned papillary thyroid carcinoma variants. Cytopathology. 2018 Jun;29(3):233-240. doi: 10.1111/cyt.12537. Epub 2018 Apr 11. PubMed PMID: 29638022.

OBJECTIVE: Noninvasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP) is a recently described, indolent thyroid tumor, with well-defined histopathological diagnostic criteria. Cytology features are not well documented. We reviewed cytology of histologically proven cases of NIFTP and some of its common differentials to look for salient diagnostic features.
METHODS: Cases reported on histopathology as follicular variant of papillary thyroid carcinoma (FVPTC), or NIFTP between July 2015 and April 2017 having available cytology smears were retrieved and reclassified as NIFTP, FVPTC, and classical papillary thyroid carcinoma with predominant follicular pattern (PTC-FP). Cytological features were assessed, classified as per The Bethesda System for Reporting Cytopathology and compared.
RESULTS: There were 23 NIFTP cases, 18 FVPTC and 8 PTC-FP. A microfollicle-predominant pattern was seen in all. Nuclear score was 2 in most NIFTP cases (61%). Pseudoinclusions were absent. NIFTP showed features of atypia of undetermined significance/follicular lesion of undetermined significance (AUS/FLUS) (III) in 61%, follicular neoplasm/suspicious for a follicular neoplasm (FN/SFN) (IV) in 35% and suspicious for malignancy (SFM) (V) in 4%. Most of the FVPTCs were also called FN/SFN (IV) (56%) or AUS/FLUS (III) (22%). Nuclear features did not statistically differ from NIFTP. PTC-FP showed high-grade cytology in 75%, and higher nuclear score (3 in 75%) in contrast to NIFTP

(P = .003).
CONCLUSION: NIFTP and FVPTC show a similar distribution among the Bethesda categories hence precluding conclusive distinction on cytology. PTC-FP, in contrast, was found to have a statistically significant higher nuclear score and more commonly showed malignant cytology.

DOI: 10.1111/cyt.12537
PMID: 29638022

96: Makhija N, Magoon R, Krishna NS, Bhoje A. Ultrasound Guided Cannulation of the Carotid Artery in Extensive Aortic Dissection Involving the Aortic Arch Branch Vessels. J Cardiothorac Vasc Anesth. 2018 Apr;32(2):e47-e48. doi: 10.1053/j.jvca.2017.08.015. Epub 2017 Aug 9. PubMed PMID: 29336963.

97: Makwana T, Takkar B, Venkatesh P, Sharma JB, Gupta Y, Chawla R, Vohra R, Kriplani A, Tandon N. Prevalence, progression, and outcomes of diabetic retinopathy during pregnancy in Indian scenario. Indian J Ophthalmol. 2018 Apr;66(4):541-546. doi: 10.4103/ijo.IJO_1062_17. PubMed PMID: 29582816; PubMed Central PMCID: PMC5892058.

Purpose: The objective of this study is to evaluate pattern of diabetic retinopathy (DR) during pregnancy in females with pregestational diabetes mellitus (DM).
Methods: This is an ambispective observational cohort study conducted at an Indian tertiary care centre. A total of 50 pregnant females with pregestational DM were included while those with gestational DM were excluded from the study. Ocular examination (inclusive of fundus photography) was conducted and systemic parameters (inclusive of Glycated hemoglobin) were assessed during each of the 3 trimesters and 3 months postpartum. The prevalence and progression of DR during pregnancy in the study cohort were the main outcome measures.
Results: Three of the 50 patients had type 1 DM while 47 had type II DM. All the patients with type I DM were insulin dependent while 19 patients with type II DM were insulin dependent. Overall prevalence of DR was 8% (4/50); 2 cases had nonproliferative DR (NPDR), and 2 had proliferative DR (PDR). During the study period, worsening was seen in both the patients with PDR and one required vitrectomy. Mean visual acuity in patients with PDR decreased from 0.77 logMAR units at presentation to 1.23 logMAR at final follow-up. There was no change in the mean visual acuity of patients with NPDR. None of the patients with NPDR converted to PDR. There was no new onset DR in the patients without DR at presentation. Assessment of risk factors for DR revealed significantly higher duration of DM (14 ± 6.32 years vs. 3.43 ± 1.43 years, P = 0.0008). The median age was also higher in the DR patients (31 years vs. 29 years, P = 0.32).
Conclusion: No new onset cases were seen during the course of pregnancy and no conversion from NPDR to PDR was seen; however, a worsening of the two PDR cases was observed. No cases of DR were seen in noninsulin-dependent DM. None of the four participants with DR showed a spontaneous resolution of DR postpartum. Patients with PDR and long-standing DM require careful observation during pregnancy. A registry of diabetic mothers should be set up for development of guidelines for managing such cases.

DOI: 10.4103/ijo.IJO_1062_17
PMCID: PMC5892058
PMID: 29582816 [Indexed for MEDLINE]

Conflict of interest statement: There are no conflicts of interest

98: Malik V, Kiran U, Chauhan S, Makhija N. Transcutaneous nerve stimulation for pain relief during chest tube removal following cardiac surgery. J Anaesthesiol Clin Pharmacol. 2018 Apr-Jun;34(2):216-220. doi: 10.4103/joacp.JOACP_336_15. PubMed PMID: 30104832; PubMed Central PMCID: PMC6066881.

Background and Aims: In patients undergoing open heart surgery, chest tubes are removed postoperatively when patients are well awake and stable. Pain during chest tube removal can be moderate to severe and can be the worst experience of hospitalization. Various modalities of pain relief during chest tube removal have been tried with variable results. We sought to examine the effect of transcutaneous electrical nerve stimulation (TENS) as an intervention for pain relief during chest tube removal after cardiac surgery.
Material and Methods: In a tertiary care center, fifty patients undergoing open heart surgery were randomized into two groups. Group TENS (n = 25) received TENS from 30 min before and continued up to 30 min after chest tube removal. Control Group (n = 25) did not receive TENS. In both the groups, additional analgesic medication was provided on demand, besides the standard analgesic regime which was injection ketorolac 30 mg intramuscularly every 8 h. Patients were studied for pain during chest drain removal and pain related nausea, vomiting, and sense of well-being.
Results: Mean visual analog pain score assessed for chest tube removal was significantly less 4.1 ± 1.2 ($P < 0.05$) in TENS Group as compared to 6.1 ± 0.8 in Control Group. Significantly greater number of patients (n = 14) ($P < 0.05$) in Control Group demanded additional analgesia as compared to TENS Group (n = 5). Feeling of well-being, improvement in appetite, and sleep was better in TENS Group as compared to Control Group.
Conclusion: We conclude that TENS might not replace the conventional analgesics but has definite adjuvant role in decreasing pain scores and improves sense of well-being during chest tube removal after cardiac surgery.

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PMCID: PMC6066881
PMID: 30104832

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

99: Manivannan P, Tyagi S, Chandra D, Mishra P, Pati HP, Saxena R. Flow cytometric analysis of patients with hereditary spherocytosis - an Indian scenario. Hematology. 2018 Apr;23(3):175-180. doi: 10.1080/10245332.2017.1376855. Epub 2017 Sep 15. PubMed PMID: 28914173.

OBJECTIVES: Flow cytometry osmotic fragility test (FC-OFT) was a recently introduced screening test for hereditary spherocytosis (HS). This study was conducted to evaluate the utility of FC-OFT in all newly diagnosed cases of HS, to compare its diagnostic value with conventional OFT and to correlate with clinical disease severity.
METHODS: In this study, the percentage of residual red cells (%RRC) was measured using flow cytometer after creating a red cell suspension. Subsequently, this was spiked with deionized water for FC-OFT in all cases of HS (n = 40), healthy subjects (n = 40) and beta-thalassemia traits (BTT) (n = 20).
RESULTS: The receiver operator curve analysis defined the optimal cut-offs for FC-OFT-derived indices, such as %RRC value (≤16.29%) and %RRC ratio (>1.72), for HS cases when compared with healthy subjects and BTT ($p < 0.05$). The FC-OFT (96%) achieved higher test efficiency than the conventional OF test (68.9%). A significant positive and a negative correlation were found between number of spherocytes/hpf and %RRC ratio ($p = 0.001$) and %RRC values ($p = 0.0486$). No significant correlation was observed between %RRC value ($p = 0.8934$), %RRC ratio

(p=0.6348) and HS disease severity score.
CONCLUSION: Our results suggest that FC-OFT could be the better screening test for HS cases in developing countries if flow cytometer is available.

DOI: 10.1080/10245332.2017.1376855
PMID: 28914173 [Indexed for MEDLINE]

100: Marieswaran M, Sikidar A, Goel A, Joshi D, Kalyanasundaram D. An extended OpenSim knee model for analysis of strains of connective tissues. Biomed Eng Online. 2018 Apr 17;17(1):42. doi: 10.1186/s12938-018-0474-8. PubMed PMID: 29665801; PubMed Central PMCID: PMC5905155.

BACKGROUND: OpenSim musculoskeletal models provide an accurate simulation environment that eases limitations of in vivo and in vitro studies. In this work, a biomechanical knee model was formulated with femoral articular cartilages and menisci along with 25 connective tissue bundles representing ligaments and capsules. The strain patterns of the connective tissues in the presence of femoral articular cartilage and menisci in the OpenSim knee model was probed in a first of its kind study.
METHODS: The effect of knee flexion (0°-120°), knee rotation (-40° to 30°) and knee adduction (-15° to 15°) on the anterior cruciate, posterior cruciate, medial collateral, lateral collateral ligaments and other connective tissues were studied by passive simulation. Further, a new parameter for assessment of strain namely, the differential inter-bundle strain of the connective tissues were analyzed to provide new insights for injury kinematics.
RESULTS: ACL, PCL, LCL and PL was observed to follow a parabolic strain pattern during flexion while MCL represented linear strain patterns. All connective tissues showed non-symmetric parabolic strain variation during rotation. During adduction, the strain variation was linear for the knee bundles except for FL, PFL and TL.
CONCLUSIONS: Strains higher than 0.1 were observed in most of the bundles during lateral rotation followed by abduction, medial rotation and adduction. In the case of flexion, highest strains were observed in aACL and aPCL. A combination of strains at a flexion of 0° with medial rotation of 30° or a flexion of 80° with rotation of 30° are evaluated as rupture-prone kinematics.

DOI: 10.1186/s12938-018-0474-8
PMCID: PMC5905155
PMID: 29665801 [Indexed for MEDLINE]

101: Mathur P. Prevention of healthcare-associated infections in low- and middle-income Countries: The 'bundle approach'. Indian J Med Microbiol. 2018 Apr-Jun;36(2):155-162. doi: 10.4103/ijmm.IJMM_18_152. PubMed PMID: 30084404.

Background: Healthcare-associated infections (HCAI/HAIs) are one of the most common adverse events in patient care and account for substantial morbidity and mortality. The high rates of HCAIs in a facility are an indicator of poor quality of healthcare services. According to the World Health Organization, at any time, up to 7% of patients in developed and 10% in developing countries will acquire at least one HAI. These infections also present a significant economic burden at the societal level. However, a large percentage of HAIs are preventable through effective infection prevention and control measures.
Objectives: Prevention of these infections also needs to be prioritised in view of the growing antimicrobial resistance in HAIs. The bundle approach to the prevention of HAIs is a relatively new concept that is revolutionising the care of high-risk patients in the Intensive Care Units. This report details the bundle approach for the prevention of HAIs, particularly the device-associated

infections, for low- and middle-income countries.
Conclusion: With the escalating armamentarium of antimicrobial resistance, healthcare sector has to go back to the very basics of hospital infection control; develop, assess and implement bundles of prevention. These are cost-effective and easily adaptable, to cater to the increasing HCAIs and MDR infections in the LMICs.

DOI: 10.4103/ijmm.IJMM_18_152
PMID: 30084404

Conflict of interest statement: There are no conflicts of interest

102: Mazzeo AT, Gupta D. Monitoring the injured brain. J Neurosurg Sci. 2018 Oct;62(5):549-562. doi: 10.23736/S0390-5616.18.04465-X. Epub 2018 Apr 18. PubMed PMID: 29671295.

Traumatic brain injury can be defined as the most complex disease in the most complex organ. When an acute brain injury occurs, several pathophysiological cascades are triggered, leading to further exacerbation of the primary damage. A number of events potentially occurring after TBI can compromise the availability or utilization of energy substrates in the brain, ultimately leading to brain energy crisis. The frequent occurrence of secondary insults in the acute phase after TBI, such as intracranial hypertension, hypotension, hypoxia, hypercapnia, hyperthermia, seizures, can then increase cerebral damage, and adversely affect outcome. Neuromonitoring techniques provide clinicians and researchers with a mean to detect and reverse those processes that lead to this energy crisis, especially ischemic processes, and have become a critical component of modern neurocritical care. Which is the best way to monitoring the brain after an acute injury has been a matter of debate for decades. This review will discuss how monitoring the injured brain can reduce secondary brain damage and ameliorate outcome after acute brain injury.

DOI: 10.23736/S0390-5616.18.04465-X
PMID: 29671295

103: Meghwani H, Prabhakar P, Mohammed SA, Dua P, Seth S, Hote MP, Banerjee SK, Arava S, Ray R, Maulik SK. Beneficial Effect of Ocimum sanctum (Linn) against Monocrotaline-Induced Pulmonary Hypertension in Rats. Medicines (Basel). 2018 Apr 17;5(2). pii: E34. doi: 10.3390/medicines5020034. PubMed PMID: 29673152; PubMed Central PMCID: PMC6023537.

BACKGROUND: The study was designed to explore any beneficial effect of Ocimum sanctum (Linn) (OS) in experimental pulmonary hypertension (PH) in rats. OS is commonly known as “holy basil” and “Tulsi” and is used in the Indian System of Medicine as antidiabetic, antioxidant, hepatoprotective, adaptogenic, and cardioprotective.
METHODS: Monocrotaline (MCT) administration caused development of PH in rats after 28 days and rats were observed for 42 days. Treatments (sildenafil; 175 µg/kg, OS; 200 mg/kg) were started from day 29 after the development of PH and continued for 14 days. Parameters to assess the disease development and effectiveness of interventions were echocardiography, right and left ventricular systolic pressures, and right ventricular end diastolic pressure, percentage medial wall thickness (%MWT) of pulmonary artery, oxidative stress markers in lung tissue, NADPH oxidase (Nox-1) protein expression in lung, and mRNA expression of Bcl2 and Bax in right ventricular tissue.
RESULTS: OS (200 mg/kg) treatment ameliorated increased lung weight to body weight ratio, right ventricular hypertrophy, increased RVSP, and RVoTD/AoD ratio. Moreover, OS treatment decreases Nox-1 expression and increases expression of

Bcl2/Bax ratio caused by MCT.
CONCLUSION: The present study demonstrates that OS has therapeutic ability against MCT-induced PH in rat which are attributed to its antioxidant effect. The effect of OS was comparable with sildenafil.

DOI: 10.3390/medicines5020034
PMCID: PMC6023537
PMID: 29673152

104: Mishra PR, Bhoi S, Sinha TP. Integration of Point-of-care Ultrasound during Rapid Sequence Intubation in Trauma Resuscitation. J Emerg Trauma Shock. 2018 Apr-Jun;11(2):92-97. doi: 10.4103/JETS.JETS_56_17. PubMed PMID: 29937637; PubMed Central PMCID: PMC5994849.

Introduction: Airway and breathing management play critical role in trauma resuscitation. Early identification of esophageal intubation and detection of fatal events is critical. Authors studied the utility of integration of point-of-care ultrasound (POCUS) during different phases of rapid sequence intubation (RSI) in trauma resuscitation.
Methods: It was prospective, randomized single-centered study conducted at the Emergency Department of a level one trauma center. Patients were divided into ultrasonography (USG) and clinical examination (CE) arm. The objectives were to study the utility of POCUS in endotracheal tube placement and confirmations and identification of potentially fatal conditions as tracheal injury, midline vessels, paratracheal hematoma, vocal cord pathology, pneumothorax, and others during RSI. Patient >1 year of age were included. Time taken for procedure, number of incorrect intubations, and pathologies detected were noted. The data were collected in Microsoft Excel spread sheets and analyzed using Stata (version 11.2, Stata Corp, Texas, U. S. A) software.
Results: One hundred and six patients were recruited. The mean time for primary survey USG versus CE arm was (20 ± 10.01 vs. 18 ± 11.03) seconds. USG detected four pneumothorax, one tracheal injury, and one paratracheal hematoma. The mean procedure time USG versus CE arm was (37.3 ± 21.92 vs. 58 ± 32.04) seconds. Eight esophageal intubations were identified in USG arm by POCUS and two in CE arm by EtCO2 values.
Conclusion: Integration of POCUS was useful in all three phases of RSI. It identified paratracheal hematoma, tracheal injury, and pneumothorax. It also identified esophageal intubation and confirmed main stem tracheal intubation in less time compared to five-point auscultation and capnography.

DOI: 10.4103/JETS.JETS_56_17
PMCID: PMC5994849
PMID: 29937637

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

105: Mishra RK, Chaturvedi A, Jena BR, Rath GP. Anesthetic Considerations for Ventriculoatrial Shunt Insertion in a Child with Cerebrospinal Fluid Ascites. J Pediatr Neurosci. 2018 Apr-Jun;13(2):249-251. doi: 10.4103/jpn.JPN_6_18. PubMed PMID: 30090149; PubMed Central PMCID: PMC6057175.

Cerebrospinal fluid (CSF) ascites is a rare complication of ventriculoperitoneal shunt, where CSF accumulates in the peritoneal cavity as a result of defective absorption. Alternate CSF diversion procedure such as ventriculoatrial (VA) shunt is another way of managing this complication. Although there are reports published on this condition, the scientific literature hardly discussed the anesthetic management in such scenario. Here, we describe such a case with

particular attention to perioperative management during VA shunt insertion for CSF ascites.

