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List of publications of AIIMS, New Delhi for the month of February, 2018 [Source: www.pubmed.com].

1: Agarwal K, Sharma U, Mathur S, Seenu V, Parshad R, Jagannathan NR. Study of lipid metabolism by estimating the fat fraction in different breast tissues and in various breast tumor sub-types by in vivo (1)H MR spectroscopy. Magn Reson Imaging. 2018 Jun;49:116-122. doi: 10.1016/j.mri.2018.02.004. Epub 2018 Feb 14. PubMed PMID: 29454110.

PURPOSE: To evaluate the utility of fat fraction (FF) for the differentiation of different breast tissues and in various breast tumor subtypes using in vivo proton (1H) magnetic resonance spectroscopy (MRS).
METHODS: 1H MRS was performed on 68 malignant, 35 benign, and 30 healthy volunteers at 1.5 T. Malignant breast tissues of patients were characterized into different subtypes based on the differences in the expression of hormone receptors and the FF was calculated. Further, the sensitivity and specificity of FF to differentiate malignant from benign and from normal breast tissues of healthy volunteers was determined using receiver operator curve (ROC) analysis.
RESULTS: A significantly lower FF of malignant (median 0.12; range 0.01-0.70) compared to benign lesions (median 0.28; range 0.02-0.71) and normal breast tissue of healthy volunteers (median 0.39; range 0.06-0.76) was observed. No significant difference in FF was seen between benign lesions and normal breast tissues of healthy volunteers. Sensitivity and specificity of 75% and 68.6%, respectively was obtained to differentiate malignant from benign lesions. For the differentiation of malignant from healthy breast tissues, 76% sensitivity and 74.5% specificity was achieved. Higher FF was seen in patients with ER-/PR- status as compared to ER+/PR+ patients. Similarly, FF of HER2neu+ tumors were significantly higher than in HER2neu- breast tumors.
CONCLUSION: The results showed the potential of in vivo 1H MRS in providing insight into the changes in the fat content of different types of breast tissues and in various breast tumor subtypes.

DOI: 10.1016/j.mri.2018.02.004
PMID: 29454110

2: Agarwal R, Sharma M, Saxena R, Sharma P. Surgical outcome of superior rectus transposition in esotropic Duane syndrome and abducens nerve palsy. J AAPOS. 2018 Feb;22(1):12-16.e1. doi: 10.1016/j.jaapos.2017.10.004. Epub 2017 Dec 1. PubMed PMID: 29199032.

PURPOSE: To evaluate surgical outcome of superior rectus transposition (SRT) in esotropic Duane syndrome (DS) and abducens nerve palsy.
METHODS: Retrospective medical record analysis of all patients with esotropic DS and abducens nerve palsy treated with SRT at our center with minimum follow-up of 6 months. Primary outcome measures were esotropia in primary position and abduction limitation. Secondary outcome measures included head turn, stereopsis, and cyclovertical deviations.
RESULTS: A total of 20 eyes of 19 patients were included: 9 with DS and 10 with traumatic abducens nerve palsy. One patient had bilateral esotropic DS. Mean age of DS patients was 12.5 ± 10.1 years; of abducens nerve palsy patients, 25.4 ± 11.3 years. Medial rectus recession (MRc) of 3.5 mm was additionally performed in 5 DS eyes. An adjustable MRc 5.6 ± 2.2 mm with or without augmentation suture was performed in all abducens nerve palsy patients. In DS patients, esotropia improved from 27.5Δ ± 5.4Δ to 3.6Δ ± 6.4Δ ($P < 0.001$), abduction limitation reduced from -3.8 to -1.8 ($P < 0.001$), and head posture improved from 20° to 4° ($P < 0.001$) at 6 months. In abducens nerve palsy patients, esotropia improved from 51.5Δ ± 18.8Δ to 6.1Δ ± 10.7Δ ($P < 0.001$), abduction limitation reduced from -3.8 to -2, and head posture improved from 25° to 8° ($P < 0.001$). Stereopsis improved in 4 patients ($P = 0.12$). No patient had vertical deviation or torsional diplopia.
CONCLUSIONS: In our patient cohort with esotropic DS or abducens nerve palsy, SRT reduced esotropia and improved abduction. Because of a long-term exotropic drift, initial undercorrection in the immediate postoperative period may prevent

eventual overcorrection.

DOI: 10.1016/j.jaapos.2017.10.004
PMID: 29199032

3: Ahmad H, Verma S, Kumar VL. Effect of roxithromycin on mucosal damage, oxidative stress and pro-inflammatory markers in experimental model of colitis. Inflamm Res. 2018 Feb;67(2):147-155. doi: 10.1007/s00011-017-1103-x. Epub 2017 Oct 7. PubMed PMID: 28988395.

OBJECTIVE AND DESIGN: Roxithromycin, a macrolide antibiotic, exhibits anti-inflammatory property. The present study was designed to evaluate its protective effect in a rat model of colitis.
METHODS: The anti-inflammatory property of roxithromycin was first validated in rat paw edema model at 5 and 20 mg/kg doses where it produced 19 and 51% inhibition of paw swelling induced by carrageenan. The efficacy of roxithromycin was evaluated at these doses in a rat model where colitis was induced by intra-colonic instillation of acetic acid. Rats were divided into six groups viz. normal control, experimental control and drug-treated groups: roxithromycin 5 and 20 mg/kg, diclofenac 10 mg/kg and mesalazine 300 mg/kg. All drugs were given orally 1 h before induction of colitis. The macro and microscopic changes, mean ulcer score, mucus content and markers of oxidative stress and inflammation were evaluated in all the groups after 24 h.
RESULTS: Pretreatment with roxithromycin markedly decreased hyperemia, ulceration, edema and restored histological architecture. The protection afforded by roxithromycin was substantiated by dose-dependent increase in mucus content, normalization of markers of oxidative stress (GSH and TBARS) and levels of TNF-α, PGE2 and nitrite along with marked decrease in expression of NFκB (p65), IL-1β and COX-2. The protective effect of roxithromycin was found to be comparable to mesalazine while diclofenac was found ineffective.
CONCLUSION: Our study demonstrates that roxithromycin ameliorates experimental colitis by maintaining redox homeostasis, preserving mucosal integrity and downregulating NFκB-mediated pro-inflammatory signaling and suggests that it has a therapeutic potential in inflammatory conditions of the colon.

DOI: 10.1007/s00011-017-1103-x
PMID: 28988395

4: Al-Mallah MH, Pascual TNB, Mercuri M, Vitola JV, Karthikeyan G, Better N, Dondi M, Paez D, Einstein AJ; INCAPS Investigators Group. Impact of age on the selection of nuclear cardiology stress protocols: The INCAPS (IAEA nuclear cardiology protocols) study. Int J Cardiol. 2018 May 15;259:222-226. doi: 10.1016/j.ijcard.2018.02.060. Epub 2018 Feb 16. PubMed PMID: 29486996.

BACKGROUND: There is growing concern about radiation exposure from nuclear myocardial perfusion imaging (MPI), particularly among younger patients who are more prone to develop untoward effects of ionizing radiation, and hence US and European professional society guidelines recommend age as a consideration in weighing radiation risk from MPI. We aimed to determine how patient radiation doses from MPI vary across age groups in a large contemporary international cohort.
METHODS: Data were collected as part of a global cross-sectional study of centers performing MPI coordinated by the International Atomic Energy Agency (IAEA). Sites provided information on each MPI study completed during a single week in March-April 2013. We compared across age groups laboratory adherence to pre-specified radiation-related best practices, radiation effective dose (ED; a whole-body measure reflecting the amount of radiation to each organ and its relative sensitivity to radiation's deleterious effects), and the proportion of patients with ED≤9 mSv, a target level specified in guidelines.

RESULTS: Among 7911 patients undergoing MPI in 308 laboratories in 65 countries, mean ED was 10.0 ± 4.5 mSv with slightly higher exposure among younger age groups (trend p value < 0.001). There was no difference in the proportion of patients with ED ≤ 9 mSv across age groups, or in adherence to best practices based on the median age of patients in a laboratory.
CONCLUSIONS: In contemporary nuclear cardiology practice, the age of the patient appears not to impact protocol selection and radiation dose, contrary to professional society guidelines.

DOI: 10.1016/j.ijcard.2018.02.060
PMID: 29486996

5: Alhazzani AA, Kumar A, Selim M. Association between Factor V Gene Polymorphism and Risk of Ischemic Stroke: An Updated Meta-Analysis. J Stroke Cerebrovasc Dis. 2018 May;27(5):1252-1261. doi: 10.1016/j.jstrokecerebrovasdis.2017.12.006. Epub 2018 Feb 23. PubMed PMID: 29478939.

BACKGROUND: Ischemic stroke is a complex, multifactorial, and polygenic disease. Reports on relationship between Factor V G1691A single nucleotide gene polymorphism and ischemic stroke have revealed inconsistent results. We conducted an updated meta-analysis to determine the role of Factor V single nucleotide gene polymorphism in ischemic stroke.
METHODS: We searched the literature using academic electronic databases that is, PubMed, Trip Data Base, EBSCO, and Google Scholar, last search up to September 2017. Pooled odds ratios (ORs) and 95% confidence intervals (CIs) were calculated from fixed or random effects models whichever applicable using software STATA version 13 (StataCorp LP, College Station, TX).
RESULTS: Forty case-control studies met the inclusion criteria, which included 6860 cases and 18,025 controls. Altogether, 19 studies in young adults (age < or = 40 years) and 17 studies were conducted in old stroke (age > 40). Four studies did not report the mean age at recruitment. Significant association between Factor V G1691A gene polymorphism and risk of ischemic stroke were observed under dominant model (OR 1.40; 95% CI: 1.22 to 1.62, P value <.001). Stratified analysis suggested substantial association of Factor V gene polymorphism and risk of ischemic stroke in cases with onset at young age (OR 1.84; 95% CI: 1.47 to 2.30), but was not statistical significant in cases at old age (>40 years).
CONCLUSIONS: Factor V G1691A single nucleotide gene polymorphism was associated with risk of ischemic stroke mainly in young adults. Further research with adequately powered prospective studies in homogenous subjects are required to determine the nature of association in young stroke.

DOI: 10.1016/j.jstrokecerebrovasdis.2017.12.006
PMID: 29478939

6: Ambekar A, Mongia M. Planning research in psychosocial interventions. Indian J Psychiatry. 2018 Feb;60(Suppl 4):S575-S582. doi: 10.4103/psychiatry.IndianJPsychiatry_27_18. Review. PubMed PMID: 29540934; PubMed Central PMCID: PMC5844175.

A number of research designs have been used to study the efficacy of psychosocial interventions in addictive disorders, including open label studies and randomised controlled trials. Only through a rigorously conducted research, evidence base for effectiveness of a psychosocial intervention can be established. However, research on these interventions are fraught with a number of challenges. It is imperative for researchers to ask appropriate research questions based on sound theoretical understanding of psychiatric disorders, psychosocial interventions

and research designs. This would help in choosing the less studied, relevant areas for in depth study as well as in using pragmatic, realistic research designs. Defining intervention clearly is as crucial, as is its uniform implementation across various treatment arms. In addition, tapping the mediators, moderators and confounders of treatment using appropriate methods while assessing the factors that directly impact the outcome is important to determine actual effects of psychosocial intervention. Barriers at different stages must be gauged proactively and dealt with, wherever possible.

DOI: 10.4103/psychiatry.IndianJPsychiatry_27_18
PMCID: PMC5844175
PMID: 29540934

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

7: Arumalla K, Singla V, Aggarwal S, Garg H, Goel R, Katiyar V. Outcomes in morbidly obese adolescent patients undergoing laparoscopic sleeve gastrectomy in the Indian subcontinent: A retrospective review. J Minim Access Surg. 2018 Feb 27. doi: 10.4103/jmas.JMAS_143_17. [Epub ahead of print] PubMed PMID: 29483370.

Introduction: There is a worldwide increase in the prevalence of obesity among the adolescent population in India from 16.3% in 2001 to 19.3% in 2010. Recent evidence suggests that bariatric surgery leads to resolution of comorbidities and associated long-term complications in adolescent patients with morbid obesity.
Aim: The aim of this study is to determine the impact of bariatric surgery on the weight loss and comorbidities of morbidly obese adolescents.
Materials and Methods: A retrospective review of the data of 10 adolescent patients, who underwent Laparoscopic Sleeve Gastrectomy at our institute (tertiary care hospital), from July 2009 to July 2016 was carried out.
Results: Of the 10 patients, 4 patients had syndromic forms of obesity. The median age was 16.54 years. The median pre-operative weight and height were 112 kg and 154 cm, respectively, with a body mass index of 47.2 kg/m2. There was no intra-operative or post-operative complication except for suspected methylene blue toxicity in one patient which was treated conservatively. Median follow-up period was 1 year (0-5 years). The patients had an increase in excess weight loss (EWL) of 54.5% until the end of 1 year. There was a regain of weight between the 1st and 2nd year, followed by a sustained weight loss achieving 44.8% EWL at 3 years and 60% at the end of 5 years (only two patients followed up at 5 years). Similar results were found in syndromic patients. Among the four diabetic patients, three had complete resolution and one had improvement in diabetes status. Among the three patients with obstructive sleep apnoea, two patients had complete resolution, while one patient had improvement in symptoms. One patient with hypocortisolism improved after surgery with a decrease in the steroid requirement. Among the hypothyroid patients, one patient had a complete resolution, one patient had improvement in hypothyroid status while two patients had no change.
Conclusion: Bariatric surgery is effective for morbidly obese adolescents, leading to significant resolutions of comorbid illness.

PMID: 29483370

8: Ayub II, Mohan A, Madan K, Hadda V, Jain D, Khilnani GC, Guleria R. Identification of specific EBUS sonographic characteristics for predicting benign mediastinal lymph nodes. Clin Respir J. 2018 Feb;12(2):681-690. doi: 10.1111/crj.12579. Epub 2016 Nov 15. PubMed PMID: 27805323.

OBJECTIVE: Reliable differentiation of benign from malignant mediastinal lymphadenopathy is important, especially in countries with a high tuberculosis burden. We hypothesized that specific sonographic features on endobronchial ultrasonography (EBUS) may differentiate benign from malignant nodes. In this study, the sonographic features of non-malignant and malignant nodes were compared.

METHODS: This was a retrospective analysis of patients with intrathoracic lymphadenopathy who underwent EBUS-guided transbronchial needle aspiration (TBNA). Sonographic features such as nodal size, margin (distinct or indistinct), echogenicity (heterogeneous or homogeneous), and presence or absence of calcification, a central hilar structure, coagulation necrosis sign, and nodal conglomeration were recorded and compared in the 2 groups.
RESULTS: During the study period, a diagnosis of tuberculosis (n = 71), sarcoidosis (n = 63), and malignancy (n = 36) was made in 170 patients by EBUS-TBNA. A total of 312 lymph node stations were examined. Presence of central hilar structure (15.6% versus 4%, P = .03) and the presence of nodal conglomeration (27.5% versus 8%, P < .01) were significantly higher in benign nodes. Further, logistic regression analysis revealed that the presence of well-defined nodal margins, the presence of central hilar structure, and the presence of conglomeration of lymph nodes were independent predictive factors for the diagnosis of benign mediastinal lymphadenopathy.
CONCLUSION: Sonographic features of well-defined margins, presence of central hilar structure, and presence of nodal conglomeration in the lymph nodes on EBUS are predictive of benign disease.

DOI: 10.1111/crj.12579
PMID: 27805323

9: Bajaj J, Tripathi M, Dwivedi R, Sapra S, Gulati S, Garg A, Tripathi M, Bal CS, Chandra SP. Does surgery help in reducing stigma associated with drug refractory epilepsy in children? Epilepsy Behav. 2018 Mar;80:197-201. doi: 10.1016/j.yebeh.2018.01.010. Epub 2018 Feb 3. PubMed PMID: 29414552.

INTRODUCTION: Epilepsy has several comorbidities and associated stigma. Stigma associated with epilepsy is well known and prevalent worldwide. Surgical treatment is an established treatment for drug refractory epilepsy. Following surgery in children, it is possible that the stigma may reduce, but such an effect has not been studied earlier.
MATERIALS AND METHODS: Analysis of prospectively collected data was performed for pediatric patients at a single tertiary center for treating epilepsy. Child stigma scale, as described by Austin et al., was used to evaluate stigma both pre- and postoperatively. Analysis was done using Paired t test.
RESULTS: In this study, following surgery, there was significant reduction of stigma (P<0.001). This was proportional to the reduction in seizures, though there were 9 (30%) patients, who due to persistent neurodisability did not have any reduction of stigma despite having good seizure outcome.
CONCLUSION: Surgery in drug-resistant epilepsy helps in reducing stigma. Seizure reduction is probably not the only factor responsible for a change in stigma outcome.

DOI: 10.1016/j.yebeh.2018.01.010
PMID: 29414552

10: Balhara YPS, Garg H, Kumar S, Bhargava R. Gaming disorder as a consequence of attempt at self- medication: Empirical support to the hypothesis. Asian J Psychiatr. 2018 Jan;31:98-99. doi: 10.1016/j.ajp.2018.02.013. Epub 2018 Feb 10. PubMed PMID: 29453152.

11: Battu S, Kumar A, Pathak P, Purkait S, Dhawan L, Sharma MC, Suri A, Singh M, Sarkar C, Suri V. Clinicopathological and molecular characteristics of pediatric meningiomas. Neuropathology. 2018 Feb;38(1):22-33. doi: 10.1111/neup.12426. Epub 2017 Sep 13. PubMed PMID: 28901666.

Molecular and clinical characteristics of pediatric meningiomas are poorly defined. Therefore, we analyzed clinical, morphological and molecular profiles of pediatric meningiomas. Forty pediatric meningiomas from January 2002 to June 2015 were studied. 1p36, 14q32 and 22q-deletion were assessed by fluorescent in situ hybridization and mutations of most relevant exons of AKT, SMO, KLF4, TRAF and pTERT using sequencing. Expression of GAB1, stathmin, progesterone receptor (PR), p53 along with MIB-1 LI was examined using immunohistochemistry. There were 36 sporadic and four NF2 associated meningiomas. Among sporadic meningiomas, the majority (72.2%) of cases harbored 22q-deletion. Difference in frequency of combined 1p/14q deletion in Grade-I versus Grade-II/III tumors was not significant (13.7% vs 28.5%, P=0.57). PR immunoreactivity was seen in 65.5% of Grade-I and 14.2% of Grade-II/III tumors (P=0.03). The majority (97.2%) of meningiomas were immunonegative for p53. Stathmin and GAB co-expression was observed in 58.3% of cases. Notably, AKT, SMO, KLF4, TRAF7 (exon 17) and pTERT mutations were seen in none of the cases analyzed. 1p/14q codeletion was frequent in skull base as compared to non-skull base meningiomas (23% vs 11.1%, P=0.37). All NF2 meningiomas harbored 22q-deletion and showed GAB and stathmin co-expression while none showed 1p/14q loss. Pediatric meningiomas share certain phenotypic and cytogenetic characteristics with adult counterparts, but GAB and stathmin co-expression in the majority of cases and non-significant difference in frequency of 1p/14q co-deletion between low- and high-grade meningiomas indicate an inherently aggressive nature. Characteristic AKT/SMO, KLF4/TRAF7 and pTERT genetic alterations seen in adults are distinctly absent in pediatric meningiomas.

DOI: 10.1111/neup.12426
PMID: 28901666

12: Chadda RK, Chatterjee B. Need for psychosocial interventions: From resistance to therapeutic alliance. Indian J Psychiatry. 2018 Feb;60(Suppl 4):S440-S443. doi: 10.4103/psychiatry.IndianJPsychiatry_11_18. Review. PubMed PMID: 29540911; PubMed Central PMCID: PMC5844152.

Addictive disorders have a strong psychosocial component in their etiogenesis, and hence psychosocial approaches form a significant part of management planning with a role in prevention, treatment, relapse prevention and long term rehabilitation. Due to a number of myths and misconceptions associated with addictive disorders, there is often strong resistance from the patients as well as the families towards treatment. The disorder is often perceived as a bad habit and hence not requiring treatment. It is very important to break this barrier to bring the patient and the family in treatment engagement. This article summarizes the need for psychosocial management of the addictive disorders, dealing with treatment resistance building therapeutic alliance, and improving the long term outcome.

DOI: 10.4103/psychiatry.IndianJPsychiatry_11_18
PMCID: PMC5844152
PMID: 29540911

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

13: Chadda RK, Sood M. General hospital psychiatry in India: History, scope, and future. Indian J Psychiatry. 2018 Feb;60(Suppl 2):S258-S263. doi: 10.4103/psychiatry.IndianJPsychiatry_435_17. Review. PubMed PMID: 29527058; PubMed Central PMCID: PMC5836348.

Background: General hospital psychiatry units (GHPUs) are the major providers of mental health services in India. Unlike in high-income countries, GHPUs in India are also the main training centers for providing postgraduate training in psychiatry and allied disciplines.

Aim: This paper traces the history of the GHPUs in India from beginning to the present.
Material and Methods: PubMed, old issues of the Indian Journal of Psychiatry and related sources were searched with key words general hospital and psychiatry both electronically and manually to look for the related literature.
Results: The history of the development of GHPUs is discussed under 3 phases: beginning to the preindependence period, independence to the year of the launch of the National Mental Health Programme of India, and afterward. Contributions of the GHPUs towards service development, teaching, research, community awareness and reducing stigma, and their future scope are discussed.
Conclusion: GHPUs have been a revolutionary development in India with great contribution in the field of mental heath.

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PMCID: PMC5836348
PMID: 29527058

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

14: Chakraborty S, Chopra M, Mani K, Giri AK, Banerjee P, Sahni NS, Siddhu A, Tandon N, Bharadwaj D. Prevalence of vitamin B(12) deficiency in healthy Indian school-going adolescents from rural and urban localities and its relationship with various anthropometric indices: a cross-sectional study. J Hum Nutr Diet. 2018 Feb 22. doi: 10.1111/jhn.12541. [Epub ahead of print] PubMed PMID: 29468754.

BACKGROUND: Micronutrient deficiency is a global health burden, especially among developing countries. The present cross-sectional study aimed to determine the prevalence of vitamin B12 deficiency in healthy Indian school-going adolescents, based on area of residence, sex and body mass index (BMI). Furthermore, the relationship of serum B12 concentration with dietary vitamin B12 intake and anthropometric indices was assessed among adolescents from rural and urban India.
METHODS: A total of 2403 school-going adolescents (11-17 years) from National Capital Region and rural areas of Haryana, India were selected. Serum B12 concentrations were estimated using an electrochemiluminescence immunoassay. Dietary assessments were conducted on 65% of total participants (n = 1556) by two 24-h diet recalls.
RESULTS: The prevalence of vitamin B12 deficiency in the total study population was 32.4% (rural: 43.9% versus urban: 30.1%, $P < 0.001$; male: 34.4% versus female: 31.0%, $P < 0.05$; normal weight: 28.1%, versus overweight: 39.8%, versus obese: 51.2%, $P < 0.001$). More than half (51.2%) of obese adolescents were vitamin B12 deficient. On multiple linear regression analysis, serum B12 in rural adolescents was associated with age ($\beta = -0.12$, $P < 0.05$). Among urban adolescents, serum B12 was associated with BMI ($\beta = -0.08$, $P < 0.05$) and adjusted dietary vitamin B12 intake ($\beta = 0.14$, $P < 0.001$). Serum vitamin B12 levels were found to be lower in rural females ($\beta = -0.12$, $P = 0.030$) and urban males (β: 0.11, $P < 0.001$) compared to their respective contemporaries.
CONCLUSIONS: Vitamin B12 deficiency was higher among rural school-going adolescents. Boys had a higher B12 deficiency than girls. Inverse associations of serum B12 with adiposity indices were observed. Serum B12 levels were positively associated with dietary vitamin B12 intake.

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PMID: 29468754

15: Chaudhry R, Kokkayil P, Ghosh A, Bahadur T, Kant K, Sagar T, Kabra SK, Lodha R, Dey AB, Menon V. Bartonella henselae infection in diverse clinical conditions in a tertiary care hospital in north India. Indian J Med Res. 2018 Feb;147(2):189-194. doi: 10.4103/ijmr.IJMR_1932_16. PubMed PMID: 29806608; PubMed Central PMCID: PMC5991118.

Background & objectives: : Bartonella henselae causes infections which closely resemble febrile illness and chronic diseases such as tuberculosis and haematological malignancies. There are not many studies on Bartonella infections from India. The present study was undertaken to diagnose B. henselae infection in diverse clinical conditions in a tertiary care hospital in north India.
Methods: A total of 145 patients including those with fever and lymphadenopathy, infective endocarditis and neuroretinitis were enrolled in the study. Whole blood, serum and lymph node aspirate and valvular vegetations if available, were obtained. Samples were plated on chocolate agar and brain-heart infusion agar containing five per cent fresh rabbit blood and were incubated at 35°C for at least four weeks in five per cent CO2with high humidity. Immunofluorescent antibody assay (IFA) was done for the detection of IgM antibodies in the serum using a commercial kit. Whole blood was used to perform polymerase chain reaction (PCR) for the citrate synthase gene (gltA).
Results: IFA was positive in 11 of 140 (7.85%) patients and PCR was positive in 3 of 140 (2.14%) patients. Culture was negative in all the cases. A higher incidence of Bartonella infection was seen in patients with fever and lymphadenopathy (n=30), seven of whom were children. In ophthalmological conditions, four cases were IFA positive.
Interpretation & conclusions: The present study shows that the threat of Bartonella infection is a reality in India. It is also an important treatable cause of fever and lymphadenopathy in children. Serology and PCR are useful tests for its diagnosis. Clinicians should consider.
Bartonella: infection in the differential diagnosis of febrile illnesses and chronic diseases.

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PMCID: PMC5991118
PMID: 29806608

Conflict of interest statement: None

16: Chawla R, Kumar A, Ravani R, Tewari R, Rajmohmad Shaikh F, Sharma A. Multimodal imaging questions etiology of idiopathic retinal vasculitis, aneurysms and neuroretinitis syndrome (IRVAN syndrome). Med Hypotheses. 2018 Feb;111:12-14. doi: 10.1016/j.mehy.2017.10.031. Epub 2017 Dec 12. PubMed PMID: 29406987.

Idiopathic retinal vasculitis, aneurysms and neuroretinitis (IRVAN) syndrome is a rare entity of unknown etiology for which many hypotheses have been proposed with inflammation being the most commonly accepted hypothesis. We report cases of a 9 year old girl and a 22 year old male patient with diagnosis of IRVAN syndrome. The conclusions drawn from the clinical examination and multimodal imaging including optical coherence tomography angiography of the patients are discussed. Our conclusions and interpretation point towards IRVAN being a developmental vascular anomaly rather than a consequence of inflammation. It is thus proposed to be renamed as Idiopathic retinal arteriolar aneurysm syndrome (IRAA).

DOI: 10.1016/j.mehy.2017.10.031
PMID: 29406987

17: Chawla R, Pujari A, Rakheja V, Kumar A. Torpedo maculopathy: A primary choroidal capillary abnormality? Indian J Ophthalmol. 2018 Feb;66(2):328-329. doi: 10.4103/ijo.IJO_784_17. PubMed PMID: 29380796; PubMed Central PMCID: PMC5819133.

A 26-year-old healthy male patient's fundus revealed findings consistent with torpedo maculopathy. Swept-source optical coherence tomography (OCT) showed a dome-shaped elevation of the retina at the level of ellipsoid zone. On OCT angiography segmented at the level of the choriocapillaris, a cluster of convoluted fine vessels was seen, and further, deeper scans of the larger

choroidal vessels showed a slower flow. From these observations along with the embryological correlation of choriocapillaris development, a possibility of an abnormality preventing proper fenestration of the choriocapillaris along the horizontal raphe being responsible for this anomaly is suggested.

DOI: 10.4103/ijo.IJO_784_17
PMCID: PMC5819133
PMID: 29380796 [Indexed for MEDLINE]

18: Choudhary A, Gulati S, Sagar R, Sankhyan N, Sripada K. Childhood epilepsy and ADHD comorbidity in an Indian tertiary medical center outpatient population. Sci Rep. 2018 Feb 8;8(1):2670. doi: 10.1038/s41598-018-20676-8. PubMed PMID: 29422636; PubMed Central PMCID: PMC5805699.

This study aimed to assess the prevalence of Attention Deficit Hyperactivity Disorder (ADHD) and its characteristics and risk factors in children with epilepsy at a tertiary medical center in New Delhi. Children with active epilepsy, aged 6 to 12 years, were assessed for ADHD using DSM-IV-TR criteria. Epilepsy and psychiatric characteristics, sociodemographic indicators, and use of antiepileptic drugs were analyzed for differences between the ADHD and non-ADHD groups. Among the 73 children with epilepsy, 23% (n=17) had comorbid ADHD, of whom 59% (n=10) had predominantly inattentive type, 35% (n=6) combined type, and 6% (n=1) predominantly hyperactive-impulsive type. Lower IQ scores, epileptiform EEG activity, not attending school, and male sex were significantly associated with comorbid ADHD in children with epilepsy. Groups were similar in terms of age, socioeconomic indicators, family history of psychiatric disorders, seizure frequency in the last six months, seizure etiology, and seizure type. Epilepsy is a common pediatric neurological condition with frequent psychiatric comorbidities, including ADHD. Specialists should collaborate to optimize treatment for children with epilepsy and ADHD, especially for families in developing countries where the burden of disease can be great.

DOI: 10.1038/s41598-018-20676-8
PMCID: PMC5805699
PMID: 29422636

19: Dani P, Patnaik N, Singh A, Jaiswal A, Agrawal B, Kumar AA, Varkhande SR, Sharma A, Vaish U, Ghosh P, Sharma VK, Sharma P, Verma G, Kar HK, Gupta S, Natarajan VT, Gokhale RS, Rani R. Association and expression of the antigen-processing gene PSMB8, coding for low-molecular-mass protease 7, with vitiligo in North India: case-control study. Br J Dermatol. 2018 Feb;178(2):482-491. doi: 10.1111/bjd.15391. Epub 2017 Oct 9. PubMed PMID: 28207947.