DOI: 10.4103/jpn.JPN_6_18
PMCID: PMC6057175
PMID: 30090149

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

106: Mittal A, Dijoo M, Sabhikhi A, Gulati S. Henoch SchÃ¶nlein Purpura Nephritis Developing in a Child with Known IgA Nephropathy. Indian J Pediatr. 2018 Sep;85(9):808-809. doi: 10.1007/s12098-018-2660-x. Epub 2018 Apr 6. PubMed PMID: 29623535.

107: Mutha V, Narde HK, Chandra P, Kumar A. Valsalva retinopathy following normal vaginal delivery: 'bilaterality a rarity'. BMJ Case Rep. 2018 Apr 17;2018. pii: bcr-2018-224781. doi: 10.1136/bcr-2018-224781. PubMed PMID: 29666102.

108: Naalla R, De M, Dawar R, Chauhan S, Singhal M. Thoracoumbilical Flap: Anatomy, Technique, and Clinical Applications in Upper Limb Reconstruction in the Era of Microvascular Surgery. J Hand Microsurg. 2018 Apr;10(1):29-36. doi: 10.1055/s-0038-1630142. Epub 2018 Mar 20. PubMed PMID: 29706734; PubMed Central PMCID: PMC5919790.

Purpose: Microvascular reconstruction is the standard of care for salvage of soft tissue defects in complex upper extremity due to their distinct advantages over the pedicled flaps. However, in the era of microsurgery, pedicled flaps have an acceptable significant role for reconstruction of complex soft tissue defects. The authors aim to demonstrate the versatility of pedicled thoracoumbilical flap (TUF) in selected clinical scenarios.
Patients and Methods: Retrospective analysis of patients who underwent TUF for upper limb posttraumatic reconstruction was performed between January 2016 and October 2017. The demographic details, etiology, wound parameters, clinical circumstances, and complications were recorded.
Results: Ten patients were included in the retrospective case series. Out of them, nine of the patients had critical issues, which justified a pedicled TUF over free flap. The critical issues were severe comorbid illnesses (n = 3), the paucity of recipient vessels (n = 1), salvage of hand replant and revascularization (n = 2), circumferential degloving injury to the multiple fingers and palm (n = 1), coverage for metacarpal hand (n = 1), and extensive scarring at the surgical site (n = 1). Mean age was 34.4 years (range: 11-70 years), six of them were males, and four were females. Two patients had infections resulting in wound gaping. One of the patients had flap tip necrosis.
Conclusion: Pedicled flaps have a significant acceptable role in this era of microsurgery, and a pedicled TUF is a versatile option for coverage of complex soft tissue defects of the forearm, wrist, hand, and fingers.
Level of Evidence: This is a level IV, therapeutic, and retrospective study.

DOI: 10.1055/s-0038-1630142
PMCID: PMC5919790 [Available on 2019-04-01]
PMID: 29706734

109: Nalwa A, Walia R, Singh V, Madan K, Mathur S, Iyer V, Jain D. Comparison of Conventional Smear and Liquid-based Cytology Preparation in Diagnosis of Lung Cancer by Bronchial Wash and Transbronchial Needle Aspiration. J Cytol. 2018 Apr-Jun;35(2):94-98. doi: 10.4103/JOC.JOC_248_16. PubMed PMID: 29643656; PubMed Central PMCID: PMC5885611.

Introduction: Liquid-based cytology (LBC), initially developed for screening gynecologic specimens, is now being used in nongynecologic aspiration and exfoliative specimens. In this study, the diagnostic yield and utility of thin-prep (TP) was compared with conventional preparations to ascertain its utility in improving the diagnosis of respiratory lesions.
Materials and Methods: Bronchial washings (BW) and transbronchial needle aspirates (TBNA) (bronchoscopy/endobronchial ultrasound-guided) from 70 consecutive patients of mediastinal masses and endo/peribronchial growths were included. The diagnostic yields of both conventional smears and thin-prep were compared. Immunocytochemistry (ICC) was performed on direct/cytospin smears of TBNA/BW and TP slides when the tumor could not be subtyped by morphology. Histopathologic correlation was done.
Results: Although well-preserved morphological features and cleaner background in TP allowed accurate diagnosis of malignancies, diagnostic yield was comparable to conventional preparations. Immunocytochemistry was successfully employed on TP smears which helped in accurate subtyping of the tumors. Few shortcomings of TP smears were uneven distribution of cells, thick cell clusters, and inadequate cellularity.
Conclusion: Liquid-based TP preparation is an effective diagnostic tool for respiratory tract cytology, however, results are comparable to conventional smears.

DOI: 10.4103/JOC.JOC_248_16
PMCID: PMC5885611
PMID: 29643656

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

110: Nambirajan A, Kaur H, Jangra K, Kaur K, Madan K, Mathur SR, Iyer VK, Jain D. Adenocarcinoma predominant pattern subtyping and nuclear grading in cytology: Is there a role in prognostication of advanced pulmonary adenocarcinomas? Cytopathology. 2018 Apr;29(2):163-171. doi: 10.1111/cyt.12519. Epub 2018 Feb 1. PubMed PMID: 29388266.

INTRODUCTION: Primary lung adenocarcinomas (ADs) show varied architectural patterns, and pattern-based subtyping of ADs is currently recommended due to prognostic implications. Predicting AD patterns on cytology is challenging; however, cytological nuclear features appear to correlate with histological grade and survival in early stage lung ADs. The feasibility and value of AD pattern prediction and nuclear grading on cytology in advanced lung ADs is not known. We aimed to predict patterns and analyse nuclear features on cytology and evaluate their role in prognostication.
METHODS: One-hundred patients of Stage III/IV lung AD with available matched cytology and histology samples were included. Cyto-patterns based on cell arrangement patterns (flat sheets vs three-dimensional clusters vs papillae) and cyto-nuclear score based on nuclear features (size, shape, contour), nucleoli (macronucleoli vs prominent vs inconspicuous), and nuclear chromatin were determined, and correlated with predominant histological-pattern observed on the matched small biopsy and outcome.
RESULTS: Higher cyto-nuclear scores were observed with high-grade histo-patterns (solid, micropapillary and cribriform), while the predicted cyto-patterns did not correspond to the predominant pattern on histology in 77% cases. Highest cyto-histo agreement was observed for solid pattern (72%). High grade histo-patterns and cyto-nuclear scores > 3 showed a trend towards inferior survival (not significant).
CONCLUSIONS: Nuclear grade scoring on cytology is simple to perform, and is predictive of high grade patterns. Its inclusion in routine reporting of cytology samples of lung ADs may be valuable.

DOI: 10.1111/cyt.12519
PMID: 29388266

111: Nehate C, Moothedathu Raynold AA, Haridas V, Koul V. Comparative Assessment of Active Targeted Redox Sensitive Polymersomes Based on pPEGMA-S-S-PLA Diblock Copolymer with Marketed Nanoformulation. Biomacromolecules. 2018 Jul 9;19(7):2549-2566. doi: 10.1021/acs.biomac.8b00178. Epub 2018 Apr 18. PubMed PMID: 29648799.

In the present work, polymersomes based on self-assembled, folate-targeted, redox-responsive, ATRP-based amphiphilic diblock copolymer poly(polyethylene glycol)-S-S-polylactide with disulfide linkage were developed for efficient doxorubicin (DOX) delivery and compared with marketed DOXIL nanoformulation. The polymersomes formulation was optimized by quality by design approach providing monodisperse nanostructures of ~110 nm and enhanced DOX loading of ~20%. Polymersomes showed excellent stability as per the ICH guidelines over the extended storage period of 3 months. The in vitro drug release profile confirmed the redox sensitive behavior of polymersomes providing ~80% drug release in endosomal pH 5 with 10 mmol GSH as compared to ~20% release at pH 7.4. The targeted polymersomes achieved enhanced cellular internalization in folate receptor overexpressing cell lines, MDA-MB-231 and HeLa, providing ~24% higher tumor reduction than DOXIL in Ehrlich ascites tumor bearing Swiss albino mice.

DOI: 10.1021/acs.biomac.8b00178
PMID: 29648799

112: Noopur G, Praveen V, Radhika T, Sanjeev K G, Mani K, Deepak K. Attitudes and Perception Towards Eye Donation in Patients with Corneal Disease: A Case-controlled Population-based Study. Curr Eye Res. 2018 Jun;43(6):734-739. doi: 10.1080/02713683.2018.1449221. Epub 2018 Apr 13. PubMed PMID: 29652516.

PURPOSE: To assess awareness, barriers, and misconceptions related to eye donation in people with corneal disease as compared to controls in a population setting.
MATERIALS AND METHODS: A population-based study was conducted in 25 randomly selected clusters of Rural Gurgaon, Haryana, India, as part of the CORE (Cornea Opacity Rural Epidemiological) study. In addition to ophthalmic examination, knowledge and perceptions regarding eye donation were assessed through a validated questionnaire. The questionnaire captured the sociodemographic factors influencing awareness regarding eye donation in participants with corneal disease and twice the number of age- and gender-matched controls recruited from the same study clusters. Descriptive statistics were computed along with multivariable logistic regression analysis to determine associated factors for awareness of eye donation.
RESULTS: In the CORE study, 452 participants had corneal opacities on ocular examination. Of these, 442 were assessed for eye donation awareness. Additionally, 884 age- and gender-matched controls were recruited. The mean age of cases and controls was 60.9 ± 15.5 and 59.6 ± 14.3 years, respectively. Awareness of eye donation in cases and controls was 46.4% (n = 205 of 442) and 52.3% (n = 462 of 884), respectively (P = 0.044). Educational status was an important factor determining knowledge about eye donation in both cases and controls (P = < 0.001). Major barriers reported for not pledging eyes were lack of willingness (36.7%) and ignorance (15.3%). Common misconceptions like eyes could be donated before death or even after 24 h of death and that any type of blindness could be treated with corneal transplantation were prevalent.

CONCLUSIONS: The study demonstrated that although there is substantial awareness about eye donation, there are numerous barriers in this population that need to be resolved to improve donation rates. Additional efforts are needed to translate this awareness into actual eye donation in both cases with corneal disease and controls.

DOI: 10.1080/02713683.2018.1449221
PMID: 29652516

113: Pande A, Ramachandran R, Rewari V. Bougie-associated bronchial injury complicated by a nephropleural fistula after percutaneous nephrolithotomy: a tale of two complications. BMJ Case Rep. 2018 Apr 17;2018. pii: bcr-2017-223969. doi: 10.1136/bcr-2017-223969. PubMed PMID: 29666093.

We present a case of bronchial injury following bougie-assisted endotracheal intubation in a patient with difficult airway scheduled to undergo right percutaneous nephrolithotomy under general anaesthesia. The patient developed pleuritic pain along with right pleural effusion on the third postoperative day which was diagnosed by the anaesthesiologist who was following up the patient for airway trauma-associated complications. However, the patient was diagnosed to have a nephropleural fistula, a rare complication of supracostal access to percutaneous nephrolithotomy, which was managed successfully.

DOI: 10.1136/bcr-2017-223969
PMID: 29666093 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

114: Pandey R, Biswas R, Ray M, Ramteke PP, Dhamija E, Halder A. Report of a unique case of myoepithelial carcinoma of left parotid gland with metachronous bilateral cavernous sinus metastasis. J Egypt Natl Canc Inst. 2018 Jun;30(2):73-76. doi: 10.1016/j.jnci.2018.02.002. Epub 2018 Apr 23. PubMed PMID: 29699873.

Myoepithelial carcinoma (MC) is a rare, locally aggressive malignant neoplasm of the salivary glands. Only few evidences on its metastatic behavior are available in the literature. We herein present a unique case of MC of left parotid gland which metastasized to bilateral cavernous sinuses. The patient was successfully treated with palliative radiotherapy and chemotherapy.

DOI: 10.1016/j.jnci.2018.02.002
PMID: 29699873 [Indexed for MEDLINE]

115: Parakh N, Utagi B, Arava S, Verma S, Karthikeyan G, Singh S, Bhargava B, Ray R, Patel CD, Bahl VK. Clinical significance of intracoronary thrombus aspirated during primary percutaneous intervention: An immunohistopathological study. Cardiovasc Revasc Med. 2018 Apr;19(3 Pt A):241-246. doi: 10.1016/j.carrev.2017.09.009. Epub 2017 Sep 22. PubMed PMID: 29113867.

BACKGROUND: Manual thrombus aspiration during primary percutaneous intervention provides us with aspirated thrombus sample, that may contain material from the

disrupted plaque. Immunohistopathological analysis of thrombus can yield valuable information about the clinical and cardiovascular outcomes and possible mechanisms of myocardial infarction.
MATERIAL AND METHODS: We studied and analysed the immunohistopathological features of coronary thrombus aspirated from patients undergoing primary percutaneous coronary angioplasty. Immunohistological staining included markers namely CD68, SMA and CD34 for macrophages, smooth muscle actin and endothelium, respectively. Major adverse cardiac events, angiographic outcome and infarct size were also noted.
RESULTS: Fifty-three patients (Mean age - 51.3±13years; males-47) who underwent primary percutaneous coronary intervention with aspiration thrombectomy were enrolled. Thrombus was successfully aspirated in 40 of 53 patients (75.4%). Patients with successful thrombus aspiration had higher ST-segment resolution (≥50%) as compared to patients with failed thrombus aspiration. Presence of RBC-rich thrombus on microscopy was more commonly associated with post-procedure TIMI flow of <2 as compared to patients with fibrin-rich thrombus and a trend towards lower myocardial blush grade<2 (P=0.10), and a significantly higher final infarct size (37.5±5% vs 25±15%; P=0.04 of myocardium) on nuclear scan. Immunohistology revealed presence of plaque material in 72% (26/36) of the samples.
CONCLUSIONS: Immunohistopathological evaluation of intracoronary thrombus may be of prognostic importance. High prevalence of plaque material in the aspirated intracoronary thrombus suggests plaque rupture as a possible etiology for vessel occlusion in these patients.
SHORT SUMMARY: Immunohistopathological evaluation of intracoronary thrombus reveals high prevalence of plaque material in the aspirated intracoronary thrombus suggesting plaque rupture as a possible etiology for vessel occlusion in Indian STEMI patients.

DOI: 10.1016/j.carrev.2017.09.009
PMID: 29113867

116: Parida GK, Tripathy S, Datta Gupta S, Singhal A, Kumar R, Bal C, Shamim SA. Adenocarcinoma Prostate With Neuroendocrine Differentiation: Potential Utility of 18F-FDG PET/CT and 68Ga-DOTANOC PET/CT Over 68Ga-PSMA PET/CT. Clin Nucl Med. 2018 Apr;43(4):248-249. doi: 10.1097/RLU.0000000000002013. PubMed PMID: 29474196.

Ga-PSMA PET/CT is the upcoming imaging modality for staging, restaging and response assessment of prostate cancer. However, due to neuroendocrine differentiation in some of patients with prostate cancer, they express somatostatin receptors instead of prostate specific membrane antigen. This can be exploited and other modalities like Ga-DOTANOC PET/CT and F-FDG PET/CT should be used in such cases for guiding management. We hereby discuss a similar case of 67-year-old man of adenocarcinoma prostate with neuroendocrine differentiation, which shows the potential pitfall of Ga-PSMA PET/CT imaging and benefit of Ga-DOTANOC PET/CT and F-FDG PET/CT in such cases.

DOI: 10.1097/RLU.0000000000002013
PMID: 29474196 [Indexed for MEDLINE]

117: Parveen B, Tripathi M, Vohora D. A Cross-Sectional Study to Assess the Modulation of Wnt Inhibitors following Anti-Epileptic Drug Therapy and their Correlation with Vitamin D and Receptor Activator of Nuclear Factor Î° B Ligand in Indian Women with Epilepsy. Basic Clin Pharmacol Toxicol. 2018 Sep;123(3):271-276. doi: 10.1111/bcpt.12996. Epub 2018 Apr 15. PubMed PMID: 29504704.

Long-term anti-epileptic drug (AED) therapy compromises bone health. Although vitamin D deficiency is proposed to be involved, it alone is not held responsible. This accounts for investigating other mechanisms in bone accrual. Recent studies have shown modulation of inhibitors of wnt pathway, sclerostin and dickkopf-1 (DKK-1), in glucocorticoids-induced osteoporosis. We investigated whether AED monotherapy modulates wnt inhibitors in Indian women with epilepsy. Women of age > 20-40 years with the diagnosis of epilepsy and receiving AEDs (carbamazepine, valproate and levetiracetam) for at least a year were enrolled. The results were compared with age-matched healthy controls with no evidence of metabolic bone disease. Women undergoing treatment with AEDs (mean duration: 50.59 ± 37.929 months) exhibited higher serum sclerostin and receptor activator of nuclear factor κ B ligand (RANKL) and lower vitamin D (25-hydroxy vitamin D) and DKK-1 levels when compared to age-matched healthy controls. Sclerostin showed a positive correlation with RANKL, while DKK-1 presented no such relationship. However, no association was evident after adjusting for age, duration of treatment and total daily dose. Although a correlation between wnt inhibitors and RANKL could not be obtained, AEDs displayed changes in serum levels of wnt inhibitors in persons with epilepsy and hence these drugs may compromise bone health through a disturbance in wnt signalling mechanisms.

DOI: 10.1111/bcpt.12996
PMID: 29504704

118: Patnaik SK, Kumar P, Bamal M, Patel S, Yadav MP, Kumar V, Sinha A, Bagga A, Kanitkar M. Cardiovascular outcomes of Nephrotic syndrome in childhood (CVONS) study: a protocol for prospective cohort study. BMC Nephrol. 2018 Apr 3;19(1):81. doi: 10.1186/s12882-018-0878-5. PubMed PMID: 29614967; PubMed Central PMCID: PMC5883594.

BACKGROUND: Nephrotic syndrome (NS) is characterized by dyslipidemia which is a well-known risk factor for atherogenesis. Atherosclerosis in childhood is mostly subclinical and endothelial dysfunction is known to precede this. Evidence for screening for endothelial dysfunction and cardiovascular risk factors and early identification of premature onset of atherosclerosis in childhood NS remains tenuous in the absence of well-designed prospective studies addressing cardiovascular comorbidity in NS. The objective of our study is to examine endothelial dysfunction and short-term cardiovascular outcomes in a carefully phenotyped cohort of patients with Nephrotic syndrome as compared to healthy controls.
METHODS: In a multi-centric prospective cohort study, 70 Steroid Resistant NS (SRNS), 70 Steroid Sensitive (SSNS) patients along with 70 Healthy Controls are being recruited. After a baseline assessment of functional and structural status of heart (2D Echocardiography), arteries (Carotid Doppler and Intima Media Thickness measurements) and microcirculation [a combination of 2D Echocardiography, Laser Doppler Flowmetry (LDF) and Brachial Artery Flow mediated dilation (FMD) and Nail Fold Capillaroscopy (NFC)], the patients are being investigated for endothelial dysfunction. Venous blood sample (15 ml) is being collected for routine investigations and assay of biochemical endothelial markers through Flow Cytometry. The patients will be followed up at 12 months and 24 months after the recruitment to look for any change from baseline period.
DISCUSSION: This study will able to provide a better understanding of the epidemiology of endothelial dysfunction and associated subclinical cardiovascular co-morbidity in childhood NS. Findings on characterization of prevalence of endothelial dysfunction and subclinical markers may be used to design future

randomized controlled trials for evaluating the efficacy of preventive and therapeutic interventions in reducing the incidence of cardiovascular disease.

DOI: 10.1186/s12882-018-0878-5
PMCID: PMC5883594
PMID: 29614967

119: Prasad SN, Razik A, Siddiqui F, Lal H. Mucinous adenocarcinoma arising from chronic perianal fistula mimicking horseshoe abscess. BMJ Case Rep. 2018 Apr 5;2018. pii: bcr-2017-223063. doi: 10.1136/bcr-2017-223063. PubMed PMID: 29622704.

Perianal fistulae are commonly seen clinical entity. Development of malignancy within a perianal fistula is rare. Even rarer is the development of mucinous adenocarcinoma in a chronic fistula-in-ano. Only a handful of such cases have been reported in the past. A case of mucinous adenocarcinoma arising in chronic perianal fistula in a 34-year-old woman is being described. She presented with complaints of perineal fullness, pain and recurrent pus discharge from perianal fistula for 4 years. On radiological workup, a large solid-cystic pelvic mass was seen in relation to the fistula. On MRI, the lesion was mimicking a large horseshoe abscess. Transrectal ultrasound-guided biopsy and subsequent histopathological examination confirmed the presence of mucinous adenocarcinoma with tumour cells immunopositive for CK7 and CK20.

DOI: 10.1136/bcr-2017-223063
PMID: 29622704 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

120: Priya S, Thomas R, Nagpal P, Sharma A, Steigner M. Congenital anomalies of the aortic arch. Cardiovasc Diagn Ther. 2018 Apr;8(Suppl 1):S26-S44. doi: 10.21037/cdt.2017.10.15. Review. PubMed PMID: 29850417; PubMed Central PMCID: PMC5949580.

Congenital anomalies of the aortic arch include diverse subgroups of malformations that may be clinically silent or may present with severe respiratory or esophageal symptoms especially when associated with complete vascular rings. These anomalies may be isolated or may be associated with other congenital heart diseases. Volume rendered computed tomography (CT) and magnetic resonance angiography (MRA) help in preoperative surgical planning by providing information about the complex relationship of aortic arch and its branches to the trachea and esophagus. Three dimensional capabilities of both computed tomography angiography (CTA) and MRA are helpful in determining evidence of tracheal or esophageal compression or other high-risk features in patients with a complete vascular ring.

DOI: 10.21037/cdt.2017.10.15
PMCID: PMC5949580
PMID: 29850417

Conflict of interest statement: Conflicts of Interest: The authors have no conflicts of interest to declare.

121: Pujari A, Bajaj MS, Sen S, Goel S. Conjunctival angiomyxoma-rare but needs

observation. Can J Ophthalmol. 2018 Apr;53(2):e60-e62. doi: 10.1016/j.jcjo.2017.07.005. Epub 2017 Sep 22. PubMed PMID: 29631843.

122: Rahman RA, Bhatnagar V, Agarwala S, Kumar R. Estimation of Renal Functional Reserve in Children with Different Grades of Vesicoureteric Reflux. J Indian Assoc Pediatr Surg. 2018 Apr-Jun;23(2):74-80. doi: 10.4103/jiaps.JIAPS_213_17. PubMed PMID: 29681697; PubMed Central PMCID: PMC5898208.

Background: Vesicoureteric reflux (VUR) is one of the most common anomalies encountered in pediatric urology. The concept of renal functional reserve (RFR) as the ability of the kidney to increase glomerular filtration rate (GFR) following a protein load was introduced in the 1980s.
Aim: This study aims to evaluate RFR using 99Tc diethylenetriamine pentaacetic acid (DTPA) as the filtration agent for GFR estimation in children with VUR.
Materials and Methods: RFR was estimated in 53 children, of which 31 patients had unilateral VUR (Group I) and 22 patients had bilateral VUR (Group II), by subtracting baseline GFR from stimulated GFR following an intravenous protein load. GFR was determined by double compartment-2 sample method using 99Tc DTPA radioisotope as the filtration agent. Both the groups were further subgrouped into low-grade (IA, IIA) and high-grade VUR (IB, IIB).
Results: The RFR was significantly lower in unilateral high-grade VUR (Group IB) as compared to unilateral low-grade VUR (Group IA) (P = 0.024). RFR was significantly lower in bilateral high-grade VUR patients (IIB) as compared to unilateral low-grade VUR group (IA) (P = 0.0226). Furthermore, the stimulated GFR shows very strong correlation to baseline GFR in both major groups (r = 0.9659 and P = 0.001 in Group I and r = 0.9856 and P = 0.001 in Group II) concluding that the baseline GFR and the stimulated GFR increase or decrease in tandem in both the groups.
Conclusion: The RFR is impaired in children with both unilateral high-grade VUR and bilateral high-grade VUR while it is relatively preserved in unilateral low-grade VUR and bilateral low-grade VUR.

DOI: 10.4103/jiaps.JIAPS_213_17
PMCID: PMC5898208
PMID: 29681697

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

123: Rath R, Krishnan A, Nongkynrih B, Misra P. Assessment of implementation status of Cigarettes and Other Tobacco Products Act (COTPA) and its awareness among residents in a block of Haryana. Indian J Public Health. 2018 Apr-Jun;62(2):100-103. doi: 10.4103/ijph.IJPH_126_17. PubMed PMID: 29923532.

Background: Legislative route is one of the known method to control behaviour of population. Cigarette and Other Tobacco Products Act is one of the laws enacted to control the use of tobacco in India lunched in the year 2003.
Objective: The objective of this study was to find compliance of COTPA among tobacco stores and to find the knowledge of people regarding COTPA.
Methods: All selected communities were studied by community audit. All stores selling tobacco products were assessed for its compliance to COTPA. Thirty participants from selected communities with in the age range of 18- 65 years were selected and interviewed for knowledge regarding COTPA.
Results: A total of 218 stores were found to be selling tobacco. None of the stores were fully compliant to all COTPA clauses. Stores in rural areas were found to be more non-complaint than urban areas. 41% of stores were selling tobacco to minors, 10% were within 100 yards of schools.8% of schools have tobacco advertisement on façade and 24% displayed tobacco products openly. Around half of the participants (n-552) had heard about COTPA whereas only 4% were aware

of all 4 provisions of COTPA.
Conclusion: Although more than a decade passed since the law was enacted poor compliance and knowledge was found among participants.

DOI: 10.4103/ijph.IJPH_126_17
PMID: 29923532

Conflict of interest statement: There are no conflicts of interest

124: Rathi A, Chakrabarti A, Agarwal T, Pushker N, Patil M, Kamble H, Titiyal JS, Mohan R, Kashyap S, Sharma S, Sen S, Satpathy G, Sharma N. Pythium Keratitis Leading to Fatal Cavernous Sinus Thrombophlebitis. Cornea. 2018 Apr;37(4):519-522. doi: 10.1097/ICO.0000000000001504. PubMed PMID: 29319595.

PURPOSE: To report a case of Pythium insidiosum keratitis leading to fatal cavernous sinus thrombophlebitis.
METHODS: Case report.
RESULTS: A 70-year-old man presented with excruciating pain, redness, and diminution of vision in his left eye for 2 weeks after washing his hair with tap water. A total corneal ulcer with surrounding infiltrates and associated corneal thinning was present. Corneal scraping revealed the presence of Gram-positive cocci. KOH wet mount and in vivo confocal microscopy revealed branching hyphae. Combined antibacterial and antifungal treatment was started, but 4 days later, the ulcer showed signs of worsening with perforation for which a large therapeutic penetrating keratoplasty was done. The host cornea showed branching septate hyphae on Sabarouds Dextrose Agar. Two weeks later, the patient developed left eye proptosis with associated extraocular movement restriction. Magnetic resonance imaging of the head and orbit revealed cavernous sinus thrombophlebitis. Lid sparing partial exenteration was performed. Polymerase chain reaction revealed P. insidiosum. The patient subsequently developed a cerebrovascular attack and died of its complications.
CONCLUSIONS: Ocular pythiosis may lead to cavernous sinus thrombophlebitis and can even be life threatening. Timely diagnosis and early radical surgery are of value. A high index of suspicion must be kept for P. insidiosum in cases with suspected fungal etiology not responding to conventional treatment.

DOI: 10.1097/ICO.0000000000001504
PMID: 29319595 [Indexed for MEDLINE]

125: Reddy S, Swamy R, Irugu DVK, Ramji KVV. Transtracheal endoscopic-assisted resection of a rare inflammatory myofibroblastic tumour in adult trachea: a case report. Acta Otorhinolaryngol Ital. 2018 Apr;38(2):170-173. doi: 10.14639/0392-100X-1278. PubMed PMID: 29967553; PubMed Central PMCID: PMC6028815.

SUMMARY: Inflammatory myofibroblastic tumours (IMTs) are rare and clinically benign in childhood, and malignant in adults. The aetiology of IMTs is not clear, and recent studies report it as true neoplasm rather than a reactive or inflammatory lesion. IMTs can involve any part of the body, but are usually common in lungs. These are rarely seen in adults and tracheal involvement is also rare in both adults and children. We describe an 18-year-old woman who presented with respiratory difficulty to the emergency department. On clinical examination, the patient had complete absence of breath sounds on the right side of the chest. CT of the chest and virtual bronchoscopy revealed a polypoidal soft tissue mass lesion involving the carina with occlusion of right main bronchus. Endoscopic-assisted resection was performed under general anaesthesia and the final pathological diagnosis was tracheal IMT.

Publisher: Resezione transtracheale endoscopio-assistita di un raro tumore

miofibroblastico infiammatorio della trachea di un paziente adulto: case report.I tumori miofibroblastici infiammatori sono rari in età pediatrica, età nella quale sono clinicamente benigni; sono invece maligni in età adulta. L'eziologia non è chiara, recenti studi affermano che essi siano delle vere neoplasie piuttosto che delle lesioni reattive o infiammatorie. I tumori miofibroblastici infiammatori sono raramente riscontrati negli adulti e il coinvolgimento tracheale è raro sia nei bambini sia negli adulti. Noi descriviamo il caso di una paziente di sesso femminile di diciotto anni, che si è presentata al pronto soccorso per difficoltà respiratoria. All'esame clinico della paziente si evidenziava assenza dei suoni polmonari a destra, pertanto si eseguiva TC del torace e la broncoscopia virtuale rivelava una lesione polipoide soffice che coinvolgeva la carena occludendo completamente il bronco principale di destra. La resezione endoscopio-assistita è stata eseguita in anestesia generale e all'esame istopatologico definitivo la diagnosi è stata di tumore miofibroblastico infiammatorio.

PMCID: PMC6028815
PMID: 29967553

126: Sadhu S, Mitra DK. Emerging Concepts of Adaptive Immunity in Leprosy. Front Immunol. 2018 Apr 9;9:604. doi: 10.3389/fimmu.2018.00604. eCollection 2018. Review. PubMed PMID: 29686668; PubMed Central PMCID: PMC5900054.

Leprosy is a chronic intracellular infection caused by the acid-fast bacillus, Mycobacterium leprae. The disease chiefly affects the skin, peripheral nerves, mucosa of the upper respiratory tract, and the eyes. The damage to peripheral nerves results in sensory and motor impairment with characteristic deformities and disability. Presently, the disease remains concentrated in resource-poor countries in tropical and warm temperate regions with the largest number of cases reported from India. Even though innate immunity influences the clinical manifestation of the disease, it is the components of adaptive immune system which seem to tightly correlate with the characteristic spectrum of leprosy. M. leprae-specific T cell anergy with bacillary dissemination is the defining feature of lepromatous leprosy (LL) patients in contrast to tuberculoid leprosy (TT) patients, which is characterized by strong Th1-type cell response with localized lesions. Generation of Th1/Th2-like effector cells, however, cannot wholly explain the polarized state of immunity in leprosy. A comprehensive understanding of the role of various regulatory T cells, such as Treg and natural killer T cells, in deciding the polarized state of T cell immunity is crucial. Interaction of these T cell subsets with effector T cells like Th1 (IFN-γ dominant), Th2 (interluekin-4 dominant), and Th17 (IL-17+) cells through various regulatory cytokines and molecules (programmed death-1/programmed death ligand-1) may constitute key events in dictating the state of immune polarization, thus controlling the clinical manifestation. Studying these important components of the adaptive immune system in leprosy patients is essential for better understanding of immune function, correlate(s) the immunity and mechanism(s) of its containment.

DOI: 10.3389/fimmu.2018.00604
PMCID: PMC5900054
PMID: 29686668

127: Saha S, Gupta V, Dawood FS, Broor S, Lafond KE, Chadha MS, Rai SK, Krishnan A. Estimation of community-level influenza-associated illness in a low resource rural setting in India. PLoS One. 2018 Apr 26;13(4):e0196495. doi: 10.1371/journal.pone.0196495. eCollection 2018. PubMed PMID: 29698505; PubMed

Central PMCID: PMC5919664.

OBJECTIVE: To estimate rates of community-level influenza-like-illness (ILI) and influenza-associated ILI in rural north India.
METHODS: During 2011, we conducted household-based healthcare utilization surveys (HUS) for any acute medical illness (AMI) in preceding 14days among residents of 28villages of Ballabgarh, in north India. Concurrently, we conducted clinic-based surveillance (CBS) in the area for AMI episodes with illness onset ≤3days and collected nasal and throat swabs for influenza virus testing using real-time polymerase chain reaction. Retrospectively, we applied ILI case definition (measured/reported fever and cough) to HUS and CBS data. We attributed 14days of risk-time per person surveyed in HUS and estimated community ILI rate by dividing the number of ILI cases in HUS by total risk-time. We used CBS data on influenza positivity and applied it to HUS-based community ILI rates by age, month, and clinic type, to estimate the community influenza-associated ILI rates.
FINDINGS: The HUS of 69,369 residents during the year generated risk-time of 3945 person-years (p-y) and identified 150 (5%, 95%CI: 4-6) ILI episodes (38 ILI episodes/1,000 p-y; 95% CI 32-44). Among 1,372 ILI cases enrolled from clinics, 126 (9%; 95% CI 8-11) had laboratory-confirmed influenza (A (H3N2) = 72; B = 54). After adjusting for age, month, and clinic type, overall influenza-associated ILI rate was 4.8/1,000 p-y; rates were highest among children <5 years (13; 95% CI: 4-29) and persons≥60 years (11; 95%CI: 2-30).
CONCLUSION: We present a novel way to use HUS and CBS data to generate estimates of community burden of influenza. Although the confidence intervals overlapped considerably, higher point estimates for burden among young children and older adults shows the utility for exploring the value of influenza vaccination among target groups.

DOI: 10.1371/journal.pone.0196495
PMCID: PMC5919664
PMID: 29698505 [Indexed for MEDLINE]

128: Saini I, Bagri N, Gupta N. My Phenotype speaks: please do not harm me with biopsy needle. Acta Reumatol Port. 2018 Apr-Jun;43(2):156-158. PubMed PMID: 30091961.

Fibrodysplasia ossificans progressiva is characterized by congenital skeletal anomalies and progressive heterotopic ossification. We present a 4 year old male patient who underwent unnecessary harmful multiple biopsies before the diagnosis of fibrodysplasia ossificans progressiva is made. Though rare, diagnosis of fibrodysplasia ossificans progressiva should be considered whenever characteristic radiographic features of multifocal heterotopic bone formation is seen along with the valgus deformities of the big toes.

PMID: 30091961

129: Saini I, Chouhan P, Bagri NK. Starry Sky Calcifications. J Clin Rheumatol. 2018 Apr;24(3):150-151. doi: 10.1097/RHU.0000000000000643. PubMed PMID: 29319555.

130: Satyarthee GD. Ideally, How Early Should Cranioplasty Be Performed-Days, Weeks, or Months Following Decompressive Craniectomy Surgery to Label as "Optimal Early Cranioplasty"? Big Enigma. World Neurosurg. 2018 Apr;112:302-303. doi: 10.1016/j.wneu.2017.11.136. PubMed PMID: 29580020.