BACKGROUND: Vitiligo is a multifactorial, autoimmune, depigmenting disorder of the skin where aberrant presentation of autoantigens may have a role.
OBJECTIVES: To study the association of two antigen-processing genes, PSMB8 and PSMB9, with vitiligo.
METHODS: In total 1320 cases of vitiligo (1050 generalized and 270 localized) and 752 healthy controls were studied for the PSMB9 exon 3 G/A single-nucleotide polymorphism (SNP), PSMB8 exon 2 C/A SNP and PSMB8 intron 6 G/T SNP at site 37 360 using polymerase chain reaction (PCR)-restriction fragment length polymorphism. Real-time PCR was used for transcriptional expression of PSMB8 and cytokines. Expression of ubiquitinated proteins and phosphorylated-p38 (P-p38) was studied by Western blotting.
RESULTS: Significant increases in PSMB8 exon 2 allele A ($P < 2.07 \times 10-6$, odds ratio 1·93) and genotypes AA ($P < 1.03 \times 10-6$, odds ratio 2·51) and AC ($P < 1.29 \times 10-6$, odds ratio 1·63) were observed in patients with vitiligo. Interferon-γ stimulation induced lower expression of PSMB8 in peripheral blood mononuclear cells of cases compared with controls, suggesting impaired antigen processing, which was confirmed by accumulation of ubiquitinated proteins in both lesional

and nonlesional skin of patients with vitiligo. Expression of proinflammatory cytokines - interleukin (IL)-6, IL-1β and IL-8 - was higher in the lesional skin. P-p38 expression was variable but correlated with the amount of ubiquitinated proteins in the lesional and nonlesional skin, suggesting that the inflammatory cytokine responses in lesional skin could be a result of both P-p38-dependent and -independent pathways.
CONCLUSIONS: The PSMB8 exon 2 SNP is significantly associated with vitiligo. Accumulation of ubiquitinated proteins in skin of cases of vitiligo suggests their aberrant processing, which may promote the development of the disease.

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PMID: 28207947

20: Dantham S, Srivastava AK, Gulati S, Rajeswari MR. Differentially Regulated Cell-Free MicroRNAs in the Plasma of Friedreich's Ataxia Patients and Their Association with Disease Pathology. Neuropediatrics. 2018 Feb;49(1):35-43. doi: 10.1055/s-0037-1607279. Epub 2017 Nov 27. PubMed PMID: 29179232.

Friedreich's ataxia (FRDA) is a multisystem disease affecting the predominately nervous system, followed by muscle, heart, and pancreas. Current research focused on therapeutic interventions aimed at molecular amelioration, but there are no reliable noninvasive signatures available to understand disease pathogenesis. The present study investigates the alterations of plasma cell-free microRNAs (miRNAs) in FRDA patients and attempts to find the significance in relevance with the pathogenesis. Total RNA from the plasma of patients and healthy controls were subjected to miRNA microarray analysis using Agilent Technologies microarray platform. Differentially regulated miRNAs were validated by SYBR-green real-time polymerase chain reaction (Thermo Fisher Scientific). The study identified 20 deregulated miRNAs (false discovery rate < 0.01, fold change ≥ 2.0 $\leq$) in comparison with healthy controls; out of which 17 miRNAs were upregulated, and 3 miRNAs were downregulated. Target and pathway analysis of these miRNAs have shown association with neurodegenerative and other clinical features in FRDA. Further validation ($n = 21$) identified a set of significant ($p < 0.05$) deregulated miRNAs; hsa-miR-15a-5p, hsa-miR-26a-5p, hsa-miR-29a-3p, hsa-miR-223-3p, hsa-24-3p, and hsa-miR-21-5p in comparison with healthy controls. These miRNAs were reported to influence various pathological features associated with FRDA. The present study is expected to aid in the understanding of disease pathogenesis.

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21: Dar HY, Shukla P, Mishra PK, Anupam R, Mondal RK, Tomar GB, Sharma V, Srivastava RK. Lactobacillus acidophilus inhibits bone loss and increases bone heterogeneity in osteoporotic mice via modulating Treg-Th17 cell balance. Bone Rep. 2018 Feb 5;8:46-56. doi: 10.1016/j.bonr.2018.02.001. eCollection 2018 Jun. PubMed PMID: 29955622; PubMed Central PMCID: PMC6019967.

Osteoporosis is one of the most important but often neglected bone disease associated with aging and postmenopausal condition leading to bone loss and fragility. Probiotics have been associated with various immunomodulatory properties and have the potential to ameliorate several inflammatory conditions including osteoporosis. Lactobacillus acidophilus (LA) was selected as probiotic of choice in our present study due its common availability and established

immunomodulatory properties. In the present study, we report for the first time that administration of LA in ovariectomized (ovx) mice enhances both trabecular and cortical bone microarchitecture along with increasing the mineral density and heterogeneity of bones. This effect of LA administration is due to its immunomodulatory effect on host immune system. LA thus skews the Treg-Th17 cell balance by inhibiting osteoclastogenic Th17 cells and promoting anti-osteoclastogenic Treg cells in ovx mice. LA administration also suppressed expression of osteoclastogenic factors (IL-6, IL-17, TNF-α and RANKL) and increased expression of anti-osteoclastogenic factors (IL-10, IFN-γ). Taken together the present study for the first time clearly demonstrates the therapeutic potential of LA as an osteo-protective agent in enhancing bone health (via tweaking Treg-Th17 cell balance) in postmenopausal osteoporosis.

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PMCID: PMC6019967
PMID: 29955622

22: Dar HY, Singh A, Shukla P, Anupam R, Mondal RK, Mishra PK, Srivastava RK. High dietary salt intake correlates with modulated Th17-Treg cell balance resulting in enhanced bone loss and impaired bone-microarchitecture in male mice. Sci Rep. 2018 Feb 6;8(1):2503. doi: 10.1038/s41598-018-20896-y. PubMed PMID: 29410520; PubMed Central PMCID: PMC5802842.

Osteoporosis is associated with reduced density and quality of bone leading to weakened skeleton thereby increasing the risk of fractures responsible for increased morbidity and mortality. Due to preference for western food style the consumption of salt intake in our diets has increased many folds. High dietary salt intake has recently been linked with induction of Th17 cells along with impairment of Treg cells. Also, Th17 cells have been one of major players in the pathophysiology of various bone pathologies including osteoporosis. We thus hypothesized that high salt diet (HSD) intake would lead to enhanced bone loss by modulating Th17-Treg cell balance. In the present study, we report for the first time that HSD intake in male mice impairs both trabecular and cortical bone microarchitecture along with decreasing the mineral density and heterogeneity of bones. The HSD modulates host immune system and skews Treg-Th17 balance by promoting osteoclastogenic Th17 cells and inhibiting development of anti-osteoclastogenic Treg cells in mice. HSD also enhanced expression of proinflammatory cytokines (IL-6, TNF-α, RANKL and IL-17) and decreased the expression of anti-inflammatory cytokines (IL-10, IFN-γ). Taken together the present study for the first time establishes a strong correlation between high dietary salt intake and bone health via interplay between Th17-Treg cells.

DOI: 10.1038/s41598-018-20896-y
PMCID: PMC5802842
PMID: 29410520

23: Dash HH, Chavali S. Management of traumatic brain injury patients. Korean J Anesthesiol. 2018 Feb;71(1):12-21. doi: 10.4097/kjae.2018.71.1.12. Epub 2018 Feb 1. Review. PubMed PMID: 29441170; PubMed Central PMCID: PMC5809702.

Traumatic brain injury (TBI) has been called the 'silent epidemic' of modern times, and is the leading cause of mortality and morbidity in children and young adults in both developed and developing nations worldwide. In recent years, the treatment of TBI has undergone a paradigm shift. The management of severe TBI is ideally based on protocol-based guidelines provided by the Brain Trauma Foundation. The aims and objectives of its management are prophylaxis and prompt management of intracranial hypertension and secondary brain injury, maintenance of cerebral perfusion pressure, and ensuring adequate oxygen delivery to injured brain tissue. In this review, the authors discuss protocol-based approaches to the management of severe TBI as per recent guidelines.

DOI: 10.4097/kjae.2018.71.1.12

PMCID: PMC5809702
PMID: 29441170

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Catheters with inflatable balloons such as a Foley catheter may be used for feeding gastrostomy/jejunostomy. The incorrect or improper use of these catheters can have serious consequences. We report 13 cases of feeding jejunostomy with balloon-inflated catheter's malfunction, some referred to our centre and others operated here over a period of 8 years. The most dramatic consequence of such improper use led to rupture of the small intestine due to inadvertent over-inflation (over 100 ml) of the balloon of the catheter during a contrast study. The patient required a laparotomy with resection and anastomosis of the bowel. Three other patients had similar over-inflation of the balloon leading to severe pain and discomfort. In all three patients, timely deflation of the balloon was sufficient to relieve the symptoms. One patient had intussusception with the inflated balloon acting as a lead point. The patient underwent resection of the small bowel with end jejunostomy and distal mucous fistula. All other patients presented with abdominal pain and distension and intestinal obstruction and were managed non-operatively with deflation of balloon either by aspiration, cutting the balloon port or ultrasound-guided puncture of balloon. Healthcare personnel dealing with patients with indwelling catheters must be educated to suspect, detect and manage such problems. The best measure for such unusual complications of otherwise safe devices would be prevention by training and generation of awareness.

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PMID: 29581679

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25: Davis AA. A womb like a broken heart. BMJ Case Rep. 2018 Feb 22;2018. pii: bcr-2017-222075. doi: 10.1136/bcr-2017-222075. PubMed PMID: 29472419.

Uterine perforation during hysteroscopic operative procedures is a potential complication well known to gynaecologists. Uterine septa are a commonly encountered Müllerian anomaly related to pregnancy loss and infertility. Hysteroscopic resection of septa has shown to improve pregnancy outcome. There are limited case reports of uterine rupture in subsequent pregnancies after hysteroscopic septal resection. Our patient had a hysteroscopic septal resection done a year prior which was complicated by a uterine fundal perforation, left to spontaneously heal after immediate sealing with cautery. The patient conceived spontaneously soon after and underwent an emergency caesarean section for severe pre-eclampsia. Intraoperatively, after removal of the placenta, we discovered a 3 cm symmetrical circular defect at the fundus of the uterus with no myometrium or serosa. The potentially disastrous consequences of this silent uterine rupture were mitigated due to another life-threatening condition which prevented the onset of labour.

DOI: 10.1136/bcr-2017-222075
PMID: 29472419

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26: Dhole B, Gupta S, Venugopal SK, Kumar A. Triiodothyronine stimulates VEGF expression and secretion via steroids and HIF-1Î± in murine Leydig cells. Syst Biol Reprod Med. 2018 Jun;64(3):191-201. doi: 10.1080/19396368.2018.1433248. Epub 2018 Feb 8. PubMed PMID: 29417848.

Leydig cells are the principal steroidogenic cells of the testis. Leydig cells also secrete a number of growth factors including vascular endothelial growth factor (VEGF) which has been shown to regulate both testicular steroidogenesis and spermatogenesis. The thyroid hormone, T3, is known to stimulate steroidogenesis in Leydig cells. T3 has also been shown to stimulate VEGF production in a variety of cell lines. However, studies regarding the effect of T3 on VEGF synthesis and secretion by the Leydig cells were lacking. Therefore, we investigated the effect of T3 on VEGF synthesis and secretion in a mouse Leydig tumour cell line, MLTC-1. The effect of T3 was compared with that of LH/cAMP and hypoxia, two known stimulators of Leydig cell functions. The cells were treated with T3, 8-Br-cAMP (a cAMP analogue), or CoCl2 (a hypoxia mimetic) and VEGF secreted in the cell supernatant was measured using ELISA. The mRNA levels of VEGF were measured by quantitative RT-PCR. In the MLTC-1 cells, T3, 8-Br-cAMP, and CoCl2 stimulated VEGF mRNA levels and the protein secretion. T3 also increased steroid secretion as well as HIF-1α protein levels, two well-established upstream regulators of VEGF. Inhibitors of steroidogenesis as well as HIF-1α resulted in inhibition of T3-stimulated VEGF secretion by the MLTC-1 cells. This suggested a mediatory role of steroids and HIF-1α protein in T3-stimulated VEGF secretion by MLTC-1 cells. The mediation by steroids and HIF-1α were independent of each other.ABBREVIATIONS: 8-Br-cAMP: 8-bromo - 3', 5' cyclic adenosine monophosphate; CoCl2: cobalt chloride; HIF-1α: hypoxia inducible factor -1α; LH: luteinizing hormone; T3: 3, 5, 3'-L-triiodothyronine; VEGF: vascular endothelial growth factor.

DOI: 10.1080/19396368.2018.1433248
PMID: 29417848

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28: Fernandes-Rosa FL, Daniil G, Orozco IJ, GÃ¶ppner C, El Zein R, Jain V, Boulkroun S, Jeunemaitre X, Amar L, Lefebvre H, Schwarzmayr T, Strom TM, Jentsch TJ, Zennaro MC. A gain-of-function mutation in the CLCN2 chloride channel gene causes primary aldosteronism. Nat Genet. 2018 Mar;50(3):355-361. doi: 10.1038/s41588-018-0053-8. Epub 2018 Feb 5. PubMed PMID: 29403012.

Primary aldosteronism is the most common and curable form of secondary arterial hypertension. We performed whole-exome sequencing in patients with early-onset primary aldosteronism and identified a de novo heterozygous c.71G>A/p.Gly24Asp mutation in the CLCN2 gene, encoding the voltage-gated ClC-2 chloride channel 1 , in a patient diagnosed at 9 years of age. Patch-clamp analysis of glomerulosa cells of mouse adrenal gland slices showed hyperpolarization-activated Cl- currents that were abolished in Clcn2-/- mice. The p.Gly24Asp variant, located in a well-conserved 'inactivation domain'2,3, abolished the voltage- and time-dependent gating of ClC-2 and strongly increased Cl- conductance at resting potentials. Expression of ClC-2Asp24 in adrenocortical cells increased expression of aldosterone synthase and aldosterone production. Our data indicate that CLCN2 mutations cause primary aldosteronism. They highlight the important role of chloride in aldosterone biosynthesis and identify ClC-2 as the foremost chloride conductor of resting glomerulosa cells.

DOI: 10.1038/s41588-018-0053-8
PMID: 29403012

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Subacute sclerosing panencephalitis (SSPE) is a slowly progressive degenerative disorder caused by measles virus. It is characterised by typical clinical and electrophysiological features in the form of slow myoclonic jerks, with progressive cognitive impairment, visual symptoms, and periodic complexes on EEG, with raised titres of anti-measles antibodies in CSF and serum. Atypical presentations of SSPE have been reported including brainstem involvement, ADEM-like presentation, acute encephalitis, and cerebellar ataxia. Presentation with predominant extrapyramidal features is uncommon. We describe a case of SSPE presenting with extensive rigidity with highly elevated CPK values, mimicking neuroleptic malignant syndrome (NMS) which was most probably due to central dopaminergic blockade induced by the disease process. To our knowledge, this is the first case of SSPE presenting with a NMS-like syndrome.

DOI: 10.1007/s13365-017-0602-4
PMID: 29243130

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OBJECTIVE: To apprise readers about this rare but severest form of traumatic spine injury and its surgical management.
BACKGROUND: Complete fracture dislocation and subluxation (>100%) of 1 vertebral body in the coronal or sagittal plane with respect to the adjacent vertebra is defined as spondyloptosis. In coronal spondyloptosis the subluxated vertebral bodies lie beside each other, and the condition is lateraloptosis. Patients with lateraloptosis present unique surgical challenges because reduction and achieving realignment of spinal column require meticulous planning and execution.
METHODS: A retrospective analysis of patients admitted with lateraloptosis over a 4-year period (2013-2016) was done. Lateraloptosis was defined on computed tomography as complete subluxation of the spinal column with more than 50% of adjacent vertebral bodies lying directly lateral to each other.
RESULTS: Five men, ranging from 18 to 50 years (mean, 35.2 years) old were included in the study. Three patients had thoracic spine lateraloptosis, and in 2 the injury was at the thoracolumbar junction. All patients underwent single-stage posterior surgical reduction and fixation. Intraoperatively, cord transection was seen in 3 patients, and dural tear with cerebrospinal fluid leak was seen in 1 patient. The mean follow-up period was 14 months (range, 1-36 months), during which 1 patient died of complications arising from bedsores. All patients remained at American Spinal Injury Association grade A neurologically.
CONCLUSION: Lateraloptosis is difficult to treat, and the aim of surgery is to stabilize the spine. Rehabilitation remains the most crucial factor, but the scarcity of proper rehabilitation centers results in high mortality and morbidity.