131: Sawhney C, Arora MK, Kumar S, Barik PK, Ranjan P. Initial management in blunt trauma neck. J Anaesthesiol Clin Pharmacol. 2018 Apr-Jun;34(2):275-276. doi: 10.4103/0970-9185.168264. PubMed PMID: 30104856; PubMed Central PMCID: PMC6066891.

132: Saxena R, Singh D, Sharma M, James M, Sharma P, Menon V. Steroids versus No Steroids in Nonarteritic Anterior Ischemic Optic Neuropathy: A Randomized Controlled Trial. Ophthalmology. 2018 Oct;125(10):1623-1627. doi: 10.1016/j.ophtha.2018.03.032. Epub 2018 Apr 25. PubMed PMID: 29705054.

PURPOSE: To examine the role of oral steroid therapy in the treatment of nondiabetic cases of acute nonarteritic anterior ischemic optic neuropathy (NAAION).
DESIGN: Randomized double-blind clinical trial.
PARTICIPANTS: Thirty-eight patients with acute nondiabetic NAAION divided into 2 arms of 19 patients each. One arm constituted the cases and the other constituted the controls.
METHODS: Cases received oral steroid therapy and were designated the steroid group, whereas controls received placebo and were designated the nonsteroid group. Best-corrected visual acuity (BCVA), visual evoked response (VER), and OCT were performed at baseline, 1 month, 3 months, and 6 months after recruitment into the trial.
MAIN OUTCOME MEASURES: Best-corrected visual acuity, VER, and retinal nerve fiber layer changes on OCT.
RESULTS: Both groups showed significant improvement in BCVA, VER latency, and resolution of disc edema on OCT parameters over 6 months. Final outcome showed no statistically significant difference with regard to visual acuity, although VER was better in the steroid group (P = 0.011). Best-corrected visual acuity, VER amplitude, and VER latency (P = 0.02, P = 0.02, and P = 0.04, respectively) showed a greater percentage improvement in the steroid group, which also saw a faster resolution of disc edema on OCT (1-month follow-up).
CONCLUSIONS: Oral steroids in acute NAAION did not improve the visual acuity significantly at 6 months. However, they improved resolution of disc edema significantly and enabled a greater improvement in VER parameters. This subtle benefit of oral steroids in NAAION is clinically unimportant and does not provide support for its use.

DOI: 10.1016/j.ophtha.2018.03.032
PMID: 29705054

133: Sehrawat P, Biswas A, Kumar P, Singla P, Wig N, Dar L, Sood R. Role of Cytokines as Molecular Marker of Dengue Severity. Mediterr J Hematol Infect Dis. 2018 Apr 20;10(1):e2018023. doi: 10.4084/MJHID.2018.023. eCollection 2018. PubMed PMID: 29755701; PubMed Central PMCID: PMC5937971.

Objective: Dengue infection is a rapidly spreading vector-borne disease and is endemic in the Indian subcontinent. It has varied manifestations ranging from subclinical infection to severe fatal shock syndrome. This study aimed to estimate cytokine level in dengue patients and correlate them with dengue severity.
Methods: Cases of dengue fever diagnosed in the department of medicine of our institute from July 2015 to November 2016 were included in the study. The clinical features, biochemical, hematological and radiological parameters along with cytokine levels (Interferon-gamma, Interleukin-6, and Tumour Necrosis Factor-alpha) were recorded in all patients.
Results: Out of 80 confirmed cases of dengue included in the study, 50 had nonsevere dengue (Group 1), and 30 patients had severe dengue (Group 2). The median level of serum TNF-α in group 2 (62.5 pg/mL) was significantly higher than the median level in group 1 (20 pg/mL), (p=0.043). Similarly, the median level of

serum IFN-γ in group 2 (10.25 pg/mL) was significantly higher than the median level in group 1 (8.5 pg/mL), (p=0.002). The median level of IL-6 was also higher in group 2 (29 pg/ml) as compared group 1(14.2 pg/ml), but this result was not significant (p>0.05).
Conclusion: Some cytokines may play a role in the pathogenesis of severe manifestations of dengue.

DOI: 10.4084/MJHID.2018.023
PMCID: PMC5937971
PMID: 29755701

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

134: Shalimar, Sonika U, Kedia S, Mahapatra SJ, Nayak B, Yadav DP, Gunjan D, Thakur B, Kaur H, Acharya SK. Comparison of Dynamic Changes Among Various Prognostic Scores in Viral Hepatitis-Related Acute Liver Failure. Ann Hepatol. 2018 May-June;17(3):403-412. doi: 10.5604/01.3001.0011.7384. Epub 2018 Apr 9. PubMed PMID: 29735790.

INTRODUCTION AND AIM: Multiple prognostic scores are available for acute liver failure (ALF). Our objective was to compare the dynamicity of model for end stage liver disease (MELD), MELD-sodium, acute liver failure early dynamic model (ALFED), chronic liver failure (CLIF)-consortium ACLF score and King's College Hospital Criteria (KCH) for predicting outcome in ALF.
MATERIALS AND METHODS: All consecutive patients with ALF at a tertiary care centre in India were included. MELD, MELD-Na, ALFED, CLIF-C ACLF scores and KCH criteria were calculated at admission and day 3 of admission. Area under receiver operator characteristic curves (AUROC) were compared with DeLong method. The sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), likelihood ratio (LR) and diagnostic accuracy (DA) were reported.
RESULTS: Of the 115 patients included in the study, 73 (63.5%) died. The discrimination of mortality with baseline values of prognostic scores (MELD, MELD-Na, ALFED, CLIF-C ACLF and KCH) was modest (AUROC: 0.65-0.77). The AUROC increased on day 3 for all scores, except KCH criteria. On day 3 of admission, ALFED score had the highest AUROC 0.95, followed by CLIF-C ACLF 0.88, MELD 0.81, MELD-Na 0.77 and KCH 0.52. The AUROC for ALFED was significantly higher than MELD, MELD-Na and KCH (P < 0.001 for all) and CLIF-C ACLF (P = 0.05). ALFED score ≥ 4 on day 3 had the best sensitivity (87.1%), specificity (89.5%), PPV (93.8%), NPV (79.1%), LR positive (8.3) and DA (87.9%) for predicting mortality.
CONCLUSIONS: Dynamic assessment of prognostic scores better predicts outcome. ALFED model performs better than MELD, MELD, MELD-Na, CLIF-C ACLF scores and KCH criteria for predicting outcome in viral hepatitis- related ALF.

DOI: 10.5604/01.3001.0011.7384
PMID: 29735790

135: Shambanduram SS, Devarajan Sebastian LJ, Jain N, Garg A, Gaikwad SB. Management of a rare case of posterior condylar canal dural arteriovenous fistula presenting with subarachnoid haemorrhage: A case report and review of literature. Interv Neuroradiol. 2018 Apr;24(2):206-209. doi: 10.1177/1591019917743703. Epub 2017 Dec 3. Review. PubMed PMID: 29199500; PubMed Central PMCID: PMC5847008.

Posterior condylar canal dural arteriovenous fistula (PCC dAVF) is a rare entity with only three cases having been reported so far in the English literature. We describe the clinical presentation, imaging, and endovascular management of an elderly man with left PCC dAVF presenting with subarachnoid haemorrhage (SAH). Endovascular management of such cases requires thorough understanding of the

vascular anatomy around the craniovertebral junction (CVJ) and variable bridging vein draining patterns. The fistula in our case was fed by the posterior meningeal branch of the left vertebral artery and was draining through a dilated and tortuous medullary bridging vein into the antero-lateral pontomedullary venous system. Transarterial glue embolisation was performed with complete exclusion of the fistula and venous pouches. The patient developed intractable hiccough and left-sided facial pain on the second post-procedural day, and MRI showed focal diffusion restriction in the left dorso-lateral medulla. He recovered completely after a short course of steroids.

DOI: 10.1177/1591019917743703
PMCID: PMC5847008 [Available on 2019-04-01]
PMID: 29199500 [Indexed for MEDLINE]

136: Sharma HB, Kailashiya J. Effects of 6-Week Sprint-Strength and Agility Training on Body Composition, Cardiovascular, and Physiological Parameters of Male Field Hockey Players. J Strength Cond Res. 2018 Apr;32(4):894-901. doi: 10.1519/JSC.0000000000002212. PubMed PMID: 28858057.

Sharma, HB and Kailashiya, J. Effects of 6-week sprint-strength and agility training on body composition, cardiovascular, and physiological parameters of male field hockey players. J Strength Cond Res 32(4): 894-901, 2018-Optimal physiological and cardiovascular characteristics are essential for optimal physical performance. Different types of training regimes affect these characteristics and lead to trainees' adaptation and changes in relevant parameters. In the present interventional study, we have evaluated the effects of 6-week sprint-strength and agility training on such parameters. Twenty-four young Indian national hockey players volunteered for this study. Body weight (BW), body mass index (BMI), percentage body fat, lean body mass (LBM), resting heart rate (rHR), resting blood pressure (rBP), resting double-product (rDP), P/power (using Running-based Anaerobic Sprint Test), vertical jump (VJ), seated shot put test (SP), ball-hitting speed (BS), Tm (505-agility test), and V[Combining Dot Above]O2max were measured, and changes (d) after specified training regime were studied. The training proved to be "short yet effective." Significant improvements after training were found in body composition, cardiovascular, aerobic, anaerobic, strength, agility, and performance-related parameters; but not in BW, BMI, P/LBM, SP/LBM, and V[Combining Dot Above]O2max/LBM. Change in VJ (dVJ) was associated with change in Tm (dTm); change in SP (dSP) with change in VO2max, which also related to change in rHR, rBP and rDP. Change in BS (dBS) was more among those with lower initial BW, BMI, and BF. dBS, along with change in VO2max/LBM, was more mainly among those with lower initial anaerobic-aerobic fitness. The findings will be useful for coaches, sports managers, players, and also for general population for better, individual, and sport-based designing of "short yet effective" training programs and monitoring of outcomes. Specific physiological parameter improvement-targeted training can also be designed based on this research.

DOI: 10.1519/JSC.0000000000002212
PMID: 28858057 [Indexed for MEDLINE]

137: Sharma R, Sharma P, Katiyar V, Vora Z, Gurjar H. Can diabetic ketoacidosis (DKA) precipitate posterior reversible encephalopathy syndrome (PRES)? Childs Nerv Syst. 2018 Jun;34(6):1107-1108. doi: 10.1007/s00381-018-3799-5. Epub 2018 Apr 20. PubMed PMID: 29675562.

138: Sharma R, Sharma P, Katiyar V, Vora Z, Gurjar H. Early tracheostomy in traumatic brain injury: conundrum continuesâ€¦. Br J Neurosurg. 2018 Apr;32(2):127.

doi: 10.1080/02688697.2018.1457773. Epub 2018 Apr 24. PubMed PMID: 29687737.

139: Sharma R, Phalak M, Katiyar V. Letter to the Editor. The efficacy of local vancomycin for reducing surgical site infections after cranioplasty. J Neurosurg. 2018 Apr;128(4):1263-1265. doi: 10.3171/2017.7.JNS171589. Epub 2018 Feb 16. PubMed PMID: 29451449.

140: Sharma S. Thoracoscopic Blebectomy and Pleurodesis for Primary Spontaneous Pneumothorax. Indian J Pediatr. 2018 Apr;85(4):251-252. doi: 10.1007/s12098-018-2641-0. Epub 2018 Feb 15. Review. PubMed PMID: 29450816.

141: Sharma VK, Gupta V, Jangid BL, Pathak M. Modification of the Fitzpatrick system of skin phototype classification for the Indian population, and its correlation with narrowband diffuse reflectance spectrophotometry. Clin Exp Dermatol. 2018 Apr;43(3):274-280. doi: 10.1111/ced.13365. Epub 2018 Jan 10. PubMed PMID: 29318654.

BACKGROUND: The Fitzpatrick classification for skin phototyping is widely used, but its usefulness in dark-skinned populations has been questioned by some researchers. Recently, skin colour measurement has been proposed for phototyping skin colour objectively.
AIMS: To modify the Fitzpatrick system of skin phototyping for the Indian population and to study its correlation with skin colour using narrowband diffuse reflectance spectrophotometry METHODS: Answer choices for three items (eye colour, hair colour, colour of unexposed skin) out of 10 in the original Fitzpatrick questionnaire were modified, followed by self-administration of the original and the modified Fitzpatrick questionnaire by 70 healthy Indian volunteers. Skin colour (melanin and erythema indices) was measured from two photoexposed and two photoprotected sites using a narrowband reflectance spectrophotometer.
RESULTS: The mean ± SD scores for the original and modified Fitzpatrick questionnaires were 25.40 ± 4.49 and 23.89 ± 4.82, respectively ($r = 0.97$, $P < 0.001$). The two items related to tanning habits were deemed irrelevant based on the subjects' response and were removed from the modified questionnaire. The Melanin Index (MI) of all sites correlated moderately well with both the modified ($r = 0.61$-0.64, $P < 0.001$) and original Fitzpatrick questionnaire scores ($r = 0.64$-0.67, $P < 0.001$), while the Erythema Index showed poor correlation with both. An MI value of ≧42 was found to be the cut-off between skin phototypes I-III and IV, and ≥ 47 between IV and V-VI.
CONCLUSIONS: Our modification of the Fitzpatrick questionnaire makes it more relevant to the Indian population. Spectrophotometry can be a useful objective tool for skin phototyping.

DOI: 10.1111/ced.13365
PMID: 29318654 [Indexed for MEDLINE]

142: Shekhar S, Yadav SK, Rai N, Kumar R, Yadav Y, Tripathi M, Dey AB, Dey S. 5-LOX in Alzheimer's Disease: Potential Serum Marker and In Vitro Evidences for Rescue of Neurotoxicity by Its Inhibitor YWCS. Mol Neurobiol. 2018 Apr;55(4):2754-2762. doi: 10.1007/s12035-017-0527-1. Epub 2017 Apr 27. PubMed PMID: 28451886.

The inflammatory process plays a key role in neurodegenerative disorder. The inflammatory molecule, 5-lipooxygenase (5-LOX), protein is involved in the pathologic phenotype of Alzheimer's disease (AD) which includes Aβ amyloid deposition and tau hyperphosphorylation. This study determined the level of 5-LOX

in serum of AD patients, mild cognitive impairment (MCI) patients, and the normal elderly, and the rescue effect by YWCS, a peptide inhibitor of 5-LOX on neurotoxicity by Aβ amyloid25-35 (Aβ25-35) in neuroblastoma cells. The concentration of serum 5-LOX was estimated by surface plasmon resonance and western blot. The neuroprotective effect of 5-LOX peptide inhibitor YWCS in Aβ25-35-induced neurotoxicity was analyzed by MTT assay and western blotting. We found significant upregulated serum 5-LOX in AD patients and also in MCI patients compared to the normal control group. The peptide inhibitor of 5-LOX, YWCS, prevented the neurotoxic effect of Aβ25-35 by reducing the expression of γ-secretase as well as p-Tau181 in SH-SY5Y cells. However, YWCS was nontoxic towards normal HEK cells. The differential expression of serum 5-LOX among the study groups suggests it can be one of potential serum protein marker and a therapeutic regimen for AD and MCI. The negative correlation with neuropsychological parameters, i.e., MoCA and HMSE, increases its importance and makes it useful during the clinical setup which is very needful in developing countries. Peptide YWCS can serve as a new platform as a 5-LOX inhibitor which can prevent neurotoxicity developed in AD.

DOI: 10.1007/s12035-017-0527-1
PMID: 28451886

143: Shetty GB, Shetty B, Mooventhan A. Efficacy of Acupuncture in the Management of Primary Dysmenorrhea: A Randomized Controlled Trial. J Acupunct Meridian Stud. 2018 Aug;11(4):153-158. doi: 10.1016/j.jams.2018.04.001. Epub 2018 Apr 12. PubMed PMID: 29654840.

INTRODUCTION: Dysmenorrhea constitutes one of the most frequent disorders in women of a fertile age. The present study was conducted to evaluate the efficacy of acupuncture in the management of primary dysmenorrhea.
MATERIALS AND METHODS: Sixty females aged 17-23 years were randomly assigned to either a study group or a control group. The study group received acupuncture for the duration of 20 minutes/day, for 15 days/month, for the period of 90 days. The control group did not receive acupuncture for the same period. Baseline, during, and post assessments of both the groups were taken on day 1; day 30 and day 60; and day 90, respectively. Statistical analysis was performed by repeated measures of analysis of variance followed by post hoc analysis with Bonferroni adjustment for multiple comparisons, independent samples t test for visual analog scale score, and Mann-Whitney U test for rest of the variables using statistical package for the social sciences, version 16.
RESULTS: This study showed a significant reduction in all the variables such as the visual analog scale score for pain, menstrual cramps, headache, dizziness, diarrhea, faint, mood changes, tiredness, nausea, and vomiting in the study group compared with those in the control group.
CONCLUSION: Acupuncture could be considered as an effective treatment modality for the management of primary dysmenorrhea.

DOI: 10.1016/j.jams.2018.04.001
PMID: 29654840

144: Shewade HD, Kokane AM, Singh AR, Parmar M, Verma M, Desikan P, Khan SN, Kumar AMV. Provider reported barriers and solutions to improve testing among tuberculosis patients 'eligible for drug susceptibility test': A qualitative study from programmatic setting in India. PLoS One. 2018 Apr 20;13(4):e0196162. doi: 10.1371/journal.pone.0196162. eCollection 2018. PubMed PMID: 29677210; PubMed Central PMCID: PMC5909888.