DOI: 10.1016/j.wneu.2018.01.206
PMID: 29427815 [Indexed for MEDLINE]

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Life expectancy in Hurler syndrome is significantly improved by enzyme therapy with bone marrow transplantation. However, the deterioration of skeletal abnormalities persists. Hip dysplasia is a common presentation which may progress to significant hip arthritis requiring total hip arthroplasty at later stage. We report a long-term outcome of cementless total hip arthroplasty in a patient with Hurler syndrome who was successfully treated with bone marrow transplant.

DOI: 10.1016/j.jor.2018.01.036
PMCID: PMC5895911 [Available on 2019-03-01]
PMID: 29657451

33: Gruppen MP, Bouts AH, Jansen-van der Weide MC, Merkus MP, Zurowska A, Maternik M, Massella L, Emma F, Niaudet P, Cornelissen EAM, Schurmans T, Raes A, van de Walle J, van Dyck M, Gulati A, Bagga A, Davin JC; all members of the Levamisole Study Group. A randomized clinical trial indicates that levamisole increases the time to relapse in children with steroid-sensitive idiopathic nephrotic syndrome. Kidney Int. 2018 Feb;93(2):510-518. doi: 10.1016/j.kint.2017.08.011. Epub 2017 Oct 18. PubMed PMID: 29054532.

Levamisole has been considered the least toxic and least expensive steroid-sparing drug for preventing relapses of steroid-sensitive idiopathic nephrotic syndrome (SSINS). However, evidence for this is limited as previous randomized clinical trials were found to have methodological limitations. Therefore, we conducted an international multicenter, placebo-controlled, double-blind, randomized clinical trial to reassess its usefulness in prevention of relapses in children with SSINS. The efficacy and safety of one year of levamisole treatment in children with SSINS and frequent relapses were evaluated. The primary analysis cohort consisted of 99 patients from 6 countries. Between 100 days and 12 months after the start of study medication, the time to relapse (primary endpoint) was significantly increased in the levamisole compared to the placebo group (hazard ratio 0.22 [95% confidence interval 0.11-0.43]). Significantly, after 12 months of treatment, six percent of placebo patients versus 26 percent of levamisole patients were still in remission. During this period, the most frequent serious adverse event (four of 50 patients) possibly related to levamisole was asymptomatic moderate neutropenia, which was reversible spontaneously or after treatment discontinuation. Thus, in children with SSINS and frequent relapses, levamisole prolonged the time to relapse and also prevented recurrence during one year of treatment compared to prednisone alone. However, regular blood controls are necessary for safety issues.

DOI: 10.1016/j.kint.2017.08.011
PMID: 29054532

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A 60-year-old man presented with recurrent abdominal pain and weight loss for 6 months. Abdominal imaging showed a large vascular lesion in the head and neck of pancreas suggestive of arteriovenous malformation (AV malformation). Endoscopic ultrasound was done which showed features of AV malformation with no evidence of pancreatic malignancy. Surgery was planned for definitive treatment of malformation. Digital subtraction angiography with angioembolization was done prior to surgery to reduce vascularity of the lesion. He recovered after a pylorus preserving pancreaticoduodenectomy. Histopathology of the resected specimen confirmed the pancreatic AV malformation. There has been no recurrence at 2 years of follow-up.

DOI: 10.1007/s12328-018-0825-9
PMID: 29404916

36: Gupta V, Ghosh S, Sujeeth M, Chaudhary S, Gupta S, Chaurasia AK, Sihota R, Gupta A, Kapoor KS. Selective laser trabeculoplasty for primary open-angle glaucoma patients younger than 40 years. Can J Ophthalmol. 2018 Feb;53(1):81-85. doi: 10.1016/j.jcjo.2017.07.023. Epub 2017 Sep 25. PubMed PMID: 29426447.

OBJECTIVE: To evaluate the efficacy of selective laser trabeculoplasty (SLT) among patients with juvenile-onset primary open-angle glaucoma (JOAG).
METHODS: Patients diagnosed with JOAG who were not controlled on medical therapy were offered a trial of SLT. The patients were followed up prospectively for 1, 3, 6, and 12 months postlaser to evaluate the efficacy of SLT as second-line therapy. Success was defined as an intraocular pressure (IOP) reduction of ≥20% at 12 months without the need for further medication, laser, or surgery. Factors associated with success/failure, prelaser IOP, age, and angle dysgenesis on gonioscopy were analysed.
RESULTS: The average prelaser IOP in these JOAG eyes (n = 30) was 25.3 ± 6.5 mm Hg, which reduced to 17.3 ± 5.8 mm Hg at 12 months (p = 0.01). All patients were of Indian ethnicity. Out of 30 eyes, at 12 months post-SLT, 13 (43%) eyes had at least a 20% reduction in IOP. In the eyes that achieved success, the average reduction of IOP was 37.6%. There was no difference in the prelaser IOP between those with success (25.5 ± 5.6 mm Hg) and those that failed (25.1 ± 8 mm Hg; p = 0.8), nor was there a difference in the mean age between successful cases (34.4 ± 9.4 years) and failures (31.6 ± 8.9 years; p = 0.4). However, those without angle dysgenesis were 4 times (CI 1.1-15.2) more likely to succeed with SLT than those with angle dysgenesis (p = 0.03).
CONCLUSIONS: A significant proportion of patients with JOAG can benefit from an IOP reduction after SLT. Those with gonioscopically normal-appearing angles are more likely to respond to SLT.

DOI: 10.1016/j.jcjo.2017.07.023
PMID: 29426447

37: Gupta V, Somarajan BI, Walia GK, Kaur J, Kumar S, Gupta S, Chaurasia AK, Gupta D, Kaushik A, Mehta A, Gupta V, Sharma A. Role of CYP1B1, p.E229K and p.R368H mutations among 120 families with sporadic juvenile onset open-angle glaucoma. Graefes Arch Clin Exp Ophthalmol. 2018 Feb;256(2):355-362. doi: 10.1007/s00417-017-3853-0. Epub 2017 Nov 22. PubMed PMID: 29168043.

BACKGROUND: To determine the frequency of CYP1B1 p.E229K and p.R368H, gene mutations in a cohort of sporadic juvenile onset open-angle glaucoma (JOAG) patients and to evaluate their genotype/phenotype correlation.
METHODS: Unrelated JOAG patients whose first-degree relatives had been examined and found to be unaffected were included in the study. The patients and their parents were screened for p.E229K and p.R368H mutations. The phenotypic characteristics were compared between probands carrying the mutations and those

who did not carry these mutations.
RESULTS: Out of 120 JOAG patients included in the study, the p.E229K mutation was seen in 9 probands (7.5%) and p.R368H in 7 (5.8%). The average age of onset of the disease (p=0.3) and the highest untreated IOP (p=0.4) among those carrying mutations was not significantly different from those who did not have these mutations. The proportion of probands with angle dysgenesis among those with p.E229K and p.R368H mutations was 70% (11 out of 16) in comparison to 65% (67 out of 104) of those who did not harbour these mutations (p=0.56). Similarly, the probands with moderate to high myopia among those with p.E229K and p.R368H mutations was 20% (3 out of 16) in comparison to 18% (18 out of 104) of those who did not harbour these mutations (p=0.59).
CONCLUSION: The frequency of p.E229K and p.R368H mutations of the CYP1B1 gene is low even among sporadic JOAG patients. Moreover, there is no clinical correlation between the presence of these mutations and disease severity.

DOI: 10.1007/s00417-017-3853-0
PMID: 29168043 [Indexed for MEDLINE]

38: Gurjar BS, Manikanta Sriharsha T, Bhasym A, Prabhu S, Puraswani M, Khandelwal P, Saini H, Saini S, Verma AK, Chatterjee P, Guchhait P, Bal V, George A, Rath S, Sahu A, Sharma A, Hari P, Sinha A, Bagga A. Characterization of genetic predisposition and autoantibody profile in atypical haemolytic-uraemic syndrome. Immunology. 2018 Feb 27. doi: 10.1111/imm.12916. [Epub ahead of print] PubMed PMID: 29485195; PubMed Central PMCID: PMC6050217.

We previously reported that Indian paediatric patients with atypical haemolytic-uraemic syndrome (aHUS) showed high frequencies of anti-complement factor H (FH) autoantibodies that are correlated with homozygous deletion of the genes for FH-related proteins 1 and 3 (FHR1 and FHR3) (FHR1/3-/-). We now report that Indian paediatric aHUS patients without anti-FH autoantibodies also showed modestly higher frequencies of the FHR1/3-/- genotype. Further, when we characterized epitope specificities and binding avidities of anti-FH autoantibodies in aHUS patients, most anti-FH autoantibodies were directed towards the FH cell-surface anchoring polyanionic binding site-containing C-terminal short conservative regions (SCRs) 17-20 with higher binding avidities than for native FH. FH SCR17-20-binding anti-FH autoantibodies also bound the other cell-surface anchoring polyanionic binding site-containing region FH SCR5-8, at lower binding avidities. Anti-FH autoantibody avidities correlated with antibody titres. These anti-FH autoantibody characteristics did not differ between aHUS patients with or without the FHR1/3-/- genotype. Our data suggest a complex matrix of interactions between FHR1-FHR3 deletion, immunomodulation and anti-FH autoantibodies in the aetiopathogenesis of aHUS.

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PMCID: PMC6050217 [Available on 2019-08-01]
PMID: 29485195

39: 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

40: Irugu DVK, Singh A, Ch S, Panuganti A, Acharya A, Varma H, Thota R, Falcioni M, Reddy S. Comparison between early and delayed facial nerve decompression in traumatic facial nerve paralysis - A retrospective study. Codas. 2018;30(1):e20170063. doi: 10.1590/2317-1782/20182017063. Epub 2018 Feb 8. PubMed PMID: 29451668.

Purpose To study the intraoperative findings in case of early and delayed decompression of facial nerve paralysis and compare their results. Methods Retrospective data analysis of 23 cases of longitudinal temporal bone fracture with House-Brackmann grade V and VI facial nerve paralysis. All cases were thoroughly evaluated and underwent facial nerve decompression through the transmastoid approach. All cases were under regular follow-up till the date of manuscript submission. Results Clinical improvement of the facial nerve function was observed for early vs. delayed facial nerve decompression. In the early decompression group, facial nerve function improved to grade II in eight cases (80%) and grade III in two cases (20%), whereas in the delayed decompression group it improved to grade II in one case (7.70%), grade III in four cases (30.76%), grade IV in seven cases (53.84%), and grade V in one case (7.70%). Conclusions Early decompression of facial nerve provides better results than delayed decompression because it enables early expansion of the nerve.

DOI: 10.1590/2317-1782/20182017063
PMID: 29451668 [Indexed for MEDLINE]

41: Jauhari P, Goswami JN, Sankhyan N, Singh P, Singhi P. Unusual Neuroimaging Finding in Infantile Tay-Sach's Disease. Indian J Pediatr. 2018 Feb;85(2):158-159. doi: 10.1007/s12098-017-2429-7. Epub 2017 Aug 2. PubMed PMID: 28766053.

42: Kariya P, Tandon S, Singh S, Tewari N. Polymorphism in emergence of deciduous dentition: A cross-sectional study of Indian children. J Investig Clin Dent. 2018 Feb;9(1). doi: 10.1111/jicd.12266. Epub 2017 Mar 27. PubMed PMID: 28349669.

AIM: The aim of the present study was to evaluate the timing and sequence of the eruption of deciduous teeth in Indian children.
METHOD: This cross-sectional study focused on children aged 5-36 months. One hospital was randomly selected from four geographic zones of the city. A total of 400 children from each hospital, fulfilling the inclusion criteria, constituted the sample. The examination was carried out by a single, trained examiner. The tooth was recorded as "present" or "absent" on the day of examination. The mean age of emergence was calculated using a probit model. Independent sample t-test was used to assess the statistical significance of differences in the mean age of tooth emergence.

RESULTS: The deciduous mandibular central incisor was the first tooth to erupt in the oral cavity (8.15±1.69 months). Girls showed delayed eruption compared to boys; however, no interarch variation was observed in the mean age of tooth eruption. There was also no difference in the sequence of eruption of deciduous teeth, as reported in other studies.
CONCLUSIONS: The present study establishes a chronological table for the eruption of deciduous teeth in Indian children. There was delayed eruption of deciduous teeth when compared to the reference ranges of Western populations.

DOI: 10.1111/jicd.12266
PMID: 28349669

43: Kashyap S, Kumar U, Pandey AK, Kanjilal M, Chattopadhyay P, Yadav C, Thelma BK. Functional characterisation of ADP ribosylation factor-like protein 15 in rheumatoid arthritis synovial fibroblasts. Clin Exp Rheumatol. 2018 Jul-Aug;36(4):581-588. Epub 2018 Feb 14. PubMed PMID: 29465355.

OBJECTIVES: ARL15 is a novel susceptibility gene identified in a recent GWAS in a north Indian rheumatoid arthritis (RA) cohort. However, the role of ARL15 or ARF family genes in RA aetiology remains unknown. Therefore, we aimed to i) establish the expression of ARL15 in rheumatoid arthritis synovial fibroblasts (RASF) and ii) its functional characterisation by assessing its effects on major inflammatory cytokines and interacting partners using a knockdown approach.
METHODS: RASF were cultured from synovial tissue obtained from RA patients (n=5) and osteoarthritis (OA) patients (n=3) serving as controls. Expression of ARL15, ARF1 and ARF6 in RASF was checked by semi-quantitative PCR and western blots; and altered expression of ARL15, if any, by induction of RASF with TNF using real-time PCR. The effect of ARL15 on the expression of adiponectin, adiponectin receptor I, IL6 and GAPDH and on cell mobility by invasion and migration assays were assessed by siRNA mediated gene knockdown.
RESULTS: Expression of ARL15, ARF1 and ARF6 was confirmed in RASF and OASF samples but ARL15 expression remained unaltered on TNF induction. Notably, ARL15 knockdown resulted in downregulation of IL6 and GAPDH, upregulation of adiponectin and adiponectin receptor I genes; and significant reduction in migration and invasion of RASF. Genemania showed significant interactions of ARL15 with genes responsible for insulin resistance and phospholipase D.
CONCLUSIONS: This first report on ARL15 expression in RASF and its likely role in inflammation and metabolic syndromes through a TNF independent pathway, encourages hypothesis-free studies to identify additional pathways underlying RA disease biology.

PMID: 29465355

44: Katiyar A, Sharma S, Singh TP, Kaur P. Identification of Shared Molecular Signatures Indicate the Susceptibility of Endometriosis to Multiple Sclerosis. Front Genet. 2018 Feb 16;9:42. doi: 10.3389/fgene.2018.00042. eCollection 2018. PubMed PMID: 29503661; PubMed Central PMCID: PMC5820528.

Women with endometriosis (EMS) appear to be at a higher risk of developing other autoimmune diseases predominantly multiple sclerosis (MS). Though EMS and MS are evidently diverse in their phenotype, they are linked by a common autoimmune condition or immunodeficiency which could play a role in the expansion of endometriosis and possibly increase the risk of developing MS in women with EMS. However, the common molecular links connecting EMS with MS are still unclear. We conducted a meta-analysis of microarray experiments focused on EMS and MS with their respective controls. The GEO2R web application discovered a total of 711 and 1516 genes that are differentially expressed across the experimental conditions in EMS and MS, respectively with 129 shared DEGs between them. The functional enrichment analysis of DEGs predicts the shared gene expression signatures as well as the overlapping biological processes likely to infer the

co-occurrence of EMS with MS. Network based meta-analysis unveiled six interaction networks/crosstalks through overlapping edges between commonly dysregulated pathways of EMS and MS. The PTPN1, ERBB3, and CDH1 were observed to be the highly ranked hub genes connected with disease-related genes of both EMS and MS. Androgen receptor (AR) and nuclear factor-kB p65 (RelA) were observed to be the most enriched transcription factor in the upstream of shared down-regulated and up-regulated genes, respectively. The two disease sample sets compared through crosstalk interactions between shared pathways revealed commonly up- and down-regulated expressions of 10 immunomodulatory proteins as probable linkers between EMS and MS. This study pinpoints the number of shared genes, pathways, protein kinases, and upstream regulators that may help in the development of biomarkers for diagnosis of MS and endometriosis at the same time through improved understanding of shared molecular signatures and crosstalk.