BACKGROUND: In a study conducted in Bhopal district (a setting with facility for molecular drug susceptibility testing (DST)) located in central India in 2014-15, we found high levels of pre-diagnosis attrition among patients with presumptive multi drug-resistant tuberculosis (MDR-TB)-meaning TB patients who were eligible for DST, were not being tested.
OBJECTIVES: In this study, we explored the health care provider perspectives into barriers and suggested solutions for improving DST.
METHODS: This was a descriptive qualitative study. One to one interviews (n = 10) and focus group discussions (n = 2) with experienced key informants involved in programmatic management of DR-TB were conducted in April 2017. Manual descriptive thematic analysis was performed.
RESULTS: The key barriers reported were a) lack of or delay in identification of patients eligible for DST because of using treatment register as the source for identifying patients b) lack of assured specimen transport after patient identification and c) lack of tracking. Extra pulmonary TB patients were not getting identified as eligible for DST. Solutions suggested by the health care providers were i) generation of unique identifier at identification in designated microscopy center (DMC), immediate intimation of unique identifier to district and regular monitoring by senior TB laboratory and senior treatment supervisors of patients eligible for DST that were missed; ii) documentation of unique identifier at each step of cascade; iii) use of human carriers/couriers to transport specimen from DMCs especially in rural areas; and iv) routine entry of all presumptive extra-pulmonary TB specimen, as far as possible, in DMC laboratory register.
CONCLUSION: Lack of assured specimen transport and lack of accountability for tracking patient after identification and referral were the key barriers. The identification of patients eligible for DST among microbiologically confirmed TB at the time of diagnosis and among clinically confirmed TB at the time of treatment initiation is the key. Use of unique identifier at identification and its use to ensure cohort wise tracking has to be complemented with specimen transport support and prompt feedback to the DMC. The study has implications to improve detection of MDR-TB among diagnosed/notified TB patients.

DOI: 10.1371/journal.pone.0196162
PMCID: PMC5909888
PMID: 29677210 [Indexed for MEDLINE]

145: Sihota R, Angmo D, Ramaswamy D, Dada T. Simplifying "target" intraocular pressure for different stages of primary open-angle glaucoma and primary angle-closure glaucoma. Indian J Ophthalmol. 2018 Apr;66(4):495-505. doi: 10.4103/ijo.IJO_1130_17. Review. PubMed PMID: 29582808; PubMed Central PMCID: PMC5892050.

Lowering of intraocular pressure is currently the only therapeutic measure for Glaucoma management. Many longterm, randomized trials have shown the efficacy of lowering IOP, either by a percentage of baseline, or to a specified level. This has lead to the concept of 'Target" IOP, a range of IOP on therapy, that would stabilize the Glaucoma/prevent further visual field loss, without significantly affecting a patient's quality of life. A clinical staging of Glaucoma by optic nerve head evaluation and perimetric parameters, allows a patient's eye to be categorized as having - mild, moderate or severe Glaucomatous damage. An initial attempt should be made to achieve the following IOP range for both POAG or PACG after an iridotomy. In mild glaucoma the initial target IOP range could be kept as 15-17 mmHg, for moderate glaucoma 12-15 mmHg and in the severe stage of glaucomatous damage 10-12 mmHg. Factoring in baseline IOP, age, vascular perfusion parameters, and change on perimetry or imaging during follow up, this range may be reassessed over 6 months to a year. "Target" IOP requires further lowering when the patient continues to progress or develops a systemic disease

such as a TIA. Conversely, in the event of a very elderly or sick patient with stable nerve and visual field over time, the target IOP could be raised and medications reduced. An appropriate use of medications/laser/surgery to achieve such a "Target" IOP range in POAG or PACG can maintain visual fields and quality of life, preventing Glaucoma blindness.

DOI: 10.4103/ijo.IJO_1130_17
PMCID: PMC5892050
PMID: 29582808 [Indexed for MEDLINE]

Conflict of interest statement: There are no conflicts of interest

146: Sihota R, Gupta S, Angmo D. Evaluation of macular ganglion cell analysis compared to retinal nerve fiber layer thickness for pre-perimetric glaucoma diagnosis. Indian J Ophthalmol. 2018 Apr;66(4):491-493. doi: 10.4103/ijo.IJO_235_18. PubMed PMID: 29582806; PubMed Central PMCID: PMC5892048.

147: Sindwani G, Suri A. Saviour in a mess: Spinal needle (Gaurav Technique). Saudi J Anaesth. 2018 Apr-Jun;12(2):374-375. doi: 10.4103/sja.SJA_4_18. PubMed PMID: 29628871; PubMed Central PMCID: PMC5875249.

148: Singh A, Gupta A, Datta PK, Pandey M. Intrathecal levobupivacaine versus bupivacaine for inguinal hernia surgery: a randomized controlled trial. Korean J Anesthesiol. 2018 Jun;71(3):220-225. doi: 10.4097/kja.d.18.27191. Epub 2018 Apr 24. PubMed PMID: 29684982; PubMed Central PMCID: PMC5995016.

BACKGROUND: Levobupivacaine is an attractive alternative to racemic bupivacaine for spinal anesthesia due to the lower potential for cardio-toxicity and faster recovery profile. This study was designed to compare isobaric levobupivacaine with hyperbaric racemic bupivacaine with respect to intraoperative quality of anesthesia and the postoperative recovery profile in patients undergoing inguinal hernia surgery.
METHODS: A total of 100 American Society of Anesthesiologists 1 and 2 patients, aged 18-60 years, undergoing elective daycare unilateral inguinal hernia surgery, were randomized into two groups. Group L received spinal anesthesia with 3 ml of 0.5% plain levobupivacaine. Group B received 3 ml of 0.5% hyperbaric racemic bupivacaine. Quality of anesthesia, sensory and motor block characteristics, duration of effective analgesia, time to mobilization, and incidence of side effects were compared.
RESULTS: The quality of anesthesia was comparable between the two groups. No difference was observed in the block onset time or maximum block height. The duration of anesthesia was significantly shorter in group L compared with that in group B (206.2 ± 18.9 min vs. 224.1 ± 15.6 min, $P < 0.001$), as was duration of motor block (185.9 ± 20.3 min vs. 196.4 ± 21.2 min, $P = 0.016$) and time to walk unaided (321.9 ± 19.2 min vs. 356.7 ± 26.6 min, $P < 0.001$). The incidence of hypotension was less in group L (12%) compared to group B (32%) ($P = 0.028$).
CONCLUSIONS: Levobupivacaine is an effective alternative to bupivacaine for patients undergoing unilateral inguinal hernia surgery. It has a shorter duration of sensory and motor block, allowing earlier mobilization in daycare surgeries, and a lower incidence of intraoperative hypotension.

DOI: 10.4097/kja.d.18.27191
PMCID: PMC5995016
PMID: 29684982

149: Singh A, Dawman L, Seth R. Malignancy associated hemophagocytic

lymphohistiocytosis in children. J Cancer Res Ther. 2018 Apr-Jun;14(3):559-562. doi: 10.4103/0973-1482.188437. PubMed PMID: 29893316.

Aim of Study: Hemophagocytic lymphohistiocytosis (HLH) is a rare disorder of immune dysregulation resulting in abnormal T-cell activation and inflammatory cytokine production which produces a constellation of clinical features unique to HLH. Pediatric secondary HLH is usually triggered by infection, malignancy, or rheumatological disorders. The diagnosis of malignancy-associated HLH (MA-HLH) poses a difficult challenge as clinical features may be attributed to the underlying disease or chemotherapy. Our study aimed to see the occurrence of this rare entity at our centre.
Materials and Methods: Data were collected from all pediatric oncology patient treated at our center with the diagnosis of MA-HLH from January 2012 to December 2014. Data were collected for age, sex, underlying disease, treatment protocol, stage of chemotherapy, any underlying infection, treatment given for HLH, and outcome.
Results: There were five patients with a diagnosis of MA-HLH in the study period. Age ranged from 18 months to 9 years. Of the five MA-HLH, two patients had acute lymphoblastic leukemia, two acute myeloid leukemia, and one had Hodgkin lymphoma. The three patients who had documented microbiological infection also did not improve after appropriate treatment. Two patients died during treatment. One patient improved completely on steroid alone. One patient received HLH 2004 induction.
Conclusion: The delay in the diagnosis of MA-HLH in pediatric patients may be due to decrease awareness about the condition the timely diagnosis of MA-HLH is crucial for a better outcome. Herein, we discuss our experience with this rare entity in pediatric oncology patients with review of literature.

DOI: 10.4103/0973-1482.188437
PMID: 29893316 [Indexed for MEDLINE]

Conflict of interest statement: There are no conflicts of interest

150: Singh AN, Kilambi R, Madhusudhan KS, Pal S. An Alternative Approach to Life-Threatening Gastrointestinal Bleeding After Corrosive Ingestion. Indian J Surg. 2018 Apr;80(2):187-189. doi: 10.1007/s12262-018-1739-y. Epub 2018 Feb 5. PubMed PMID: 29915486; PubMed Central PMCID: PMC5991017.

Massive gastrointestinal bleeding after corrosive intake is a rare complication that generally mandates a surgical intervention for control. Angioembolization for control of gastrointestinal bleeding in the setting of acute corrosive injury has not been described. Here, we present our experience of a case of acute corrosive injury presenting with massive upper gastrointestinal bleeding in the delayed phase which was successfully managed by angioembolization. We discuss the case in light of the literature available and describe markers which may serve to identify potential candidates for angioembolization.

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PMCID: PMC5991017 [Available on 2019-04-01]
PMID: 29915486

Conflict of interest statement: Compliance with Ethical StandardsThe authors declare that they have no conflict of interest.

151: Singh K, Chandrasekaran AM, Bhaumik S, Chattopadhyay K, Gamage AU, Silva P, Roy A, Prabhakaran D, Tandon N. Cost-effectiveness of interventions to control cardiovascular diseases and diabetes mellitus in South Asia: a systematic review. BMJ Open. 2018 Apr 3;8(4):e017809. doi: 10.1136/bmjopen-2017-017809. PubMed PMID:

29615442; PubMed Central PMCID: PMC5884366.

OBJECTIVES: More than 80% of cardiovascular diseases (CVD) and diabetes mellitus (DM) burden now lies in low and middle-income countries. Hence, there is an urgent need to identify and implement the most cost-effective interventions, particularly in the resource-constraint South Asian settings. Thus, we aimed to systematically review the cost-effectiveness of individual-level, group-level and population-level interventions to control CVD and DM in South Asia.
METHODS: We searched 14 electronic databases up to August 2016. The search strategy consisted of terms related to 'economic evaluation', 'CVD', 'DM' and 'South Asia'. Per protocol two reviewers assessed the eligibility and methodological quality of studies using standard checklists, and extracted incremental cost-effectiveness ratios of interventions.
RESULTS: Of the 2949 identified studies, 42 met full inclusion criteria. Critical appraisal of studies revealed 15 excellent, 18 good and 9 poor quality studies. Most studies were from India (n=37), followed by Bangladesh (n=3), Pakistan (n=2) and Bhutan (n=1). The economic evaluations were based on observational studies (n=9), randomised trials (n=12) and decision models (n=21). Together, these studies evaluated 301 policy or clinical interventions or combination of both. We found a large number of interventions were cost-effective aimed at primordial prevention (tobacco taxation, salt reduction legislation, food labelling and food advertising regulation), and primary and secondary prevention (multidrug therapy for CVD in high-risk group, lifestyle modification and metformin treatment for diabetes prevention, and screening for diabetes complications every 2-5 years). Significant heterogeneity in analytical framework and outcome measures used in these studies restricted meta-analysis and direct ranking of the interventions by their degree of cost-effectiveness.
CONCLUSIONS: The cost-effectiveness evidence for CVD and DM interventions in South Asia is growing, but most evidence is from India and limited to decision modelled outcomes. There is an urgent need for formal health technology assessment and policy evaluations in South Asia using local research data.
PROSPERO REGISTRATION NUMBER: CRD42013006479.

DOI: 10.1136/bmjopen-2017-017809
PMCID: PMC5884366
PMID: 29615442

Conflict of interest statement: Competing interests: None declared.

152: Singh P, Arora A, Strand TA, Sommerfelt H, Lodha R, Kabra SK, Aneja S, Natchu UCM, Chandra J, Rath B, Sharma VK, Kumari M, Saini S, Bhatnagar S, Wadhwa N. Predictors of death in infants with probable serious bacterial infection. Pediatr Res. 2018 Apr;83(4):784-790. doi: 10.1038/pr.2017.299. Epub 2017 Dec 20. PubMed PMID: 29166376.

BackgroundBacterial infections account for a significant proportion of neonatal and infant mortality globally. We aimed to identify predictors of death in infants with probable serious bacterial infection (PSBI) defined as signs/symptoms of possible serious bacterial infection along with baseline C-reactive protein (CRP) ≥12 mg/l.MethodsWe did a secondary analysis using the data collected from 700 infants with PSBI who participated in a randomized controlled trial in India in which zinc or placebo was given in addition to the standard antibiotics. Logistic regression was used to estimate the associations between relevant variables and death within 21 days.ResultsThose infants who were

fed cow's milk or formula before the illness episode had 3.7-fold (95% confidence interval (CI) 1.5-9.3) and 5.3-fold (95% CI 2.0-13.6) higher odds of death, respectively. Lethargy (odds ratio (OR) 2.4, 95% CI 1.1-5.4) and CRP (OR 1.9, 95% CI 1.1-3.3) were also independent predictors of death. In the model including only clinical features, female gender (OR 2.25, 95% CI 1.0-5.0), abdominal distention (3.7, 95% CI 1.1-12.3), and bulging fontanelle (5.8, 95% CI 1.1-30.5) were also independent predictors for death.ConclusionFormula or cow milk feeding prior to the illness, lethargy at the time of presentation, and high serum CRP levels predicted death in infants with PSBI.

DOI: 10.1038/pr.2017.299
PMID: 29166376

153: Singh PM, Borle A, Makkar JK, Trisha A, Sinha A. Evaluation of transversus abdominis plane block for renal transplant recipients - A meta-analysis and trial sequential analysis of published studies. Saudi J Anaesth. 2018 Apr-Jun;12(2):261-271. doi: 10.4103/sja.SJA_598_17. PubMed PMID: 29628838; PubMed Central PMCID: PMC5875216.

Background: Patients undergoing renal transplant (RT) have altered drug/opioid pharmacokinetics. Transversus abdominis plane (TAP) block in renal transplant recipients has been recently evaluated for analgesic and opioid-sparing potential by many trials.
Methodology: The studies comparing TAP-block to conventional analgesic regimens for RT were searched. Comparisons were made for total opioids consumed (as morphine-equivalents) during the first postoperative 24-h (primary objective), intraoperative, and immediate-postoperative period. Pain scores and postoperative nausea-vomiting (PONV) were also evaluated. Trial sequential analysis (TSA) was used to quantify the strength of analysis.
Results: Ten-trials with 258 and 237 patients in control and TAP-block group, respectively, were included. TAP-block decreased the 24-h (reported in 9-trials) opioid consumption by 14.61 ± 4.34 mg (reduction by 42.7%, random-effects, P < 0.001, I2 = 97.82%). Sample size of the present analysis (472) was well past the required "information-size" variable (396) as per the TSA for a power of 85%. Intraoperative opioid consumption also decreased by 2.06 ± 0.63 mg (reduction of 27.8%) (random effects, P < 0.001, I2 = 98.84%). Pain scores with TAP-block were significantly lower in both early and delayed postoperative phase. Odds ratio for PONV without TAP block was 1.99 ± 1.05 (Fixed-effects, P = 0.04, I2 = 0%). Publication bias was likely (Egger's test, X-intercept=7.89, P < 0.05).
Conclusions: TAP-block significantly lowers the intraoperative and cumulative postoperative 24-h opioid consumption in RT recipients. Persistent and better pain control is achieved when TAP-Block is used. Benefits of TAP block extend beyond the analgesic actions alone as it also decreases the 24-h incidence of postoperative nausea vomiting as well. The technique of the block needs standardization for RT recipients.

DOI: 10.4103/sja.SJA_598_17
PMCID: PMC5875216
PMID: 29628838

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

154: Singh S, Kumar R, Roy M, Mridha AR. Glottic neurogenic tumor: A highly uncommon site for schwannomas. J Cancer Res Ther. 2018 Apr-Jun;14(3):687-689. doi: 10.4103/jcrt.JCRT_878_14. PubMed PMID: 29893341.

Schwannomas are benign encapsulated neurogenic tumors, arising from Schwann cells embedded in neurilemal sheath as multinucleated syncytial network. Head and neck

schwannomas account for 25%-45% of all schwannomas, majority developing in parapharyngeal space. Laryngeal schwannoma in itself is a rarity, and a glottic origin further complicates its diagnosis. To the best of our knowledge, this is the second case of glottic schwannoma being reported in medical literature. Symptomatology is attributable to mass effect of a slow-growing laryngeal tumor, ranging from sore throat to stridor. The gold standard method for their excision is still debatable. For small tumors, endoscopic or direct laryngoscopic approach is preferred, but for large glottic tumors, external approach is advocated for better exposure and facilitating mucosal grafting. Index case is being presented not only for its rare site of origin, but also to stress on the importance of meticulous histopathological examination to advocate appropriate treatment.

DOI: 10.4103/jcrt.JCRT_878_14
PMID: 29893341

Conflict of interest statement: There are no conflicts of interest

155: Singh T, Kumar KR, Parthiban M. Intra-operative emergency airway management in a child with broken tracheal limb of Montgomery T-tube. J Anaesthesiol Clin Pharmacol. 2018 Apr-Jun;34(2):256-257. doi: 10.4103/joacp.JOACP_256_17. PubMed PMID: 30104844; PubMed Central PMCID: PMC6066875.

156: Singhal D, Maharana PK, Sharma N, Titiyal JS. Immune stromal keratitis: a rare ocular presentation of tuberculosis. BMJ Case Rep. 2018 Apr 5;2018. pii: bcr-2017-222571. doi: 10.1136/bcr-2017-222571. PubMed PMID: 29622703.
An 11-year-old female patient presented with diminution of vision in both the eyes for the last 4 days. She had redness, watering and photophobia for the past 11 days. Slit lamp examination revealed multiple disc-shaped corneal stromal infiltrates with an overlying epithelial defect and hypopyon in both the eyes. A provisional diagnosis of infective keratitis was made. The patient was started on empirical antimicrobial therapy. However, no improvement was noted over the next 72 hours. Microbiological examination of the corneal scraping from both the eyes was negative. Considering the above, provisional diagnosis was changed to immune stromal keratouveitis and the patient was started on topical steroids. Further evaluation revealed a positive Mantoux test (30×20 mm) and contrast enhanced CT chest showing pulmonary nodules, suggestive of tuberculosis. The patient was subsequently started on antitubercular treatment. The infiltrates along with the ulcer and anterior uveitis responded dramatically to the revised treatment and resolved completely within 7 days of therapy.

DOI: 10.1136/bcr-2017-222571
PMID: 29622703 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

157: Singla R, Katiyar V, Sharma R, Gurjar H. Is decision-making easier post RESCUE ICP trial? Acta Neurochir (Wien). 2018 Jun;160(6):1301-1302. doi: 10.1007/s00701-018-3533-9. Epub 2018 Apr 23. PubMed PMID: 29687252.

158: Sinha R, Kumar KR. Safer methods of ophthalmic block. Indian J Anaesth. 2018 Apr;62(4):323. doi: 10.4103/ija.IJA_220_18. PubMed PMID: 29720764; PubMed Central PMCID: PMC5907444.

159: Sood A, Midha V, Makharia G, Thelma BK, Halli SS, Mehta V, Mahajan R, Narang V, Sood K, Kaur K. A simple phenotypic classification for celiac disease. Intest Res. 2018 Apr;16(2):288-292. doi: 10.5217/ir.2018.16.2.288. Epub 2018 Apr 30. PubMed PMID: 29743842; PubMed Central PMCID: PMC5934602.

Background/Aims: Celiac disease is a global health problem. The presentation of celiac disease has unfolded over years and it is now known that it can manifest at different ages, has varied presentations, and is prone to develop complications, if not managed properly. Although the Oslo definitions provide consensus on the various terminologies used in literature, there is no phenotypic classification providing a composite diagnosis for the disease.
Methods: Various variables identified for phenotypic classification included age at diagnosis, age at onset of symptoms, clinical presentation, family history and complications. These were applied to the existing registry of 1,664 patients at Dayanand Medical College and Hospital, Ludhiana, India. In addition, age was evaluated as below 15 and below 18 years. Cross tabulations were used for the verification of the classification using the existing data. Expert opinion was sought from both international and national experts of varying fields.
Results: After empirical verification, age at diagnosis was considered appropriate in between A1 (<18) and A2 (≥18). The disease presentation has been classified into 3 types-P1 (classical), P2 (non-classical) and P3 (asymptomatic). Complications were considered as absent (C0) or present (C1). A single phenotypic classification based on these 3 characteristics, namely age at the diagnosis, clinical presentation, and intestinal complications (APC classification) was derived.
Conclusions: APC classification (age at diagnosis, presentation, complications) is a simple disease explanatory classification for patients with celiac disease aimed at providing a composite diagnosis.

DOI: 10.5217/ir.2018.16.2.288
PMCID: PMC5934602
PMID: 29743842

Conflict of interest statement: CONFLICT OF INTEREST: No potential conflict of interest relevant to this article was reported.

160: Srivastava RK, Dar HY, Mishra PK. Immunoporosis: Immunology of Osteoporosis-Role of T Cells. Front Immunol. 2018 Apr 5;9:657. doi: 10.3389/fimmu.2018.00657. eCollection 2018. Review. PubMed PMID: 29675022; PubMed Central PMCID: PMC5895643.

The role of immune system in various bone pathologies, such as osteoporosis, osteoarthritis, and rheumatoid arthritis is now well established. This had led to the emergence of a modern field of systems biology called as osteoimmunology, an integrated research between fields of immunology and bone biology under one umbrella. Osteoporosis is one of the most common inflammatory bone loss condition with more than 200 million individuals affected worldwide. T helper (Th) cells along with various other immune cells are major players involved in bone homeostasis. In the present review, we specifically discuss the role of various defined T lymphocyte subsets (Th cells comprising Th1, Th2, Th9, Th17, Th22, regulatory T cells, follicular helper T cells, natural killer T cells, γδ T cells, and CD8+ T cells) in the pathophysiology of osteoporosis. The study of the specific role of immune system in osteoporosis has now been proposed by our group as "immunoporosis: the immunology of osteoporosis" with special emphasis on the role of various subsets of T lymphocytes. The establishment of this new field had been need of the hour due to the emergence of novel roles of various T cell lymphocytes in accelerated bone loss observed during osteoporosis. Activated T

cells either directly or indirectly through the secretion of various cytokines and factors modulate bone health and thereby regulate bone remodeling. Several studies have summarized the role of inflammation in pathogenesis of osteoporosis but very few reports had delineated the precise role of various T cell subsets in the pathobiology of osteoporosis. The present review thus for the first time clearly highlights and summarizes the role of various T lymphocytes in the development and pathophysiology of osteoporosis, giving birth to a new field of biology termed as "immunoporosis". This novel field will thus provide an overview of the nexus between the cellular components of both bone and immune systems, responsible for the observed bone loss in osteoporosis. A molecular insight into the upcoming and novel field of immunoporosis would thus leads to development of innovative approaches for the prevention and treatment of osteoporosis.

DOI: 10.3389/fimmu.2018.00657
PMCID: PMC5895643
PMID: 29675022

161: Subramanian R, Mishra P, Subramaniam R, Bansal S. Role of anesthesiologist in ex utero intrapartum treatment procedure: A case and review of anesthetic management. J Anaesthesiol Clin Pharmacol. 2018 Apr-Jun;34(2):148-154. doi: 10.4103/joacp.JOACP_239_16. Review. PubMed PMID: 30104819; PubMed Central PMCID: PMC6066899.

The ex utero intrapartum treatment (EXIT) procedure is a rare form of perinatal resuscitation. It is basically a bridge therapy between partial delivery of the child and stabilization of its cardiorespiratory functions. This procedure has multiple anesthetic challenges including maternal anesthesia, maintenance of uteroplacental flow, tocolysis till the neonate is stabilized, management of postpartum hemorrhage, fetal, and neonatal anesthesia. This review also describes a case of cervical teratoma in fetus, for which the EXIT was performed in our institute. In addition to the case description, multiple concerns specific for EXIT procedure are discussed in this review.

DOI: 10.4103/joacp.JOACP_239_16
PMCID: PMC6066899
PMID: 30104819

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

162: Surve A, Sharma MC, Pushker N, Bajaj MS, Meel R, Kashyap S. A study of changes in levator muscle in congenital ptosis. Int Ophthalmol. 2018 Apr 28. doi: 10.1007/s10792-018-0931-1. [Epub ahead of print] PubMed PMID: 29705893.

PURPOSE: To study microscopic and ultrastructural changes of levator palpebrae superioris (LPS) muscle in congenital ptosis.
METHODS: In this prospective observational study, LPS muscle was studied in 77 eyelids with congenital ptosis; 35-simple congenital ptosis (SCP), 12-Marcus Gunn jaw winking phenomenon (MGJWP), and 30-blepharophimosis epicanthus inversus syndrome (BPES). Light microscopy, enzyme histochemistry, immunohistochemistry and electron microscopy were performed, and results were analyzed.
RESULTS: Muscle fibers were detected in 83.33% of MGJWP, 22.86% of SCP and 16.67% of BPES eyelids. Fibers were detected significantly more in individuals with moderate ptosis, LPS action > 4 mm, present eyelid crease and eyelid fold. Severe endomysial and perimysial fibrosis was seen significantly more in individuals with MGJWP. Fat infiltration and nuclei internalization were seen in all three groups. The absence of degenerating or regenerating fibers and inflammatory cells, normal staining pattern on immunohistochemistry and absence of accumulation of any abnormal substance were found in all three groups. Abnormal

mitochondrial staining pattern was seen occasionally in three groups. On electron microscopy, muscle was detected in 1 SCP eyelid and 8 MGJWP eyelids out of which 4 had myofibrillary disruption. All other eyelids where muscle fibers were not detected had only fibrocollagenous tissue.
CONCLUSION: Fibrocollagenous tissue predominated in all the cases, and muscle fibers detected correlated inversely with the severity of ptosis. The absence of degenerating, regenerating fibers and inflammatory cells supported the theory of dysgenesis of muscle. However, internalization of nucleus seen in all the subtypes is a feature favoring dystrophy.

DOI: 10.1007/s10792-018-0931-1
PMID: 29705893

163: Takkar B, Azad R, Kamble N, Azad S. Retinal Nerve Fiber Layer Changes Following Primary Retinal Detachment Repair with Silicone Oil Tamponade and Subsequent Oil Removal. J Ophthalmic Vis Res. 2018 Apr-Jun;13(2):124-129. doi: 10.4103/jovr.jovr_134_16. PubMed PMID: 29719639; PubMed Central PMCID: PMC5905304.

Purpose: To evaluate the correlation between the retinal nerve fiber layer (RNFL), particularly the temporal RNFL (TRNFL), and visual outcomes following surgery for rhegmatogenous retinal detachment (RRD).
Methods: This retrospective study was performed at a tertiary center; 32 patients underwent single and successful vitrectomy for total RRD using silicone oil as tamponade. Data were collected after oil removal. RNFL thickness and central foveal thickness (CFT) were measured using spectral domain optical coherence tomography. RNFL thickness and CFT of normal eyes were acquired as a control to calculate percentage changes in the affected eyes. The correlation between postoperative best-corrected visual acuity (BCVA) and TRNFL changes was the primary outcome measure.
Results: Postoperative BCVA correlated negatively with retinal detachment (RD) duration (Pearson coefficient 0.56, P = 0.001) and percentage loss in TRNFL thickness (Pearson Coefficient 0.41, P = 0.02). The macula lost the maximum RNFL thickness (26%). The mean percentage loss of TRNFL was significantly higher in patients with postoperative BCVA <6/60 (42.63% vs. 24.06%, P = 0.009). Patients with postoperative BCVA <6/60 had a significantly longer mean RD duration (29 days) than those with postoperative BCVA >6/60 (17.5 days) (P = 0.026).
Conclusion: When eyes with RRD are successfully repaired using silicone oil tamponade, the thickness of the RNFL decreases, particularly in the macula, and less macular neuronal loss is associated with better visual outcomes.

DOI: 10.4103/jovr.jovr_134_16
PMCID: PMC5905304
PMID: 29719639

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

164: Takkar B, Tandon N, Venkatesh P. De novo ossification of the choroid in a case of multifocal fibrosclerosis. Can J Ophthalmol. 2018 Apr;53(2):e62-e65. doi: 10.1016/j.jcjo.2017.07.022. Epub 2017 Oct 5. PubMed PMID: 29631844.

165: Talwar S, Sankhyan L, Patel C, Sreenivas V, Choudhary SK, Airan B. Evaluation of differential pulmonary perfusion using 99mTc macroaggregated albumin after the Fontan procedure. Interact Cardiovasc Thorac Surg. 2018 Apr 1;26(4):651-659. doi: 10.1093/icvts/ivx377. PubMed PMID: 29240900.

OBJECTIVES: The Fontan procedure [total cavopulmonary connection (TCPC)] is the

final palliation for patients with univentricular physiology. We studied differential perfusion ratio and percentage uptake of a radiotracer in different zones of each lung following TCPC.
METHODS: Between July 2015 and June 2017, 45 patients underwent 99mTc macroaggregated albumin lung perfusion scan at a mean follow-up period of 49.3±SD 26.1days following TCPC. Differential perfusion ratio and percentage uptake of the radiotracer in the upper, middle and lower zones of each lung were calculated.
RESULTS: Post-foot injection [inferior vena cava (IVC) injection], preferential flow to the lungs was as follows: left lung (n=13, 30.2%), right lung (n=13, 30.2%) and uniformly to both lungs (n=17, 39.6%). Post-arm injection [superior vena cava (SVC) injection], preferential flow to the lungs was as follows: left lung (n=13, 30.2%), right lung (n=22, 51.2%) and uniformly to both lungs (n=8, 18.6%). The middle zone was perfused the most in both lungs. Total lower zone mean perfusion was higher than the upper zone following both SVC injection and IVC injection (34.1±SD 5.3% vs 17.±SD 4.1% and 33±SD 5.0% vs 17.5±SD 4.1%, respectively). In patients with bilateral SVC, post-IVC injection, 6 (75%) patients had preferential flow to the right lung, whereas post-SVC injection, preferential flow to the left lung was visualized in 7 (87.5%) patients.
CONCLUSIONS: Following TCPC, IVC blood was distributed uniformly in both lungs. SVC blood preferentially perfused the right lung. The middle zone was perfused the most in both lungs.

DOI: 10.1093/icvts/ivx377
PMID: 29240900

166: Tandon V, Chandra PS, Doddamani RS, Subianto H, Bajaj J, Garg A, Tripathi M. Stereotactic Radiofrequency Thermocoagulation of Hypothalamic Hamartoma Using Robotic Guidance (ROSA) Coregistered with O-arm Guidance-Preliminary Technical Note. World Neurosurg. 2018 Apr;112:267-274. doi: 10.1016/j.wneu.2018.01.193. Epub 2018 Feb 3. PubMed PMID: 29408592.

INTRODUCTION: Treatment options for hypothalamic hamartoma (HH) include microvascular surgery, stereotactic radiofrequency thermocoagulation (SRT), laser interstitial thermal therapy, or Gamma Knife surgery. During SRT, thermographic monitoring cannot be performed and therefore highly accurate placement of electrode and confirmation of its position are required. We have used robotic guidance (ROSA) and coregistered it with O-arm for performing ablation of hamartoma.
METHODS: Five patients with HH and gelastic seizures underwent SRT. Robotic guidance (ROSA) was used for placement of electrodes. An O-arm was used for coregistering and confirming the robotic trajectory with real-time intraoperative imaging. Intraoperative computed tomography was merged with preoperative magnetic resonance imaging to confirm the exact position and trajectory of the electrode. Ablation was performed using a radiofrequency generator (70°C for 60 seconds). Multiple target sites were ablated to achieve proper ablation and disconnection.
RESULTS: Most patients (4/5) had International League Against Epilepsy class I outcome. One patient 2 sittings of lesioning. All but 1 electrode could be placed in the planned trajectories. One electrode was detected to have a medial deviation, and it had to be revised. No permanent complication was observed.
CONCLUSIONS: SRT is a cost-effective method of treating HH when compared with laser interstitial thermal therapy. With the use of a robotic arm we have demonstrated accurate placement of electrodes. Intraoperative computed tomography acquired using an O-arm can be merged with preoperative magnetic resonance imaging. This confirms electrode location and trajectory on a real-time basis by performing intraoperative imaging. This method is safe and can be used for radiofrequency ablation of HH.

DOI: 10.1016/j.wneu.2018.01.193
PMID: 29408592 [Indexed for MEDLINE]

167: Temkar S, Damodaran S, Chawla R, Behera S, Bafna RK, Parmanand K. Floating venous loop in regressed retinopathy of prematurity. Indian J Ophthalmol. 2018 Apr;66(4):568-569. doi: 10.4103/ijo.IJO_1017_17. PubMed PMID: 29582822; PubMed Central PMCID: PMC5892064.

168: Tewari N, Mathur VP, Singh N, Singh S, Pandey RK. Long-term effects of traumatic dental injuries of primary dentition on permanent successors: A retrospective study of 596 teeth. Dent Traumatol. 2018 Apr;34(2):129-134. doi: 10.1111/edt.12391. PubMed PMID: 29495106.

BACKGROUND/AIMS: Traumatic dental injuries of the primary dentition (TDI-p) have a global prevalence of approximately 11%-47%. They have immediate and long-term effects. Original research analysing the long-term sequelae of TDI-p on permanent dentition (LSP) are few in number. The aim of this study was to explore the correlation between age of TDI-p, type of TDI-p and LSP.
MATERIAL AND METHODS: Retrospective analysis of patient data from 2008-2017, reporting with LSP due to TDI-p, was performed. Uniform protocols and complete radiographic-photographic records were analysed. There were 638 LSP reported with 596 teeth having complete records.
RESULTS: There were 286 children with 153 males (53.5%) and 133 females (46.5%). Mean age of TDI-p causing LSP was 36.57 ± 11.51 months, with severity increasing in the younger age group. The highest number of LSP was associated with avulsion injuries (218, 36.58%), and the odds ratio of the type of TDI-p affect the severity of LSP was 2.0163. Mean age of reporting was 8.54 ± 2.19 years and was lowest for enamel discolorations. Most LSP were not associated with any associated feature (AF), although impaction was highest among all AF (63, 10.57%).
CONCLUSION: Age and type of TDI-p affect LSP, with the former being the stronger determinant of its severity. Mean age of reporting of LSP is dependent upon both type of LSP and AF. LSP due to TDI-p can further be graded in terms of severity.

DOI: 10.1111/edt.12391
PMID: 29495106

169: Tewari VV, Mehta R, Sreedhar CM, Tewari K, Mohammad A, Gupta N, Gulati S, Kabra M. A novel homozygous mutation in POLR3A gene causing 4H syndrome: a case report. BMC Pediatr. 2018 Apr 4;18(1):126. doi: 10.1186/s12887-018-1108-9. PubMed PMID: 29618326; PubMed Central PMCID: PMC5883641.