DOI: 10.3389/fgene.2018.00042
PMCID: PMC5820528
PMID: 29503661

45: Kaur K, Agarwal S, Rajeshwari M, Jain D, Bhalla AS, Verma H. Melanotic neuroectodermal tumour of infancy: An enigmatic tumour with unique cytomorphological features. Cytopathology. 2018 Feb;29(1):104-108. doi: 10.1111/cyt.12483. Epub 2017 Oct 13. PubMed PMID: 29027726.

46: Kaushik S, Iqbal N, Singh N, Sikarwar JS, Singh PK, Sharma P, Kaur P, Sharma S, Owais M, Singh TP. Search of multiple hot spots on the surface of peptidyl-tRNA hydrolase: structural, binding and antibacterial studies. Biochem J. 2018 Feb 9;475(3):547-560. doi: 10.1042/BCJ20170666. PubMed PMID: 29301982.

Peptidyl-tRNA hydrolase (Pth) catalyzes the breakdown of peptidyl-tRNA into peptide and tRNA components. Pth from Acinetobacter baumannii (AbPth) was cloned, expressed, purified and crystallized in a native unbound (AbPth-N) state and in a bound state with the phosphate ion and cytosine arabinoside (cytarabine) (AbPth-C). Structures of AbPth-N and AbPth-C were determined at 1.36 and 1.10 Å resolutions, respectively. The structure of AbPth-N showed that the active site is filled with water molecules. In the structure of AbPth-C, a phosphate ion is present in the active site, while cytarabine is bound in a cleft which is located away from the catalytic site. The cytarabine-binding site is formed with residues: Gln19, Trp27, Glu30, Gln31, Lys152, Gln158 and Asp162. In the structure of AbPth-N, the side chains of two active-site residues, Asn70 and Asn116, were observed in two conformations. Upon binding of the phosphate ion in the active site, the side chains of both residues were ordered to single conformations. Since Trp27 is present at the cytarabine-binding site, the fluorescence studies were carried out which gave a dissociation constant (KD) of $3.3 \pm 0.8 \times 10^{-7}$ M for cytarabine. The binding studies using surface plasmon resonance gave a KD value of $3.7 \pm 0.7 \times 10^{-7}$ M. The bacterial inhibition studies using the agar diffusion method and the biofilm inhibition assay established the strong antimicrobial potential of cytarabine. It also indicated that cytarabine inhibited Gram-negative bacteria more profoundly when compared with Gram-positive bacteria in a dose-dependent manner. Cytarabine was also effective against the drug-resistant bacteria both alone as well as in combination with other antibiotics.

DOI: 10.1042/BCJ20170666
PMID: 29301982

47: Kedia S, Madhusudhan KS, Sharma R, Bopanna S, Yadav DP, Goyal S, Jain S, Das P, Dattagupta S, Makharia G, Ahuja V. Combination of increased visceral fat and long segment involvement: Development and validation of an updated imaging marker for differentiating Crohn's disease from intestinal tuberculosis. J Gastroenterol

Hepatol. 2018 Jun;33(6):1234-1241. doi: 10.1111/jgh.14065. Epub 2018 Feb 26. PubMed PMID: 29205485.

BACKGROUND AND AIM: Computed tomographic (CT) features (long segment, ileocaecal area involvement, and lymph nodes > 1 cm) have demonstrated good specificity but poor sensitivity, while visceral to subcutaneous fat ratio on CT (VF/SC > 0.63) has moderate sensitivity and specificity in differentiating Crohn's disease (CD) and intestinal tuberculosis (ITB). This study aims to develop and validate an updated model incorporating CT features and VF/SC to improve the diagnostic accuracy of imaging in differentiating CD/ITB.
METHODS: Computed tomographic features and VF/SC were documented in two cohorts (development [n = 59, follow-up: January 2012 to November 2014] and validation [n = 69, follow-up: December 2014 to December 2015]) of CD/ITB patients diagnosed by standard criteria. Patients with normal CT were excluded. Features significantly different between CD/ITB were incorporated into a model.
RESULTS: In both the cohorts, necrotic lymph nodes were exclusive for ITB (23.1% vs 0% and 43.3% vs 0%), while long segment involvement (57.6% vs 7.7%, P < 0.001, and 52.6% vs 16.1%, P < 0.001) and VF/SC ratio > 0.63 (72.7% vs 19.2%, P < 0.001, and 81.6% vs 25.8%, P < 0.001) were significantly more common in CD. A risk score of 2, based upon long segment involvement and VF/SC ratio > 0.63, had an excellent specificity of 100% and 100% and sensitivity of 54% and 50% for CD in development and validation cohorts, respectively. Based upon these features, in 43% patients with the diagnostic dilemma of CD/ITB, a definite diagnosis based only on imaging could be made.
CONCLUSION: Necrotic lymph nodes are exclusive for ITB, and the combination of long segment involvement and VF/SC ratio > 0.63 is exclusive for CD, and these features can make a definite diagnosis in 43% patients with a CD/ITB dilemma.

DOI: 10.1111/jgh.14065
PMID: 29205485

48: Kilambi R, Singh AN, Madhusudhan KS, Das P, Pal S. Choledochal cyst of the proximal cystic duct: a taxonomical and therapeutic conundrum. Ann R Coll Surg Engl. 2018 Feb;100(2):e34-e37. doi: 10.1308/rcsann.2017.0201. Epub 2017 Nov 28. PubMed PMID: 29181996; PubMed Central PMCID: PMC5838701.

Isolated choledochal cysts involving the cystic duct are rare. We present a case of a choledochal cyst involving only the proximal cystic duct, and discuss the taxonomic and therapeutic challenges. There is a need for a clearly defined classification system for these cysts as they may be categorised as either type II or type VI cysts. The optimal treatment remains debatable, with some authors recommending a bilioenteric reconstruction owing to the wide cystic duct-bile duct junction. However, we suggest that a cholecystectomy should be performed with examination of the specimen and frozen section in case of any abnormality rather than upfront bile duct excision. In addition, given the rarity of this condition and the paucity of long-term data, we recommend meticulous follow-up for development of any malignancy.

DOI: 10.1308/rcsann.2017.0201
PMCID: PMC5838701 [Available on 2019-02-01]
PMID: 29181996 [Indexed for MEDLINE]

49: Kilambi R, Singh AN. Randomized Controlled Trial of Pancreaticojejunostomy Versus Stapler Closure of the Pancreatic Stump During Distal Pancreatectomy to Reduce Pancreatic Fistula. Ann Surg. 2018 Feb;267(2):e37. doi: 10.1097/SLA.0000000000002032. PubMed PMID: 27849671.

50: Kothari SS, Deepti S, Rai N. Reversible bioprosthetic valve thrombosis from eosinophilia. BMJ Case Rep. 2018 Feb 8;2018. pii: bcr-2017-222937. doi:

10.1136/bcr-2017-222937. PubMed PMID: 29437808.

A 31-year-old man with a mitral bioprosthetic valve presented with recent worsening of exertional dyspnoea 7 years after the mitral valve replacement. Evaluation revealed an increased gradient across the thickened mitral bioprosthetic valve leaflets. Marked eosinophilia was present and was considered as a putative cause for bioprosthetic valve thrombosis. The treatment with systemic corticosteroids and oral anticoagulation led to complete resolution of symptoms with significant decrease in mitral bioprosthetic valve gradient and leaflet thinning. The case is reported to highlight the fact that eosinophilia may cause reversible bioprosthetic valve thrombosis.

DOI: 10.1136/bcr-2017-222937
PMID: 29437808

Conflict of interest statement: Competing interests: None declared.

51: Kumar A, Varshney G, Singh PK, Agrawal D, Satyarthee GD, Chandra PS, Kale SS, Mahapatra AK. Traumatic Atlantoaxial Spondyloptosis Associated with Displaced Odontoid Fracture: Complete Reduction via Posterior Approach Using "Joint Remodeling" Technique. World Neurosurg. 2018 Feb;110:609-613. doi: 10.1016/j.wneu.2017.09.097. PubMed PMID: 29433186.

BACKGROUND: Atlantoaxial spondyloptosis (AAS), which is defined as complete displacement of facets of atlas anterior to the facets of axis such that there is no contact between the 2 articulating surfaces, is an extremely rare manifestation of atlantoaxial instability. The reason for an extreme rarity of traumatic AAS is probably the severity of injury in traumatic AAS that is usually incompatible to life. It represents the most severe form of atlantoaxial dislocation, and complete reduction in such a case presents a real technical challenge because of the interlocking of C1-C2 facets. Cranial traction fails to achieve reduction in such cases.
CASE DESCRIPTION: In this report, we describe a case of traumatic odontoid fracture associated with AAS and discuss our technique of complete reduction of deformity via posterior approach. An 11-year-old child presented to us 4 months after a road traffic accident with progressive spastic quadriparesis. On evaluation, displaced type II odontoid fracture with AAS was detected. The patient underwent surgery via posterior approach. The techniques of "joint manipulation" and "joint remodeling" were used to achieve complete reduction of spondyloptosis. Postoperative imaging showed complete reduction of deformity. The patient also improved neurologically after surgery.
CONCLUSION: This case report aims to present the ability of "joint manipulation" and "joint remodeling" techniques in achieving excellent reduction in even one of the most difficult post-traumatic deformities that affect the craniovertebral junction.

DOI: 10.1016/j.wneu.2017.09.097
PMID: 29433186 [Indexed for MEDLINE]

52: Kumar L, Harish P, Malik PS, Khurana S. Chemotherapy and targeted therapy in the management of cervical cancer. Curr Probl Cancer. 2018 Mar - Apr;42(2):120-128. doi: 10.1016/j.currproblcancer.2018.01.016. Epub 2018 Feb 3. Review. PubMed PMID: 29530393.

Management of cervical cancer has undergone refinement in the past two decades; concurrent chemo-radiation (CCRT) (with cisplatin alone or in combination) is

currently the standard treatment approach for patients with locally advanced disease (FIGO stage IIB-IVA). About 30%-40% of such patients fail to achieve complete response; alternative approaches are needed to improve outcome for them. Treatment with bevacizumab (an inhibitor of vascular endothelial growth factor) along with chemotherapy is associated with improved survival in patients with recurrent or metastatic cervical cancer. Weekly paclitaxel and carboplatin for 4-6 weeks as dose dense chemotherapy prior to CCRT is currently under study in a phase III, multicentric trial. Role of adjuvant chemotherapy after CCRT in patients with positive lymph nodes, larger tumor volume and those with stage III-IVA disease needs further exploration. Novel agents targeting molecular pathways are currently being studied. Recent development of immune check point inhibitors is exciting, results of ongoing studies are awaited with interest.

DOI: 10.1016/j.currproblcancer.2018.01.016
PMID: 29530393

53: Kumar P, Bhari N, Tembhre MK, Mohanty S, Arava S, Sharma VK, Gupta S. Study of efficacy and safety of noncultured, extracted follicular outer root sheath cell suspension transplantation in the management of stable vitiligo. Int J Dermatol. 2018 Feb;57(2):245-249. doi: 10.1111/ijd.13759. Epub 2017 Oct 3. PubMed PMID: 28971483.

BACKGROUND: Noncultured, extracted follicular outer root sheath suspension (NC-EHF-ORS-CS) is a recently introduced technique for the treatment of stable vitiligo.
OBJECTIVE: To study the clinical efficacy of this technique and to determine the viability and cell composition of the suspension.
METHODS: Twenty-five patients with stable vitiligo were included in this prospective study. Fifty follicles were extracted from occipital scalp and were incubated with trypsin-ethylenediaminetetraacetic acid to separate outer root sheath cells. The cell suspension was filtered and centrifuged to obtain a cell pellet, which was resuspended and applied to the dermabraded recipient area. Cell viability of the suspension was assessed using trypan blue staining, and markers of keratinocyte stem cells (CD200) and melanocytes (S100) were evaluated using flow cytometry and immunocytochemistry, respectively.
RESULTS: At 6 months, the mean (±SD) repigmentation was 52 ± 25.1%, and >75% repigmentation was seen in 8/25 (32%) patients. Mean percentage cell viability of the suspension was 80 ± 17.2% with a mean concentration of CD200 + and S100 + cells being 7.91 ± 8.68% and 9.93 ± 1.22% (n = 3), respectively. Recipient site infection was seen in 4 of 25 (16%) patients and a color mismatch in 11 of 25 (44%) patients.
CONCLUSION: NC-EHF-ORS-CS is a useful minimally invasive therapy for vitiligo.

DOI: 10.1111/ijd.13759
PMID: 28971483

54: Kumar P, Singh A, Gamanagatti S, Kumar S, Chandrashekhara SH. Imaging findings in Erdheim-Chester disease: what every radiologist needs to know. Pol J Radiol. 2018 Feb 4;83:e54-e62. doi: 10.5114/pjr.2018.73290. eCollection 2018. Review. PubMed PMID: 30038679; PubMed Central PMCID: PMC6047091.

Erdheim-Chester disease (ECD) is a rare sporadic non-Langerhans cell histiocytic (LCH) proliferative disorder with systemic predilection. It usually affects adults in the 5th-7th decades of life and has non-specific clinical manifestations. Its suspicion is often heralded by the presence of characteristic radiological findings and subsequently confirmed by demonstration of CD68-positive xanthogranulomatous infiltrates on histopathology. Despite being a non-malignant entity, it might be fatal due to organ dysfunction. Imaging plays a

key role in the diagnosis, management, and follow-up. Imaging findings are essential to establish the diagnosis, assess actual disease burden, and explore the aetiopathogenesis and therapeutic options to halt disease progression and associated morbidity.

DOI: 10.5114/pjr.2018.73290
PMCID: PMC6047091
PMID: 30038679

55: Kumar S, Singh S, Kumar N, Verma R. The Effects of Repetitive Transcranial Magnetic Stimulation at Dorsolateral Prefrontal Cortex in the Treatment of Migraine Comorbid with Depression: A Retrospective Open Study. Clin Psychopharmacol Neurosci. 2018 Feb 28;16(1):62-66. doi: 10.9758/cpn.2018.16.1.62. PubMed PMID: 29397668; PubMed Central PMCID: PMC5810452.

Objective: The literature on managing migraine non-responsive to pharmacological approaches and that co-occurring with depression is scanty. The comorbid condition predicts a poorer prognosis for migraine as well as depression. The present report assesses efficacy and tolerability of high frequency repetitive transcranial magnetic stimulation (rTMS) over left dorsolateral prefrontal cortex as a treatment modality for migraine with comorbid depression.
Methods: The current retrospective chart review assesses effectiveness of high frequency rTMS over left dorsolateral prefrontal cortex as a treatment modality to manage migraine occurring comorbid with depression in 14 subjects.
Results: The mean scores on Migraine Disability Assessment Test (MIDAS) and depression rating scale reduced significantly from 21.14±3.01 and 20.71±3.95 at baseline to 13.93±6.09 and 14.21±5.52 respectively, after rTMS. There was significant improvement in migraine frequency, severity and functional disability assessed using MIDAS scores ($p < 0.05$) following high frequency rTMS compared to baseline.
Conclusion: There is a role of applying rTMS as a potential therapeutic modality in the integrated management of a distinct subgroup of migraine patients with comorbid depression.

DOI: 10.9758/cpn.2018.16.1.62
PMCID: PMC5810452
PMID: 29397668

56: Kumar S, Ramanujam B, Chandra PS, Dash D, Mehta S, Anubha S, Appukutan R, Rana MK, Tripathi M. Randomized controlled study comparing the efficacy of rapid and slow withdrawal of antiepileptic drugs during long-term video-EEG monitoring. Epilepsia. 2018 Feb;59(2):460-467. doi: 10.1111/epi.13966. Epub 2017 Dec 7. PubMed PMID: 29218705.

OBJECTIVE: Antiepileptic drugs (AEDs) are routinely withdrawn during long-term video-electroencephalography (EEG) monitoring (LTM), to record sufficient number of seizures. The efficacy of rapid and slow AED taper has never been compared in a randomized control trial (RCT), which was the objective of this study.
METHODS: In this open-label RCT, patients aged 2-80 years with drug-resistant epilepsy (DRE) were randomly assigned (1:1) to rapid and slow AED taper groups. Outcome assessor was blinded to the allocation arms. Daily AED dose reduction was 30% to 50% and 15% to <30% in the rapid and slow taper groups, respectively. The primary outcome was difference in mean duration of LTM between the rapid and slow AED taper groups. Secondary outcomes included diagnostic yield, secondary generalized tonic-clonic seizure (GTCS), 4- and 24- hour seizure clusters, status epilepticus, and need for midazolam rescue treatment. The study was registered with Clinical Trial Registry-India (CTRI/2016/08/007207).
RESULTS: One hundred forty patients were randomly assigned to rapid (n = 70) or slow taper groups (n = 70), between June 13, 2016 and February 20, 2017. The difference in mean LTM duration between the rapid and slow taper groups was -1.8 days (95% confidence interval [CI] -2.9 to -0.8, P = .0006). Of the secondary outcome measures, time to first seizure (2.9 ± 1.7 and 4.6 ± 3.0 days

in the rapid and slow taper groups respectively, P = .0002) and occurrence of 4-hour seizure clusters (11.9% and 2.9% in the rapid and slow taper groups, respectively, P = .04) were statistically significant. None of the other safety variables were different between the 2 groups. LTM diagnostic yield was 95.7% and 97.1%, in rapid and slow taper groups respectively (P = .46).
SIGNIFICANCE: Rapid AED tapering has the advantage of significantly reducing LTM duration over slow tapering, without any serious adverse events.

DOI: 10.1111/epi.13966
PMID: 29218705

57: Kumar V. "Comet-tail" lesions of pseudoxanthoma elasticum. Indian J Ophthalmol. 2018 Feb;66(2):300. doi: 10.4103/ijo.IJO_718_17. PubMed PMID: 29380784; PubMed Central PMCID: PMC5819121.

58: Lal R, Singh S. Assessment tools for screening and clinical evaluation of psychosocial aspects in addictive disorders. Indian J Psychiatry. 2018 Feb;60(Suppl 4):S444-S450. doi: 10.4103/psychiatry.IndianJPsychiatry_12_18. Review. PubMed PMID: 29540912; PubMed Central PMCID: PMC5844153.

This article provides an overview of the tools for psychosocial assessment of substance use disorders. Various psychosocial factors need to be assessed for effective management of individuals and to carry out research in the field. These factors include socio-demographic characteristics, neuropsychological functions, psychiatric co-morbidities, psychological vulnerabilities such as personality traits, motivation, and cognitions related to drug use, and the psychosocial functioning of the individual and his family. The various tools used to assess these aspects have been outlined below and the brief descriptions provided can help in choosing the right tool based on the characteristics that need to be measured and logistics.

DOI: 10.4103/psychiatry.IndianJPsychiatry_12_18
PMCID: PMC5844153
PMID: 29540912

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

59: Lohani N, Singh HN, Rajeswari MR. Assessment of binding properties of Actinomycin-D to 21nt DNA segment of hmgb1 gene promoter using spectroscopic and calorimetric techniques. J Biomol Struct Dyn. 2018 Feb;36(2):504-511. doi: 10.1080/07391102.2016.1278037. Epub 2017 Feb 8. PubMed PMID: 28033959.

60: Mahajan S, Gupta K, Sinha S, Malhotra A, Mahajan S. Effect of kidney transplantation on sleep-disordered breathing in patients with End Stage Renal Disease: a polysomnographic study. Sleep Med. 2018 May;45:140-145. doi: 10.1016/j.sleep.2017.11.1151. Epub 2018 Feb 15. PubMed PMID: 29680422.

BACKGROUND: Sleep-disordered breathing (SDB) is common in patients with end-stage renal disease (ESRD). SDB is associated with comorbidities such as hypertension, diabetes mellitus, and obesity, interplaying with metabolic derangements in the form of uremia, acidosis, and hypervolemia. Renal transplant has been observed to correct most of these metabolic derangements and to control progression of comorbidities. While SDB is highly prevalent among patients in the pretransplant stage, it remains to be seen whether the beneficial aspects of transplant are extended to improvement in SDB in patients with ESRD.
METHODS: Eighteen patients undergoing thrice-weekly hemodialysis (HD) for ESRD at the transplant clinic of All India Institute of Medical Sciences (AIIMS), New Delhi, underwent detailed clinical, laboratory, and polysomnographic evaluation. The average number of apneas and hypopneas per hour of sleep, ie, Apnea-Hypopnea Index (AHI), was used to define the severity of sleep apnea. All patients

underwent polysomnography (PSG) within 24 h of the last HD and after three months of living-donor transplant.
RESULTS: Of 18 patients, there were 14 males and four females. The median age was 28 years (range 19-50 years). They had already spent a median period of six months (range 3-31 months) on HD before inclusion. The prevalence of SDB (AHI ≥ 5/h) was 44.4% (8/18) before transplant, which decreased to 5.6% (1/18) after transplant (p = 0.016). The oxygen desaturation index had a median value of 5.8 events/h (range 0.1-35.4) in the pretransplant stage, which decreased to 0 events/h (range 0-6.6) in the post-transplant stage (p = 0.035).
CONCLUSION: There was a significant improvement in the prevalence and severity of SDB after transplant. Whether improvement in SDB is sustained on a long-term follow-up remains to be seen.

DOI: 10.1016/j.sleep.2017.11.1151
PMID: 29680422

61: Mahapatra A, Sharma P. Association of Internet addiction and alexithymia - A scoping review. Addict Behav. 2018 Jun;81:175-182. doi: 10.1016/j.addbeh.2018.02.004. Epub 2018 Feb 6. Review. PubMed PMID: 29429757.

It has been hypothesized that individuals with alexithymia who have difficulty in identifying, expressing, and communicating emotions may overuse Internet as a tool of social interaction to better regulate their emotions and to fulfill their unmet social needs. Similarly, an increasing body of evidence suggests that alexithymia may also play an essential role in the etiopathogenesis of addictive disorders. We conducted a scoping review of questionnaire-based studies of problematic Internet use/Internet addiction and alexithymia. From initial 51 studies, all of the final 12 included studies demonstrated a significant positive association between scores of alexithymia and severity of Internet addiction. However, the causal direction of the association is not clear because the interplay of numerous other variables that could affect the relation has not been studied. There are limitations in the methodology of the studies conducted. Hence, we emphasise the need for longitudinal studies with stronger methodologies.

DOI: 10.1016/j.addbeh.2018.02.004
PMID: 29429757

62: Maharana PK, Sahay P, Sujeeth M, Singhal D, Rathi A, Titiyal JS, Sharma N. Microbial Keratitis After Accelerated Corneal Collagen Cross-Linking in Keratoconus. Cornea. 2018 Feb;37(2):162-167. doi: 10.1097/ICO.0000000000001439. PubMed PMID: 29111996.

PURPOSE: To assess the pattern of microbial keratitis after accelerated corneal collagen cross-linkage (aCXL) in patients with keratoconus.
METHOD: The medical records of cases of keratoconus that underwent aCXL from June 2014 to May 2017 were reviewed. Cases that developed microbial keratitis after aCXL were included in the study. The clinical, microbiological profile and the treatment outcomes were evaluated.
RESULTS: Of 532 eyes that underwent aCXL, 7 cases developed microbial keratitis during the study period. Median age at presentation was 11 years (range 8-17). Association with vernal keratoconjunctivitis was noted in 57.1% of cases (n = 4/7). The median time at the onset of infection was 3 days after aCXL (range 1-4). Microbiological reports revealed mixed infection in 3 cases [coagulase-negative Staphylococcus (CoNS) + Aspergillus fumigatus, Staphylococcus aureus and Mucor spp., Staph. aureus and Acanthamoeba], Staph. aureus in 2 cases, and CoNS and Alternaria spp. in 1 case each. Resistance to fourth-generation fluoroquinolones was noted in 83.3% of cases of bacterial keratitis (n = 5/6).

All cases were initially managed with empirical antibiotic treatment that was later tailored based on microbiological reports. One case eventually required therapeutic penetrating keratoplasty for corneal perforation. At 6 months, the corrected distance visual acuity was >6/60 in 3 cases while 4 cases had corrected distance visual acuity <6/60.
CONCLUSIONS: Microbial keratitis after aCXL is rare; however, the infection tends to be severe with high preponderance of mixed infection and resistance to fourth-generation fluoroquinolones.

DOI: 10.1097/ICO.0000000000001439
PMID: 29111996 [Indexed for MEDLINE]

63: Malhotra R, Gaba S, Wahal N, Kumar V, Srivastava DN, Pandit H. Femoral Component Sizing in Oxford Unicompartmental Knee Replacement: Existing Guidelines Do Not Work for Indian Patients. J Knee Surg. 2018 Feb 28. doi: 10.1055/s-0038-1635113. [Epub ahead of print] PubMed PMID: 29490403.

Oxford unicompartmental knee replacement (OUKR) has shown excellent long-term clinical outcomes as well as implant survival when used for correct indications with optimal surgical technique. Anteromedial osteoarthritis is highly prevalent in Indian patients, and OUKR is the ideal treatment option in such cases. Uncertainty prevails about the best method to determine femoral component size in OUKR. Preoperative templating has been shown to be inaccurate, while height- and gender-based guidelines based on European population might not apply to the Indian patients. Microplasty instrumentation introduced in 2012 introduced the sizing spoon, which has the dual function of femoral component sizing and determining the level of tibia cut. We aimed to check the accuracy of sizing spoon and also to determine whether the present guidelines are appropriate for use in the Indian patients. A total of 130 consecutive Oxford mobile bearing medial cemented UKR performed using the Microplasty instrumentation were included. The ideal femoral component size for each knee was recorded by looking for overhang and underhang in post-operative lateral knee radiograph. The accuracy of previous guidelines was determined by applying them to our study population. Previously published guidelines (which were based on Western population) proved to be accurate in only 37% of cases. Hence, based on the demographics of our study population, we formulated modified height- and gender-based guidelines, which would better suit the Indian population. Accuracy of modified guidelines was estimated to be 74%. The overall accuracy of sizing spoon (75%), when used as an intraoperative guide, was similar to that of modified guidelines. Existing guidelines for femoral component sizing do not work in Indian patients. Modified guidelines and use of intraoperative spoon should be used to choose the optimal implant size while performing OUKR in Indian patients.

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64: Mandal P, Dhawan A. Interventions in individuals with specific needs. Indian J Psychiatry. 2018 Feb;60(Suppl 4):S553-S558. doi: 10.4103/psychiatry.IndianJPsychiatry_23_18. Review. PubMed PMID: 29540930; PubMed Central PMCID: PMC5844171.

With the growing understanding of substance use problems among special populations like women, gender minority groups, as well as in the geriatric population, there is a drive to develop sensitive interventions catering to their unique needs. This chapter is a short review of psycho-social interventions targeted towards these individuals with specific needs.

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PMID: 29540930

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

65: Meel R, Dhiman R. Proposal for a new classification for ocular surface squamous neoplasia. Eye (Lond). 2018 Jul;32(7):1284-1285. doi: 10.1038/s41433-018-0058-7. Epub 2018 Feb 21. PubMed PMID: 29463863; PubMed Central PMCID: PMC6043581.

66: Mittal A, Ray A, Talupula RM, Sood R. Sheehan's syndrome presenting as cardiac tamponade. BMJ Case Rep. 2018 Feb 3;2018. pii: bcr-2017-223129. doi: 10.1136/bcr-2017-223129. PubMed PMID: 29431100.

A 50-year-old woman presented with progressive dyspnoea and oedema with rapid deterioration over the last few days. Clinical examination revealed hypotension with cold clammy skin, raised jugular venous pressure and muffled heart sounds and was diagnosed to have cardiac tamponade, later confirmed on two-dimensional echocardiography. However, patient had bradycardia, and the other striking examination findings were coarse facies with pallor, madarosis, absent axillary and pubic hair and breast atrophy. Her blood sugar level was also low. Detailed history revealed an episode of postpartum haemorrhage with lactation failure and early menopause. Pericardiocentesis was done with a pig-tail catheter. Hormone profile and MRI brain confirmed the diagnosis of Sheehan's syndrome. Patient improved on treatment with thyroxine and hydrocortisone supplementation and was discharged with education about stress dosing.

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PMID: 29431100

Conflict of interest statement: Competing interests: None declared.

67: Mittal S, Bharati SJ, Kabra SK, Madan K. Paediatric Endobronchial Ultrasound-guided Transbronchial Needle Aspiration: Anaesthetic and procedural considerations. Indian J Anaesth. 2018 Feb;62(2):150-151. doi: 10.4103/ija.IJA_514_17. PubMed PMID: 29491526; PubMed Central PMCID: PMC5827487.

68: Mittal S, Mohan A, Hadda V, Khilnani GC, Madan K. Atorvastatin in Bronchiectasis With Chronic Pseudomonas Infection. Chest. 2018 Feb;153(2):579-580. doi: 10.1016/j.chest.2017.09.056. PubMed PMID: 29406230.

69: 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.

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PMID: 29388266

70: Narayanan R, Kumar S, Gupta A, Bansal VK, Sagar S, Singhal M, Mishra B, Bhoi S, Gupta B, Gamangatti S, Kumar A, Misra MC. An Analysis of Presentation, Pattern and Outcome of Chest Trauma Patients at an Urban Level 1 Trauma Center. Indian J Surg. 2018 Feb;80(1):36-41. doi: 10.1007/s12262-016-1554-2. Epub 2016 Oct 19. PubMed PMID: 29581683; PubMed Central PMCID: PMC5866799.

Chest trauma is an important public health problem accounting for a substantial proportion of all trauma admissions and deaths. It directly account for 20-25 % of deaths due to trauma. Therefore, this study was conducted to analyze the presentation, patterns, and outcome of chest trauma in a level-1 urban trauma center. It was a prospective observational study of all patients presented with chest trauma to an urban level 1-trauma center over a period of 3 years. Demographic profile, mechanism of injury, injury severity scores (ISS), associated injuries, hospital stay, etc. were recorded. Morbidity and mortality rates were analyzed and compared with the published literature. Chest injuries comprised 30.9 % of all trauma admissions and the mechanism was blunt in majority (83.5 %) of the cases. Vehicular crashes (59.7 %) followed by assault were the most common modes of injury. Rib fracture was the most common chest injury seen in 724 of the 1258 patients while abdominal visceral injuries were the commonest associated injuries in polytrauma cases. Majority of the patients were managed non-operatively. Inter costal tube drainage (ICD) was the main stay of treatment in 75 % of the cases, whereas, thoracotomy was required only in 5.56 % of the patients. Overall mortality was 11 % and it was found to be significantly higher following blunt chest trauma. We observed that associated extra thoracic injuries resulted in higher mortality as compared to isolated chest injuries. Thoracic injuries can be readily diagnosed in the emergency department by meticulous and repeated clinical evaluation and majority require simple surgical procedures to prevent immediate mortality and long-term morbidity.