BACKGROUND: 4H syndrome is a congenital hypomyelinating leukodystrophy characterized by hypodontia, hypomyelination and hypogonadotropic hypogonadism belonging to the Pol III-related leukodystrophies which arise due to mutations in the POLR3A or POLR3B gene. The clinical presentation is of neurodevelopmental delay or regression with ataxia, dystonia, nystagmus, delayed deciduous dentition and abnormal order of eruption of teeth. MRI brain shows a characteristic hypomyelination pattern. Several mutations have been described in the implicated genes but there are no reports on mutations seen in patients from India.
CASE PRESENTATION: We report a 1½ year old girl, only child of a non-consanguinous couple who presented with delayed developmental milestones and delayed dentition. On physical examination she had downward slanting palpebral

fissures, low set ears, smooth philtrum, hypodontia, prominent body hair and clitoromegaly. There was prominent horizontal nystagmus, hypertonia of both upper and lower limbs, exaggerated deep tendon jerks and flexor planter response. She had not attained complete head control and required support to sit. She showed absent waves on brainstem evoked response audiometry and her fundus examination showed bilateral optic atrophy with prolongation of P100 latencies on visual evoked potentials. MRI Brain showed hyperintensity of entire white matter with involvement of the internal and external capsule, frontal deep white matter and corpus callosum. Her karyotype was 46 XX and her endocrinal profile was unremarkable. Clinical exome sequencing identified an unreported mutation in the POLR3A gene. The same mutation was identified by Sanger sequencing in heterozygous state in both parents. The child is being managed with physiotherapy and developmental therapy. She has been provided with hearing aids and started on speech therapy. Parents were provided anticipatory guidance and genetic counselling about autosomal recessive nature of inheritance, risk of recurrence and need for follow-up.
CONCLUSION: 4H syndrome is a rare congenital hypomyelinating leukodystrophy inherited as an autosomal recessive disorder due to mutations in the POLR3A and POLR3B gene. Delay or regression of milestones, abnormalities in dentition and endocrinal perturbations are its hallmark. A novel mutation in the POLR3A gene resulting in amino acid substitution of arginine for glutamine at codon 808 (p.R808Q) was detected in exon 18 in our case.

DOI: 10.1186/s12887-018-1108-9
PMCID: PMC5883641
PMID: 29618326

170: Thakar A, Gupta MP, Srivastava A, Agrawal D, Kumar A. Nonsurgical Treatment for Posttraumatic Complete Facial Nerve Paralysis. JAMA Otolaryngol Head Neck Surg. 2018 Apr 1;144(4):315-321. doi: 10.1001/jamaoto.2017.3147. PubMed PMID: 29470563; PubMed Central PMCID: PMC5876901.

Importance: Current recommendations envisage early surgical exploration for complete facial nerve paralysis associated with temporal bone fracture and unfavorable electrophysiologic features (response to electroneuronography, <5%). However, the evidence base for such a practice is weak, with the potential for spontaneous improvement being unknown, and the expected results from alternative nonsurgical treatment also undefined.
Objective: To document the results of nonsurgical treatment for posttraumatic complete facial paralysis with undisplaced temporal bone fracture and unfavorable electrophysiologic features.
Design, Setting, and Participants: Prospective cohort study recruiting from April 2010 to April 2013 at a tertiary care university hospital. Follow-up continued until 9 months or until complete recovery if earlier. Study group included 28 patients with head injury-associated complete unilateral facial nerve paralysis with unfavorable results of electroneuronography (<5% response) with or without undisplaced temporal bone fracture. Undisplaced temporal bone fractures were documented in 26 patients (24 longitudinal fractures and 2 transverse fractures).
Interventions: Patients received prednisolone, 1 mg/kg, for 3 weeks combined with clinical monitoring every 2 weeks and electromyography monitoring every 4 weeks. As per study protocol, surgical exploration was limited to patients demonstrating motor end plate degeneration on results of electromyography, or having no improvement until 18 weeks.
Main Outcomes and Measures: Facial nerve function was evaluated by the House-Brackmann grading system; Forehead, Eye, Mouth, and Associated defect grading system; and the modified Adour system. Observations were completed at 40 weeks.
Results: Among the 28 patients in the study (3 women and 25 men; mean [SD] age,

32.2 [8.7] years), facial nerve recovery with conservative treatment alone was noted in all patients. No recovery was seen in any patient at the initial 4-week review. The first signs of clinical recovery were noted in 4 patients by 8 weeks, in 27 patients by 12 weeks, and in all patients by 20 weeks. No patient required surgical exploration. At 40 weeks, 27 patients recovered to House-Brackmann grade I/II and 1 patient to grade III. All 24 patients with longitudinal fractures had grade I/II recovery.
Conclusions and Relevance: For undisplaced temporal bone fractures, nonsurgical treatment leads to near-universal recovery to House-Brackmann grade I/II and is superior to reported surgical results. Recovery is delayed and usually first manifests at 8 to 12 weeks after the fracture. In the current era of high-resolution computed tomography, surgical exploration should not be first-line treatment for undisplaced longitudingal temporal bone fractures associated with complete facial nerve paralysis and unfavorable electrophysiologic features.

DOI: 10.1001/jamaoto.2017.3147
PMCID: PMC5876901
PMID: 29470563

171: Titiyal JS, Kaur M, Jose CP, Falera R, Kinkar A, Bageshwar LM. Comparative evaluation of toric intraocular lens alignment and visual quality with image-guided surgery and conventional three-step manual marking. Clin Ophthalmol. 2018 Apr 24;12:747-753. doi: 10.2147/OPTH.S164175. eCollection 2018. PubMed PMID: 29731603; PubMed Central PMCID: PMC5923224.

Purpose: To compare toric intraocular lens (IOL) alignment assisted by image-guided surgery or manual marking methods and its impact on visual quality.
Patients and methods: This prospective comparative study enrolled 80 eyes with cataract and astigmatism ≥1.5 D to undergo phacoemulsification with toric IOL alignment by manual marking method using bubble marker (group I, n=40) or Callisto eye and Z align (group II, n=40). Postoperatively, accuracy of alignment and visual quality was assessed with a ray tracing aberrometer. Primary outcome measure was deviation from the target axis of implantation. Secondary outcome measures were visual quality and acuity. Follow-up was performed on postoperative days (PODs) 1 and 30.
Results: Deviation from the target axis of implantation was significantly less in group II on PODs 1 and 30 (group I: 5.5°±3.3°, group II: 3.6°±2.6°; p=0.005). Postoperative refractive cylinder was -0.89±0.35 D in group I and -0.64±0.36 D in group II (p=0.003). Visual acuity was comparable between both the groups. Visual quality measured in terms of Strehl ratio ($p<0.05$) and modulation transfer function (MTF) ($p<0.05$) was significantly better in the image-guided surgery group. Significant negative correlation was observed between deviation from target axis and visual quality parameters (Strehl ratio and MTF) ($p<0.05$).
Conclusion: Image-guided surgery allows precise alignment of toric IOL without need for reference marking. It is associated with superior visual quality which correlates with the precision of IOL alignment.

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PMCID: PMC5923224
PMID: 29731603

Conflict of interest statement: Disclosure The authors report no conflicts of interest in this work.

172: Tiwari P, Kumar L, Thulkar S, Singh G, Malik P, Seth A. Patient Reported Weight Loss Predicts Recurrence Rate in Renal Cell Cancer Cases after Nephrectomy. Asian Pac J Cancer Prev. 2018 Apr 25;19(4):891-895. PubMed PMID:

29693333; PubMed Central PMCID: PMC6031797.

Background: Recurrence of renal cell cancer (RCC) affects approximately one-third of patients after curative nephrectomy. However, studies from the Indian subcontinent have been scarce. We here ddetermine relapse rates and patterns in an Indian cohort. Methods: This study included all patients with RCC who underwent nephrectomy from 2004 to 2013 at our centre. Recurrence-free survival (RFS) was calculated from the date of surgery to date of recurrence or death. The Cox regression model was applied to identify significant prognostic factors. Results: Overall a total of 292 patients were included. Median age was 50 years (range 19-84 years), with a male:female ratio of 3:1. Radical and partial nephrectomy were performed for 276 (94.5%) and 16 (5.5%) patients, respectively. Clear cell was most common histological subtype (71.2%) and T1, T2, T3 and T4 stages accounted for 89 (30.5%), 86 (29.5%), 105 (36%) and 12 (4.1%) patients, respectively. One hundred and thirty-six patients (46.6%) demonstrated recurrence. Eighty-six (63.2%) relapsed at distant sites, 14 (10.3%) and at locoregional sites whereas 36(26.5%) had both distant and locoregional recurrence. Median time to recurrence was 18 months. Approximately 17.7% of cases had disease reappearance after five years. Factors predicting shorter RFS on multivariate analysis were patient reported weight loss ($p=0.004$), Fuhrman grade 3 or 4 ($p<0.0001$), presence of necrosis ($p<0.0001$) and higher tumour stage ($p=0.005$). Conclusion: Compared to previous studies, our patients had higher rates of recurrence in general and locoregional recurrence in particular. However, except for weight loss, other predictive factors remain similar. Finding weight loss as the marker of recurrence emphasises the importance of the simple task of history taking.

DOI: 10.22034/APJCP.2018.19.4.891
PMCID: PMC6031797
PMID: 29693333 [Indexed for MEDLINE]

173: Tiwari V, Poudel RR, Khan SA, Mehra S, Chauhan SS, Raje A. Is VEGF under-expressed in Indian children with Perthes disease? Musculoskelet Surg. 2018 Apr;102(1):81-85. doi: 10.1007/s12306-017-0502-z. Epub 2017 Sep 27. PubMed PMID: 28956304.

BACKGROUND: The role of vascular endothelial growth factor (VEGF) after ischaemic necrosis of the femoral head in Legg-Calve-Perthes disease (LCPD) has not been adequately studied in humans, especially in Indian population. Therefore, we aimed to evaluate the serum levels of VEGF-A in Indian children with various stages of LCPD and compare them with those of an age- and sex-matched control group of healthy children.
METHODS: In this case-control study, we enrolled 42 children (below 14 years age) suffering from LCPD and 21 age- and sex-matched healthy controls. Patients were classified radiographically according to Waldenstrom's classification. Serum VEGF-A was estimated by sandwich enzyme-linked immunosorbent assay technique. The serum values were compared between the patient group and the control group, as well as between the Waldenstrom subgroups. Results were expressed as means with ranges or median with interquartile range.
RESULTS: The mean age in the patient as well as the control group was 9 years (range 4-13 years). The median value (interquartile range) of serum VEGF-A was 162.5 pg/ml (673.75 pg/ml) in the patient group and 652 pg/ml (190.5 pg/ml) in the control group ($p = 0.013$). When compared between lower Waldenstrom stages (initial stage + stage of fragmentation) and higher Waldenstrom stages (re-ossification stage + stage of healing), the mean values of serum VEGF-A were 464.7 pg/ml (range 0-2211 pg/ml) and 301.1 pg/ml (range 0-1910 pg/ml),

respectively (p = 0.305).
CONCLUSIONS: VEGF is under-expressed in Indian children suffering from LCPD. As VEGF acts as a key regulator of endochondral ossification, our finding may open new therapeutic approaches to the disease. Also, serum VEGF may act as a valuable marker for the follow-up of the disease. Our study also provides baseline data about serum VEGF-A levels in Indian cohort of LCPD patients. Future multi-centre studies are warranted with a larger sample size to fully appreciate the patho-physiological changes in VEGF occurring in LCPD.

DOI: 10.1007/s12306-017-0502-z
PMID: 28956304

174: Tripathy S, Parida GK, Kumar R. Quantitative Assessment of Gynecologic Malignancies. PET Clin. 2018 Apr;13(2):269-288. doi: 10.1016/j.cpet.2017.11.010. Epub 2018 Feb 3. Review. PubMed PMID: 29482754.

18F-fluorodeoxyglucose PET/CT as a dual-modality imaging, plays a key role in the diagnosis, staging, response assessment, and disease surveillance. Uptake by tumor cells offers an opportunity to differentiate viable malignant cells from posttreatment effects. 18F-fluorodeoxyglucose PET/CT-based criteria have been developed to evaluate treatment response. Uptake can reflect the biologic aggressiveness of the tumor, predicting the risk of metastasis and recurrence. The standardized uptake value can be measured as maximum, mean, or peak. Volumetric uptake measurements have shown substantial promise in providing accurate tumor assessment. We discuss these quantitative parameters in the assessment of gynecologic malignancies.

DOI: 10.1016/j.cpet.2017.11.010
PMID: 29482754 [Indexed for MEDLINE]

175: Vanathi M, Goel S, Ganger A, Agarwal T, Dada T, Khokhar S. Corneal tomography and biomechanics in primary pterygium. Int Ophthalmol. 2018 Apr;38(2):663-671. doi: 10.1007/s10792-017-0514-6. Epub 2017 May 13. PubMed PMID: 28501948.

PURPOSE: To study the Scheimpflug's imaging and corneal biomechanics in primary pterygium.
METHODS: A prospective observational study of 55 patients with unilateral primary nasal pterygium was done. The normal fellow eyes of patients with pterygium were taken as controls. Clinical parameters noted included visual acuity, values of corneal curvature by doing Scheimpflug imaging, wavefront aberrations in terms of higher and lower-order aberrations and corneal hysteresis (CH) as well as corneal resistance factor (CRF) values by using ocular response analyzer.
RESULTS: Of the total 55 patients, mean age was 43.0 + 11.4 years (range: 20-72 years). Mean LogMar uncorrected visual acuity in pterygium eyes and control eyes was 0.21 + 0.20 and 0.12 + 0.15, respectively (p = 0.016). On Scheimpflug imaging the mean anterior corneal curvature values (Ka1/Ka2 D) were 41.09 + 3.38/44.33 + 2.29 in pterygium eyes, 43.13 + 1.79/43.98 + 2.17 in control eyes (p < 0.0005) and mean posterior corneal curvature (Kp1/Kp2 D) values were 6.14 + 0.39/6.53 + 0.43 in pterygium eyes and 6.13 + 0.28/6.46 + 0.47 in control eyes (p > 0.05). Analysis of corneal aberrations showed significantly higher corneal wavefront aberrations in pterygium eyes. Highest correlation of corneal astigmatism was noted with corneal area encroached by pterygium (ρ = 0.540 for LOA and 0.553 for HOA) and distance from pupillary center (ρ = 0.531 for LOA and 0.564 for HOA). Corneal biomechanical parameters including CH and CRF were found to be lower in the pterygium eyes, though not statistically significant (p value

0.60 and 0.59, respectively).
CONCLUSION: Pterygium leads to deterioration of visual performance not only by causing refractive and topographic changes but also by causing a significant increase in corneal wavefront aberrations.

DOI: 10.1007/s10792-017-0514-6
PMID: 28501948 [Indexed for MEDLINE]

176: Vasan SK, Roy A, Samuel VT, Antonisamy B, Bhargava SK, Alex AG, Singh B, Osmond C, Geethanjali FS, Karpe F, Sachdev H, Agrawal K, Ramakrishnan L, Tandon N, Thomas N, Premkumar PS, Asaithambi P, Princy SFX, Sinha S, Paul TV, Prabhakaran D, Fall CHD. IndEcho study: cohort study investigating birth size, childhood growth and young adult cardiovascular risk factors as predictors of midlife myocardial structure and function in South Asians. BMJ Open. 2018 Apr 10;8(4):e019675. doi: 10.1136/bmjopen-2017-019675. PubMed PMID: 29643156; PubMed Central PMCID: PMC5898335.

INTRODUCTION: South Asians have high rates of cardiovascular disease (CVD) and its risk factors (hypertension, diabetes, dyslipidaemia and central obesity). Left ventricular (LV) hypertrophy and dysfunction are features of these disorders and important predictors of CVD mortality. Lower birth and infant weight and greater childhood weight gain are associated with increased adult CVD mortality, but there are few data on their relationship to LV function. The IndEcho study will examine associations of birth size, growth during infancy, childhood and adolescence and CVD risk factors in young adulthood with midlife cardiac structure and function in South Asian Indians.
METHODS AND ANALYSIS: We propose to study approximately 3000 men and women aged 43-50 years from two birth cohorts established in 1969-1973: the New Delhi Birth Cohort (n=1508) and Vellore Birth Cohort (n=2156). They had serial measurements of weight and height from birth to early adulthood. CVD risk markers (body composition, blood pressure, glucose tolerance and lipids) and lifestyle characteristics (tobacco and alcohol consumption, physical activity, socioeconomic status) were assessed at age ~30 years. Clinical measurements in IndEcho will include anthropometry, blood pressure, biochemistry (glucose, fasting insulin and lipids, urinary albumin/creatinine ratio) and body composition by dual energy X-ray absorptiometry and bioelectrical impedance. Outcomes are LV mass and indices of LV systolic and diastolic function assessed by two-dimensional and Doppler echocardiography, carotid intimal-media thickness and ECG indicators of ischaemia. Regression and conditional growth models, adjusted for potential confounders, will be used to study associations of childhood and young adult exposures with these cardiovascular outcomes.
ETHICS AND DISSEMINATION: The study has been approved by the Health Ministry Steering Committee, Government of India and institutional ethics committees of participating centres in India and the University of Southampton, UK. Results will be disseminated through scientific meetings and peer-reviewed journals.
TRIAL REGISTRATION NUMBER: ISRCTN13432279; Pre-results.

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PMCID: PMC5898335
PMID: 29643156

Conflict of interest statement: Competing interests: None declared.

177: Vellarikkal SK, Jayarajan R, Verma A, Ravi R, Senthilvel V, Kumar A, Saini

L, Gulati S, Lal M, Mathur A, Chhetri MK, Faruq M, Scaria V, Sivasubbu S. A founder mutation MLC1 c.736delA associated with megalencephalic leukoencephalopathy with subcortical cysts-1 in north Indian kindred. Clin Genet. 2018 Aug;94(2):271-273. doi: 10.1111/cge.13251. Epub 2018 Apr 18. PubMed PMID: 29667716.