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Conflict of interest statement: Compliance with Ethical StandardsNo funding received from any source.Obtained from the Institutional Ethics Committee.Rajasekhar Narayanan, Subodh Kumar, Amit Gupta, Virinder Kumar Bansal, Sushma Sagar, Maneesh Singhal, Biplab Mishra, Sanjeev Bhoi, Babita Gupta, Shivanand Gamangatti, Adarsh Kumar, and Mahesh Chandra Misra do not have any conflict of interest.

71: Narula J, Kapoor PM, Balasubramanium U, Kiran U. Prosthetic Mitral Valve

Strut Masquerading as Left Ventricular Outflow Tract Obstruction: 3D Transesophageal Echocardiography Comes to the Rescue. J Cardiothorac Vasc Anesth. 2018 Feb;32(1):e6-e8. doi: 10.1053/j.jvca.2017.04.032. Epub 2017 Apr 19. PubMed PMID: 28939319.

72: Naskar T, Faruq M, Banerjee P, Khan M, Midha R, Kumari R, Devasenapathy S, Prajapati B, Sengupta S, Jain D, Mukerji M, Singh NC, Sinha S. Ancestral Variations of the PCDHG Gene Cluster Predispose to Dyslexia in a Multiplex Family. EBioMedicine. 2018 Feb;28:168-179. doi: 10.1016/j.ebiom.2017.12.031. Epub 2018 Jan 9. PubMed PMID: 29409727; PubMed Central PMCID: PMC5835549.

Dyslexia is a heritable neurodevelopmental disorder characterized by difficulties in reading and writing. In this study, we describe the identification of a set of 17 polymorphisms located across 1.9Mb region on chromosome 5q31.3, encompassing genes of the PCDHG cluster, TAF7, PCDH1 and ARHGAP26, dominantly inherited with dyslexia in a multi-incident family. Strikingly, the non-risk form of seven variations of the PCDHG cluster, are preponderant in the human lineage, while risk alleles are ancestral and conserved across Neanderthals to non-human primates. Four of these seven ancestral variations (c.460A>C [p.Ile154Leu], c.541G>A [p.Ala181Thr], c.2036G>C [p.Arg679Pro] and c.2059A>G [p.Lys687Glu]) result in amino acid alterations. p.Ile154Leu and p.Ala181Thr are present at EC2: EC3 interacting interface of γA3-PCDH and γA4-PCDH respectively might affect trans-homophilic interaction and hence neuronal connectivity. p.Arg679Pro and p.Lys687Glu are present within the linker region connecting trans-membrane to extracellular domain. Sequence analysis indicated the importance of p.Ile154, p.Arg679 and p.Lys687 in maintaining class specificity. Thus the observed association of PCDHG genes encoding neural adhesion proteins reinforces the hypothesis of aberrant neuronal connectivity in the pathophysiology of dyslexia. Additionally, the striking conservation of the identified variants indicates a role of PCDHG in the evolution of highly specialized cognitive skills critical to reading.

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PMCID: PMC5835549
PMID: 29409727

73: Neelapu BC, Kharbanda OP, Sardana V, Gupta A, Vasamsetti S, Balachandran R, Sardana HK. Automatic localization of three-dimensional cephalometric landmarks on CBCT images by extracting symmetry features of the skull. Dentomaxillofac Radiol. 2018 Feb;47(2):20170054. doi: 10.1259/dmfr.20170054. Epub 2018 Jan 3. PubMed PMID: 28845693; PubMed Central PMCID: PMC5965913.

To propose an algorithm for automatic localization of 3D cephalometric landmarks on CBCT data, those are useful for both cephalometric and upper airway volumetric analysis. 20 landmarks were targeted for automatic detection, of which 12 landmarks exist on the mid-sagittal plane. Automatic detection of mid-sagittal plane from the volume is a challenging task. Mid-sagittal plane is detected by extraction of statistical parameters of the symmetrical features of the skull. The mid-sagittal plane is partitioned into four quadrants based on the boundary definitions extracted from the human anatomy. Template matching algorithm is applied on the mid-sagittal plane to identify the region of interest ROI, further the edge features are extracted, to form contours in the individual regions. The landmarks are automatically localized by using the extracted knowledge of anatomical definitions of the landmarks. The overall mean error for detection of 20 landmarks was 1.88 mm with a standard deviation of 1.10 mm. The cephalometric land marks on CBCT data were detected automatically with in the mean error less than 2 mm.

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PMCID: PMC5965913 [Available on 2019-02-01]

PMID: 28845693 [Indexed for MEDLINE]

74: Pandit S, Godiyal AK, Vimal AK, Singh U, Joshi D, Kalyanasundaram D. An Affordable Insole-Sensor-Based Trans-Femoral Prosthesis for Normal Gait. Sensors (Basel). 2018 Feb 27;18(3). pii: E706. doi: 10.3390/s18030706. PubMed PMID: 29495495; PubMed Central PMCID: PMC5876733.

This paper proposes a novel and an affordable lower limb prosthesis to enable normal gait kinematics for trans-femoral amputees. The paper details the design of a passive prosthesis with magneto-rheological (MR) damping system and electronic control. A new control approach based on plantar insole feedback was employed here. Strategically placed sensors on the plantar insole provide required information about gait cycle to a finite state controller for suitable action. A proportional integral (PI) based current controller controls the required current for necessary damping during gait. The prosthesis was designed and developed locally in India keeping in view the cost, functionality, socio-economic, and aesthetic requirements. The prototype was experimentally tested on a trans-femoral amputee and the results are presented in this work. The implementation of the proposed design and control scheme in the prototype successfully realizes the notion that normal gait kinematics can be achieved at a low cost comparable to passive prostheses. The incurring cost and power expenditure of the proposed prosthesis are evaluated against passive and active prostheses, respectively. The commercial implications for the prosthesis were explored on the basis of recommendations of ISPO Consensus Conference on Appropriate Prosthetic Technology in Developing Countries. The key objective of this work is to enable lucid design for development of an affordable prosthesis in a low-resource setting.

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Conflict of interest statement: The authors declare no conflict of interest. The founding sponsors had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, and in the decision to publish the results.

75: Parajuli P, Kumar S, Gupta A, Bansal VK, Sagar S, Mishra B, Singhal M, Kumar A, Gamangatti S, Gupta B, Sawhney C, Misra MC. Role of Laparoscopy in Patients With Abdominal Trauma at Level-I Trauma Center. Surg Laparosc Endosc Percutan Tech. 2018 Feb;28(1):20-25. doi: 10.1097/SLE.0000000000000379. PubMed PMID: 28277439.

INTRODUCTION: Abdominal trauma is one of the preventable causes of death in polytrauma patients. Decision and timing of laparotomy is a major challenge. Rate of nontherapeutic laparotomy is still high. Laparoscopy can avoid nontherapeutic laparotomy and also provide a reliable and accurate diagnosis of injury.
MATERIALS AND METHODS: This ambispective observational study was conducted in the division of Trauma Surgery and Critical Care, JPN Apex Trauma Centre, All India Institute Medical Sciences, New Delhi. Retrospective analysis of prospectively maintained data of cases from January 1, 2008 through April 30, 2013 and prospective analysis of cases from May 1, 2013 through March 31, 2015 was done using appropriate measures. Hemodynamically stable or responders fulfilling inclusion criteria were included. Selected patients underwent the laparoscopic procedure and if required converted to laparotomy.
RESULTS: Of the 3610 patients of abdominal trauma, laparotomy was done in 1666 (46.14%) patients and laparoscopy was done in 119 (3.29%) patients. Rate of reduction of nontherapeutic laparotomy in patients with abdominal trauma using diagnostic laparoscopy was 55.4%. However laparotomy could be avoided in 59.7%. Laparoscopy was 100% accurate in identifying injuries in our study. No injuries were missed in these patients. Fever and wound infection were significantly higher in laparotomy group. Chest infection and sepsis were also higher in

laparotomy group but the difference was not statistically significant. Median length of hospital stay in laparoscopy group was 4 days (range: 1 to 28 d) and in laparotomy group was 9.5 days (range: 2 to 55 d) with P-value of 0.001.
CONCLUSIONS: Laparoscopy has a role in management of hemodynamically stable patients with suspected abdominal injury to prevent nontherapeutic laparotomies, and thereby decreasing postoperative complications.

DOI: 10.1097/SLE.0000000000000379
PMID: 28277439

76: Patel A, Sharma MC, Bakhshi S. Outcome of Early Stage Pediatric Non-Lymphoblastic Non-Hodgkin Lymphoma. Indian J Pediatr. 2018 Feb 8. doi: 10.1007/s12098-017-2585-9. [Epub ahead of print] PubMed PMID: 29417460.

There is lack of data on outcome of limited stage pediatric non-Hodgkin lymphoma (NHL) from south Asia. In view of this lacuna, authors evaluated patients of early stage (stage 1 and 2) non-lymphoblastic pediatric NHL patients treated with uniform short course, reduced-intensity protocol from Jan 2003 through Dec 2016. Of the total 280 subjects with pediatric NHL, 50 were of early stage of which 42 received uniform protocol. B-cell subtype was observed in 83% patients. Event-free-survival (EFS) and overall-survival (OS) were 85% and 90% respectively at 5 y (median-not reached). Age>13 y emerged as the only poor risk factor for EFS (p=0.05) on univariate analysis and same had a trend toward inferior prognosis in OS (p=0.09). Vincristine-induced neuropathy occurred in five patients. Febrile neutropenia was observed in 16% subjects with one patient requiring hospitalization. There was no treatment-related death. This largest data of limited stage pediatric non-lymphoblastic NHL from south Asia highlights that good outcomes may be achieved with less intense short course therapy without hospitalization, and that adolescent age is the only poor prognostic factor for outcome.

DOI: 10.1007/s12098-017-2585-9
PMID: 29417460

77: Patel A, Sharma MC, Mallick S, Patel M, Bakhshi S. Poor performance status, urban residence and female sex predict inferior survival in pediatric advanced stage mature B-NHL in an Indian tertiary care center. Pediatr Hematol Oncol. 2018 Feb;35(1):23-32. doi: 10.1080/08880018.2018.1424279. Epub 2018 Feb 1. PubMed PMID: 29388861.

BACKGROUND: Advanced stage is a known prognostic factor in B-Non-Hodgkin Lymphoma (NHL); however, factors within advanced stage and overall data on pediatric B-NHL from India are lacking.
METHODS: This is a retrospective study wherein all consecutive pediatric (≤18 years) patients of advanced stage B-NHL (St. Jude stage 3 and 4) treated at our center from Jan 2003 to June 2016 with BFM-90 protocol were evaluated for outcome and pathology review.
RESULTS: Total 140 patients were analyzed with median age 8 years; M:F ratio was 5.2:1; 36% patients presented within 30 days of symptom onset and 58% had rural residence. Burkitt lymphoma (66%) was commonest histopathological subtype; bone marrow was involved in 15% and CSF in 8% cases. Undernourishment was observed in 30% patients and 51% had ECOG performance status of 3&4. At 5 years, EFS was 52 ± 4% (CI 0.43-0.60) and OS was 61 ± 4% (CI 0.52-0.68). On multivariate analysis, poor performance status ($p < 0.001$) and urban residence ($p = 0.016$) emerged as significant negative prognostic factors for EFS; while for OS, female sex ($p = 0.006$), poor performance status ($p < 0.001$) and urban residence ($p = 0.023$) predicted inferior outcome.
CONCLUSION: This is the largest study from south Asia on advanced stage pediatric B-NHL and it suggests undernourishment, poor performance status and gender bias to be unique features at presentation. Although, outcomes are comparable with other data from resource-challenged nations, yet they are 15-20% inferior than

trial data from other developed countries. Further, poor performance status, female sex and urban residence for poor outcome were identified as unique prognostic factors.

DOI: 10.1080/08880018.2018.1424279
PMID: 29388861 [Indexed for MEDLINE]

78: Patterson V, Samant S, Singh MB, Jain P, Agavane V, Jain Y. Diagnosis of epileptic seizures by community health workers using a mobile app: A comparison with physicians and a neurologist. Seizure. 2018 Feb;55:4-8. doi: 10.1016/j.seizure.2017.12.006. Epub 2017 Dec 26. PubMed PMID: 29291457.

PURPOSE: The World Health Organisation (WHO) strategy for non-physician health workers (NPHWs) to diagnose and manage people with untreated epilepsy depends on them having access to suitable tools. We have devised and validated an app on a tablet computer to diagnose epileptic episodes and now examine how its use by NPHWs compares with diagnosis by local physicians and a neurologist.
METHODS: Fifteen NPHWs at Jan Swasthya Sahyog (JSS) a hospital with community outreach in Chhattisgarh, India were trained in the use of an epilepsy diagnosis app on a tablet computer. They were asked to determine the app scores on patients in their communities with possible epilepsy and then refer them first to their local JSS doctors and then to a visiting neurologist. With the neurologist's opinion as the "gold standard", the misdiagnosis rate from the NPHWs was compared with that of the local physicians.
RESULTS: There were 96 patients evaluated completely. The NPHWs misdiagnosed eight and the physicians seven. There were more uncertain diagnoses by the NPHWs. In the 22 patients who presented for the first time during the study, the NPHWs misdiagnosed three and the physicians five.
CONCLUSIONS: NPHWs using an app achieved similar misdiagnosis rates to local physicians. Both these rates were well within the range of misdiagnosis in the published literature. These results suggest that task-shifting epilepsy diagnosis and management from physicians to NPHWs, who are enabled with appropriate technology, can be an effective and safe way of reducing the epilepsy treatment gap.

DOI: 10.1016/j.seizure.2017.12.006
PMID: 29291457 [Indexed for MEDLINE]

79: Ramachandran A, Sharma S, Shalimar, Sharma R, Madhusudhan KS. Pancreatic Walled-Off Necrosis Eroding into the Inferior Vena Cava. Curr Probl Diagn Radiol. 2018 Feb 2. pii: S0363-0188(18)30001-X. doi: 10.1067/j.cpradiol.2018.01.007. [Epub ahead of print] PubMed PMID: 29496357.

Walled-off necrosis (WON) is a well-known delayed local complication of acute necrotizing pancreatitis. Occasionally, WON may spontaneously rupture into the gastrointestinal tract or peritoneal cavity. However, erosion of a WON to a systemic vein has not been reported in literature so far. We report an unusual case of a 63-year-old male with acute necrotizing pancreatitis in whom WON was eroding into the inferior vena cava resulting in its thrombosis. Our patient also had a bunch of other well-described complications of pancreatitis including splanchnic venous thrombosis.

DOI: 10.1067/j.cpradiol.2018.01.007
PMID: 29496357

80: Razik A, Das CJ, Sharma S, Seth A, Srivastava DN, Mathur S, Kumar R, Gupta AK. Diagnostic performance of diffusion-weighted MR imaging at 3.0Â T in

predicting muscle invasion in urinary bladder cancer: utility of evaluating the morphology of the reactive tumor stalk. Abdom Radiol (NY). 2018 Feb 1. doi: 10.1007/s00261-018-1458-7. [Epub ahead of print] PubMed PMID: 29392362.