178: Venkatesh P, Takkar B, Temkar S. Clinical manifestations of pachychoroid may be secondary to pachysclera and increased scleral rigidity. Med Hypotheses. 2018 Apr;113:72-73. doi: 10.1016/j.mehy.2018.02.024. Epub 2018 Feb 24. PubMed PMID: 29523299.

Current imaging advancements have led to emergence of pachychoroid as an association of important vision threatening diseases like chronic serous chorioretinopathy and polypoidal choroidal vasculopathy. While the precise relation between thick choroid and such disorder is being investigated, the etiology behind pachychoroid remains elusive. We hypothesize pachychoroid to be a resultant of impeded vascular outflow due to thick sclera and increased scleral rigidity. We discuss our hypothesis in the perspective of other choroidal manifestations of anomalously thick scleral structure.

DOI: 10.1016/j.mehy.2018.02.024
PMID: 29523299 [Indexed for MEDLINE]

179: Verma S, Kumar VL. Artesunate affords protection against aspirin-induced gastric injury by targeting oxidative stress and proinflammatory signaling. Pharmacol Rep. 2018 Apr;70(2):390-397. doi: 10.1016/j.pharep.2017.06.003. Epub 2017 Jun 15. PubMed PMID: 29397336.

BACKGROUND: Prolonged use of aspirin, a commonly prescribed non steroidal anti-inflammatory drug, is well known to produce gastrointestinal toxicity which could be minimized by various anti-secretory agents. The present study was carried out to evaluate the protective effect of artesunate against aspirin induced gastric injury in rats.
METHODS: Gastric injury was induced in fasted Wistar rats by oral administration of aspirin. The effect of 50 and 150mg/kg of artesunate was studied on macroscopic changes, gastric secretions, histology, oxidative stress and inflammatory markers in the stomach tissue after 5h of induction of gastric injury. Immunohistochemical analysis for the expression of IL-1β, IL-6, NF-κB(p65) and COX-2 was also carried out. The effect of artesunate was compared with that of standard anti-ulcer drug famotidine (20mg/kg).
RESULTS: Artesunate pretreatment produced a dose-dependent reduction in aspirin induced gastric injury and restored the gastric juice parameters. It normalized the tissue levels of oxidative stress markers (glutathione, malondialdehyde and superoxide dismutase activity) and mediators of inflammation (myeloperoxidase and TNF-α). The protection afforded by artesunate was evident from the histoarchitecture of stomach tissue and marked reduction in tissue expression of IL-1β, IL-6, NF-κB(p65) and COX-2. The effect of artesunate was found to be comparable to that of standard drug famotidine.
CONCLUSION: Artesunate markedly ameliorated aspirin induced gastric injury in rats by targeting oxidative stress and COX-2 dependent as well as COX-2 independent proinflammatory signaling pathways and could have a therapeutic potential in gastric ulcer disease.

DOI: 10.1016/j.pharep.2017.06.003
PMID: 29397336 [Indexed for MEDLINE]

180: Verma SK, Borkar SA, Singh PK, Tandon V, Gurjar HK, Sinha S, Satyarthee GD, Gupta D, Agarwal D, Sharma BS. Traumatic Posterior Fossa Extradural Hematoma: Experience at Level I Trauma Center. Asian J Neurosurg. 2018 Apr-Jun;13(2):227-232. doi: 10.4103/1793-5482.228536. PubMed PMID: 29682013; PubMed Central PMCID: PMC5898084.

Introduction: Posterior fossa extradural hematoma (PFEDH) is rare among the traumatic brain injury and represent about 4-7% cases of all EDHs. This rare condition is rapidly fatal unless identified and intervened timely. Because of limited space in posterior fossa, comparatively small volume can cause clinical deterioration. Early diagnosis by cranial computed tomography and emergent evacuation is vital for a good outcome.
Materials and Methods: This study was conducted at Level I trauma center at All India Institute of Medical Sciences, New Delhi, India. Hospital medical records were reviewed from September 2007 to June 2015. There were 856 cases of acute EDHs and of these 69 cases had PFEDHs. Records of patients with PFEDHs were reviewed for the mode of injury, Glasgow Coma Scale (GCS) at admission, imaging, type of intervention, outcome, and follow-up. GCS was assessed at 6 months and 12 months follow-up. Pertinent literature is reviewed.
Results: Of these 69 patients, 51 were males and 18 females. The mean age of patients was 28.6 years (range 4-43 years). Forty-three patients had GCS 15 at admission, and only 4 of them had admission GCS <8. Mean EDH volume was 29.2 ml. Sixty-six patients were operated, three managed conservatively. Sixty-seven patients were discharged, of which, 56 (81.1%) had GCS 15. Two patients died. Most common associated injuries were long bone fractures (18, 26.1%) followed by blunt injury thorax (11, 15.9%). Mean follow-up duration was 69.2 months (range 6-94 months). At 6 months follow-up, 61 (88.4%) patients had good recovery (Glasgow Outcome Score [GOS] 5) and at 12 months, 62 (89.8%) had GOS 5.
Conclusion: PFEDH are rare. They are usually associated with occipital bone fractures and may also have a supratentorial hematoma. It may be rapidly fatal due to the expansion of hematoma and compromise of the posterior cranial fossa space leading to brainstem compression, tonsillar herniation, and/or obstructive hydrocephalus. Early diagnosis and emergent evacuation lead to good outcome.

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181: Vijay G, Mandal A, Sankar J, Kapil A, Lodha R, Kabra SK. Ventilator Associated Pneumonia in Pediatric Intensive Care Unit: Incidence, Risk Factors and Etiological Agents. Indian J Pediatr. 2018 Oct;85(10):861-866. doi: 10.1007/s12098-018-2662-8. Epub 2018 Apr 4. PubMed PMID: 29616405.

OBJECTIVES: To study the incidence, etiology and risk factors associated with ventilator associated pneumonia (VAP) in children.
METHODS: This prospective cohort study was conducted on patients admitted to the Pediatric Intensive Care Unit (PICU) of a tertiary care institute of North India, from June 2012 through March 2014, who received mechanical ventilation for more than 24 h. All enrolled children were assessed daily for development of ventilator associated pneumonia (VAP) using the case definition given by Centers for Disease Control and Prevention (CDC). Chest radiograph and microbiologic samplings were performed in children suspected to have VAP. Risk factors associated with VAP were calculated by doing bivariate and multivariate analysis.

RESULTS: A total of 128 patients were screened and 86 were enrolled (median age 30 mo 95% CI 4.0-84.0; 72% boys). The most common admitting diagnosis was sepsis (16%) followed by acyanotic congenital heart disease with pneumonia (14%) and the most common indication for ventilation was respiratory failure (45.3%). The incidence of VAP according to CDC criteria was 38.4%, while the incidence of microbiologically confirmed VAP was 24.4%. The incidence of ventilator associated tracheobronchitis (VAT) was found to be 11.6%. Acinetobacter was the most frequently isolated organism (47%) followed by Pseudomonas (28%), Klebsiella (15%), E. coli (5%) and Enterobacter (5%). Risk factors for VAP on bivariate analysis were use of proton pump inhibitor (PPI) ($p=0.027$, OR 5.2, 95% CI 1.1-24.3), enteral feeding ($p<0.001$, OR 6.5, 95% CI 2.1-19.4) and re-intubation ($p=0.024$, OR 3.3 and 95% CI 1.1-9.6). On multivariate analysis, use of PPI ($p=0.03$, OR 8.47, 95% CI 1.19-60.33) and enteral feeding ($p<0.001$, OR 12.2, 95% CI 2.58-57.78) were identified as independent risk factors for VAP. CONCLUSIONS: Ventilator associated pneumonia is an important complication in children receiving mechanical ventilation in PICU and Gram negative bacilli (Acinetobacter and Pseudomonas) being the important causative agents. Ventilator associated tracheobronchitis is an emerging entity; recognition and treatment of same might prevent the development of VAP.

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182: Viswanathan S, Hung SKY, Goyal V, Apiwattanakul M, Thirugnanam UN, Abdullah S, Aye SMM, Ohnmar O, Si LT, Keosodsay S, Estiasari R, Khalife N, Hiew FL. Second regional plasmapheresis conference and workshop for Southeast Asia (SEA) on the immunomodulatory role of plasma exchange in central and peripheral nervous system disorders, Kuala Lumpur, Malaysia, 9th December 2017. J Clin Apher. 2018 Apr 6. doi: 10.1002/jca.21630. [Epub ahead of print] PubMed PMID: 29626354.

In December 2017, 79 delegates attended the 2nd regional plasmapheresis conference and workshop for Southeast Asia (SEA) on the immunomodulatory role of plasma exchange in central and peripheral nervous system disorders in Kuala Lumpur, Malaysia. This meeting featured 6 plenary lectures, interactive sessions dedicated for experience sharing, case presentations, and a practical session for paramedics. Clinical experts and researchers from 7 SEA countries and India shared experience and challenges in treating autoimmune neurological disorders. While the spectrum of diseases and neurology practice remained largely similar, there was great disparities in accessibility of therapeutic plasma exchange (TPE) within SEA countries and between urban or rural settings. Costs, human resources, and healthcare policies are common challenges in providing sustainable TPE services. Novel techniques and innovative ideas in performing TPE were explored. A working consortium comprising of key opinion leaders was proposed to improve standards of TPE and enhance future research.

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PMID: 29626354

183: Wadhwani M, Ranjan A, Gangwani K, Das P. An Unusual Presentation of Esthesioneuroblastoma in a Young Pregnant Female. Ocul Oncol Pathol. 2018 Apr;4(3):192-195. doi: 10.1159/000481507. Epub 2017 Nov 18. PubMed PMID: 29765954; PubMed Central PMCID: PMC5939674.

Background: Esthesioneuroblastoma is a rare neuroepithelial tumor arising from the olfactory epithelium in the cribriform plate or nasal cavity. It accounts for

1-5% of cases of malignant neoplasms of the nasal cavity.
Methods: A 20-year-old pregnant female presented with painful loss of vision in both eyes, on imaging diagnosed as meningioma. There was a progressive increase in pain along with diminution of vision to the extent of complete loss of vision in the right eye.
Results: In view of increasing proptosis with progressive complete loss of vision in the left eye also, she consulted the neurosurgery department at a tertiary care hospital where a follow-up of contrast-enhanced computerised tomography was made. Histopathology of fluid obtained after craniotomy showed esthesioneuroblastoma. In view of intracranial space-occupying lesion applying pressure on the optic nerve, intravenous methylprednisolone (1 g, IV stat X 3 days) was given. She underwent extensive radiotherapy but died within 3 months of diagnosis.
Conclusion: This case highlights the progressive and fatal course of olfactory neuroblastoma. As it can present with the complex symptoms related to ocular and nasal sites, timely referral of patients presenting with visual symptoms along with nasal involvement (frequent epistaxis) to otorhinolaryngologists is very important.

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184: Woodhouse LJ, Scutt P, Hamdy S, Smithard DG, Cohen DL, Roffe C, Bereczki D, Berge E, Bladin CF, Caso V, Christensen HK, Collins R, Czlonkowska A, de Silva A, Etribi A, Laska AC, Ntaios G, Ozturk S, Phillips SJ, Prasad K, Szatmari S, Sprigg N, Bath PM. Route of Feeding as a Proxy for Dysphagia After Stroke and the Effect of Transdermal Glyceryl Trinitrate: Data from the Efficacy of Nitric Oxide in Stroke Randomised Controlled Trial. Transl Stroke Res. 2018 Apr;9(2):120-129. doi: 10.1007/s12975-017-0548-0. Epub 2017 Aug 2. PubMed PMID: 28770403; PubMed Central PMCID: PMC5849635.

Post-stroke dysphagia is common, associated with poor outcome and often requires non-oral feeding/fluids. The relationship between route of feeding and outcome, as well as treatment with glyceryl trinitrate (GTN), was studied prospectively. The Efficacy of Nitric Oxide in Stroke (ENOS) trial assessed transdermal GTN (5 mg versus none for 7 days) in 4011 patients with acute stroke and high blood pressure. Feeding route (oral = normal or soft diet; non-oral = nasogastric tube, percutaneous endoscopic gastrostomy tube, parenteral fluids, no fluids) was assessed at baseline and day 7. The primary outcome was the modified Rankin Scale (mRS) measured at day 90. At baseline, 1331 (33.2%) patients had non-oral feeding, were older, had more severe stroke and more were female, than 2680 (66.8%) patients with oral feeding. By day 7, 756 patients had improved from non-oral to oral feeding, and 119 had deteriorated. Non-oral feeding at baseline was associated with more impairment at day 7 (Scandinavian Stroke Scale 29.0 versus 43.7; 2p < 0.001), and worse mRS (4.0 versus 2.7; 2p < 0.001) and death (23.6 versus 6.8%; 2p = 0.014) at day 90. Although GTN did not modify route of feeding overall, randomisation ≤6 h of stroke was associated with a move to more oral feeding at day 7 (odds ratio = 0.61, 95% confidence intervals 0.38, 0.98; 2p = 0.040). As a proxy for dysphagia, non-oral feeding is present in 33% of patients with acute stroke and associated with more impairment, dependency and death. GTN moved feeding route towards oral intake if given very early after stroke. Clinical Trial Registration Clinical Trial Registration-URL: http://www.controlled-trials.com . Unique identifier: ISRCTN99414122.

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PMCID: PMC5849635
PMID: 28770403 [Indexed for MEDLINE]

185: Yadav D, Singh S, Bhari N, Gupta S. Angiolymphoid hyperplasia of external ear treated with intralesional radiofrequency ablation. BMJ Case Rep. 2018 Apr 20;2018. pii: bcr-2017-223447. doi: 10.1136/bcr-2017-223447. PubMed PMID: 29678818.

A 21-year-old woman presented with multiple erythematous to skin-coloured dome-shaped firm papules and plaques over the right ear concha and external auditory canal for 1 year. It was associated with occasional itching and bleeding. Her main concern was cosmetic disfigurement. Biopsy showed presence of multiple proliferating blood vessels lined by plump epithelioid endothelial cells surrounded by dense infiltrate of lymphocytes, histiocytes and eosinophils. Other routine investigations were within normal limits. A diagnosis of angiolymphoid hyperplasia with eosinophilia was made. A single sitting of intralesional radiofrequency ablation (Vesalius, coagulation mode; fanning technique) using 18-G intravenous cannula was done. This led to almost complete resolution with no recurrence at 3 months follow-up. There was no evidence of scarring or depigmentation.

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186: Yogendrakumar V, Smith EE, Demchuk AM, Aviv RI, Rodriguez-Luna D, Molina CA, Silva Blas Y, Dzialowski I, Kobayashi A, Boulanger JM, Lum C, Gubitz G, Padma V, Roy J, Kase CS, Bhatia R, Ali M, Lyden P, Hill MD, Dowlatshahi D; Prediction of haematoma growth and outcome in patients with intracerebral haemorrhage using the CT-angiography spot sign [PREDICT]/Sunnybrook ICH CTA Study Group and the Virtual International Stroke Trials Archive (VISTA)-ICH Collaborators. Lack of Early Improvement Predicts Poor Outcome Following Acute Intracerebral Hemorrhage. Crit Care Med. 2018 Apr;46(4):e310-e317. doi: 10.1097/CCM.0000000000002962. PubMed PMID: 29303797.

OBJECTIVES: There are limited data as to what degree of early neurologic change best relates to outcome in acute intracerebral hemorrhage. We aimed to derive and validate a threshold for early postintracerebral hemorrhage change that best predicts 90-day outcomes.
DESIGN: Derivation: retrospective analysis of collated clinical stroke trial data (Virtual International Stroke Trials Archive).
VALIDATION: retrospective analysis of a prospective multicenter cohort study (Prediction of haematoma growth and outcome in patients with intracerebral haemorrhage using the CT-angiography spot sign [PREDICT]).
SETTING: Neurocritical and ICUs.
PATIENTS: Patients with acute intracerebral hemorrhage presenting less than 6 hours. Derivation: 552 patients; validation: 275 patients.
INTERVENTIONS: None.
MEASUREMENTS AND MAIN RESULTS: We generated a receiver operating characteristic curve for the association between 24-hour National Institutes of Health Stroke Scale change and clinical outcome. The primary outcome was a modified Rankin Scale score of 4-6 at 90 days; secondary outcomes were other modified Rankin Scale score ranges (modified Rankin Scale, 2-6, 3-6, 5-6, 6). We employed Youden's J Index to select optimal cut points and calculated sensitivity, specificity, and predictive values. We determined independent predictors via

multivariable logistic regression. The derived definitions were validated in the PREDICT cohort. Twenty-four-hour National Institutes of Health Stroke Scale change was strongly associated with 90-day outcome with an area under the receiver operating characteristic curve of 0.75. Youden's method showed an optimum cut point at -0.5, corresponding to National Institutes of Health Stroke Scale change of greater than or equal to 0 (a lack of clinical improvement), which was seen in 46%. Early neurologic change accurately predicted poor outcome when defined as greater than or equal to 0 (sensitivity, 65%; specificity, 73%; positive predictive value, 70%; adjusted odds ratio, 5.05 [CI, 3.25-7.85]) or greater than or equal to 4 (sensitivity, 19%; specificity, 98%; positive predictive value, 91%; adjusted odds ratio, 12.24 [CI, 4.08-36.66]). All definitions reproduced well in the validation cohort.
CONCLUSIONS: Lack of clinical improvement at 24 hours robustly predicted poor outcome and showed good discrimination for individual patients who would do poorly. These findings are useful for prognostication and may also present as a potential early surrogate outcome for future intracerebral hemorrhage treatment trials.

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