PURPOSE: To evaluate the diagnostic performance of stalk morphology on diffusion-weighted imaging (DWI) in comparison with conventional MRI in predicting muscle invasion in urinary bladder cancer.
METHODS: The study was prospective and approved by the institutional ethics committee. A written informed consent was obtained from all the patients. The study included 56 patients who presented with bladder mass between January 2014 and November 2015. After excluding 16 patients, 40 patients with 92 tumors were assessed. All the 40 patients underwent MRI at 3.0 Tesla (Achieva, Philips) inclusive of DWI (b0, 500, 1000 and 1500). Two radiologists evaluated the images independently, and disparities were resolved through consensus. For predicting muscle invasion on T2-weighted images, tumor morphology (papillary versus non-papillary), distensibility of the underlying bladder wall, and perivesical fat infiltration were evaluated. On DWI, the criterion used in a previous study (Takeuchi et al.) was used along with tumor stalk morphology. Findings were compared with histopathology using Pearson's $\chi 2$ test, and diagnostic performance indices were calculated.
RESULTS: All the evaluated features were present with significantly higher frequency in muscle-invasive tumors ($p < 0.001$). The finding of absent or distorted stalk on DWI had the highest sensitivity (87.5%) and specificity (97.6%). Conventional imaging features of non-papillary stalk morphology, restricted distension of underlying bladder wall, perivesical fat infiltration, as well as the previous DWI criterion were less sensitive (56.3%, 68.8%, 56.3% and 56.3%, respectively) in predicting muscle invasion.
CONCLUSIONS: Assessment of the morphology of the reactive tumor stalk on DWI has better diagnostic performance in predicting muscle invasion than conventional MRI.

DOI: 10.1007/s00261-018-1458-7
PMID: 29392362

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82: Saha S, Goswami R, Ramakrishnan L, Vishnubhatla S, Mahtab S, Kar P, Srinivasan S, Singh N, Singh U. Vitamin D and calcium supplementation, skeletal muscle strength and serum testosterone in young healthy adult males: Randomized control trial. Clin Endocrinol (Oxf). 2018 Feb;88(2):217-226. doi: 10.1111/cen.13507. Epub 2017 Nov 24. PubMed PMID: 29095521.

BACKGROUND: Cholecalciferol and/or calcium supplementation might increase skeletal muscle strength and serum testosterone in young adult males.
OBJECTIVE: We performed a randomized control trial assessing the effect of cholecalciferol/calcium on skeletal muscle strength and serum testosterone in vitamin D deficient young males.
DESIGN: Two-by-two factorial RCT.
SUBJECT AND INTERVENTION: Two-hundred and twenty-eight young males were block-randomized to (i) double-placebo, (ii) calcium/placebo, (iii) cholecalciferol/placebo and (iv) cholecalciferol/calcium. Doses for cholecalciferol were 60 000 IU/wk for 8 weeks followed by 60 000 IU/fortnightly, and doses for elemental calcium were 500 mg/twice daily for 6 months. A total of 180 subjects completed the study protocol. Their ean age, body mass index and baseline 25(OH)D were 20.2 ± 2.2 years, 23.0 ± 3.6 kg/m2 and 21.5 ± 9.5 nmol/L, respectively.
MEASUREMENTS: Handgrip (primary outcome), pinch-grip strength, distance walked in 6 minutes, dyspnoea-score, quality of life by Short Form 36, serum 25(OH)D, 1,25(OH)2 D, iPTH, total testosterone and free androgen index (FAI).
RESULTS: After intervention, mean serum 25(OH)D was >75.0 nmol/L in

cholecalciferol groups. However, the handgrip strength (29.7 ± 4.4, 29.3 ± 4.6, 30.6 ± 5.0 and 28.8 ± 4.3 kg, P = .28) was comparable in the 4 groups. Subgroups analysis among subjects with baseline serum 25OH)D < 25.0 and <12.0 nmol/L showed similar results. The mean serum testosterone decreased significantly at 6 months; however, delta change was similar in 4 groups. Change in handgrip strength and other outcomes was similar in 4 groups with and without adjustment for delta testosterone and FAI.
CONCLUSIONS: Six months of cholecalciferol/calcium supplementation had no significant effect on skeletal muscle strength and serum testosterone in young adult males.

DOI: 10.1111/cen.13507
PMID: 29095521

83: Sakthivel P, Kakkar A, Sharma SC, Panda S. Mucocutaneous Secondary Syphilis: 'The Great Imitator'. Am J Med. 2018 Feb;131(2):e57-e58. doi: 10.1016/j.amjmed.2017.10.017. Epub 2017 Oct 24. PubMed PMID: 29079400.

84: Saurabh A, Chakraborty S, Kumar P, Mohan A, Bhatnagar AK, Rishi N, Mitra DK. Inhibiting HLA-G restores IFN-Î³ and TNF-Î± producing T cell in pleural Tuberculosis. Tuberculosis (Edinb). 2018 Mar;109:69-79. doi: 10.1016/j.tube.2018.01.008. Epub 2018 Feb 6. PubMed PMID: 29559123.

Human Leukocyte Antigen-G (HLA-G), a non-classical, class Ib molecule, has been shown to mediate immunoregulatory functions by inducing apoptosis, inhibits cytotoxicity and differentiation by modulating cytokine secretion. Due to its immune-suppressive function, it facilitates tolerance in feto-maternal interface and transplantation. In contrary, it favours immune evasion of microbes and tumors by inhibiting immune and inflammatory responses. In Tuberculosis (TB), we previously reported differential expression of HLA-G and its receptor Ig-like transcript -2 (ILT-2) in disseminated vs. localized Tuberculosis. The present study explores the impact of HLA-G inhibition on the function of T cells and monocytes, in TB Pleural Effusion (PE), a localized form of TB. Blocking of HLA-G resulted in significant increase in IFN-γ and TNF-α production by CD3+ T cells. Additionally, we observed that HLA-G influences the apoptosis and cytotoxic effect of T cells from TB- PE patients. Next, we checked the impact of interaction between HLA-G and ILT-4 receptor in monocytes derived from TB-PE patients upon blocking and observed significant increase in IFN-γ production. The present study reveals for the first time HLA-G mediated suppression of Th1 cytokines, especially, IFN-γ and TNF-α in TB-PE patients.

DOI: 10.1016/j.tube.2018.01.008
PMID: 29559123

85: Schaub MP, Tiburcio M, Martinez N, Ambekar A, Balhara YPS, Wenger A, Monezi Andrade AL, Padruchny D, Osipchik S, Gehring E, Poznyak V, Rekve D, Souza-Formigoni MLO; WHO e-Health Project on Alcohol and Health Investigators Group. Alcohol e-Help: study protocol for a web-based self-help program to reduce alcohol use in adults with drinking patterns considered harmful, hazardous or suggestive of dependence in middle-income countries. Addiction. 2018 Feb;113(2):346-352. doi: 10.1111/add.14034. Epub 2017 Oct 26. PubMed PMID: 28921778.

BACKGROUND AND AIMS: Given the scarcity of alcohol prevention and alcohol use disorder treatments in many low and middle-income countries, the World Health Organization launched an e-health portal on alcohol and health that includes a Web-based self-help program. This paper presents the protocol for a multicentre

randomized controlled trial (RCT) to test the efficacy of the internet-based self-help intervention to reduce alcohol use.
DESIGN: Two-arm randomized controlled trial (RCT) with follow-up 6 months after randomization.
SETTING: Community samples in middle-income countries.
PARTICIPANTS: People aged 18+, with Alcohol Use Disorders Identification Test (AUDIT) scores of 8+ indicating hazardous alcohol consumption.
INTERVENTION AND COMPARATOR: Offer of an internet-based self-help intervention, 'Alcohol e-Health', compared with a 'waiting list' control group. The intervention, adapted from a previous program with evidence of effectiveness in a high-income country, consists of modules to reduce or entirely stop drinking.
MEASUREMENTS: The primary outcome measure is change in the Alcohol Use Disorders Identification Test (AUDIT) score assessed at 6-month follow-up. Secondary outcomes include self-reported the numbers of standard drinks and alcohol-free days in a typical week during the past 6 months, and cessation of harmful or hazardous drinking (AUDIT < 8).
ANALYSIS: Data analysis will be by intention-to-treat, using analysis of covariance to test if program participants will experience a greater reduction in their AUDIT score than controls at follow-up. Secondary outcomes will be analysed by (generalized) linear mixed models. Complier average causal effect and baseline observations carried forward will be used in sensitivity analyses.
COMMENTS: If the Alcohol e-Health program is found to be effective, the potential public health impact of its expansion into countries with underdeveloped alcohol prevention and alcohol use disorder treatment systems world-wide is considerable.

DOI: 10.1111/add.14034
PMID: 28921778

86: Sehrawat T, Jindal A, Kohli P, Thour A, Kaur J, Sachdev A, Gupta Y. Utility and Limitations of Glycated Hemoglobin (HbA1c) in Patients with Liver Cirrhosis as Compared with Oral Glucose Tolerance Test for Diagnosis of Diabetes. Diabetes Ther. 2018 Feb;9(1):243-251. doi: 10.1007/s13300-017-0362-4. Epub 2018 Jan 5. PubMed PMID: 29305791; PubMed Central PMCID: PMC5801248.

INTRODUCTION: To study the utility of glycated hemoglobin (HbA1c) in the diagnosis of diabetes in patients with cirrhosis as compared to the gold standard oral glucose tolerance test (OGTT) and to see the effect of anemia and severity of cirrhosis on its performance.
METHODS: Individuals (n = 100) with an established diagnosis of liver cirrhosis were recruited. The OGTT was performed as described by the World Health Organization (WHO). The severity of cirrhosis was calculated using the Child-Turcotte-Pugh (CTP) score. The severity of anemia was defined according to WHO criteria. The utility of HbA1c was compared against the OGTT results. Test sensitivity and specificity were used to describe the diagnostic accuracy of HbA1c.
RESULTS: A total of 100 subjects aged 46.9 ± 9.1 years (mean ± standard deviation) participated in the study, of whom 65% were recruited from out patient department of our hospital. The overall sensitivity and specificity of a HbA1c level of ≥ 6.5% for the diagnosis of diabetes in patients with cirrhosis was 77.1% (95% CI 59.9, 89.6) and 90.8% (95% CI 81.0, 96.5), respectively. The positive and negative predictive values were 81.8% (95% CI 67.3, 90.8) and 88.1% (95% CI 80.0, 93.2), respectively. The area under the curve was 0.85 (95% CI 0.75-0.94). The sensitivity of HbA1c for diagnosing diabetes in outpatients was 87.0% (95% CI 66.4, 97.2) and was better than that for diagnosing diabetes in hospitalized patients (58.3%; 95% CI 27.7, 84.8). The sensitivity of HbA1c for diagnosing diabetes was poor in patients with moderate to severe anemia. The difference in sensitivity and specificity was not statistically different for CTP classes A, B and C. The prevalence of diabetes as defined by American Diabetes Association OGTT criteria was 35% (95% CI 25.7-45.2%).
CONCLUSIONS: Taking OGTT as the gold standard, the sensitivity of HbA1c for

diagnosing diabetes is good when used in outpatients with cirrhosis. However, the sensitivity of HbA1c decreases when it is used for hospitalized patients, suggesting that it is not a good test for diagnosis of diabetes in such cases. It also performs poorly if the patient has moderate to severe anemia.

DOI: 10.1007/s13300-017-0362-4
PMCID: PMC5801248
PMID: 29305791

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89: Selvan H, Singh A, Tandon R. Deep blue dot corneal degeneration: confocal characteristics. Int Ophthalmol. 2018 Feb 8. doi: 10.1007/s10792-018-0849-7. [Epub ahead of print] PubMed PMID: 29423782.

PURPOSE: To discuss the clinical features, differential diagnosis and the novel confocal microscopic findings noted in the rare 'deep blue dot corneal degeneration'.
METHODS: Observational case report.
RESULTS: Slit-lamp biomicroscopic examination revealed bilateral, numerous, circular to oval discrete blue opacities at the level of deep stroma and fine grey linear opacities at the level of mid to deep stroma. Confocal microscopy demonstrated two types of corresponding hyper-reflective extracellular lesions: oval deposit-like, most concentrated at a depth of 430-480 µ and needle-like at the depth 330-370 µ.
CONCLUSIONS: Deep blue dot corneal degeneration is a rare entity where blue deposits of amyloid are seen in the deep corneal stroma. It should be considered as a differential diagnosis when an old-aged person presents with good vision and the above mentioned findings.

DOI: 10.1007/s10792-018-0849-7
PMID: 29423782

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Background: Recent studies have shown that there is an increased risk of Epithelial Ovarian Cancer (EOC) with Organochlorine Pesticides (OCPs). However, the alteration in the gene expression profile has not been explored so far. The goal of the present study is to understand the probable molecular mechanism of OCPs toxicity towards discovery of dysregulation of signaling pathway associated with differential gene expression and candidate transcriptomic set of markers in the pathophysiology of EOC in OCPs exposed population.

Methods: The OCP levels were estimated by gas chromatography and whole genome differential expression study was carried out using expression microarray and candidate genes were validated using Real time RT-PCR.
Results: Significant level of OCP residues such as β-hexachlorocyclohexane (β-HCH), Heptachlor, Heptachlor epoxide B (HTEB), dichlorodiphenyldichloroethylene (p'p'-DDE) and endosulfan-I was found between healthy and EOC patients. The transcriptome profile of several genes revealed regulation of various important cellular processes such as metabolism, inflammation, cytoskeleton dysregulation of TGF and WNT pathway in EOC cases with high OCPs.
Conclusion: This study provides the first evidence showing that differentially expressed genes and dysregulation of signaling pathways might be associated with significant level of OCPs exposure in ovary tissue of epithelial ovarian cancer patients. Moreover, significant correlation of these genes with OCPs revealed that OCPs exposure played vital role in dysregulation of related pathways in the etiology of EOC.

DOI: 10.2174/1874091X01812010016
PMCID: PMC5848219
PMID: 29576811

92: Sharma A, Khan R, Gupta N, Sharma A, Zaheer MS, Abbas M, Khan SA. Acute phase reactant, Pentraxin 3, as a novel marker for the diagnosis of rheumatoid arthritis. Clin Chim Acta. 2018 May;480:65-70. doi: 10.1016/j.cca.2018.01.035. Epub 2018 Feb 20. PubMed PMID: 29408170.

INTRODUCTION: Pentraxins are a group of highly conserved acute-phase reactant proteins and play crucial role as modulators of inflammatory processes. Pentraxin 3 (PTX3) is primarily produced and released by vascular cell wall, hence, we attempt to establish the role of PTX3 as a biomarker for Rheumatoid Arthritis (RA) compared to CRP.
METHODS: Thirty patients having active RA as cases and 30 osteoarthritis (OA) patients as controls were recruited. Paired serum and synovial fluid samples were analysed for concentrations of both PTX3 and CRP by using high sensitivity ELISA kit and ROC curve was plotted.
RESULTS: Concentrations of PTX3 and CRP were significantly higher in RA patient serum ($p < 0.0001$) as well as in synovial fluid ($p < 0.0001$) and correlated with disease severity. Upon correlation analysis, positive correlation was found between serum and synovial fluid concentrations of PTX3 and CRP. The diagnostic potential of PTX3 was observed in synovial fluid while combination of PTX3 and CRP showed better sensitivity in serum.
CONCLUSION: PTX3 found to be sensitive non-invasive indicator of clinical arthritic activity in RA patients when compared to traditional markers like CRP. Combination of PTX3 and CRP could serve as better differential diagnostic markers for RA after validation in larger patient cohort.

DOI: 10.1016/j.cca.2018.01.035
PMID: 29408170

93: Sharma P, Sagar R, Pattanayak RD, Mehta M. Familial study of attentional and behavioural problems in children with Dyslexia and their first-degree relatives in Indian setting. Asian J Psychiatr. 2018 Mar;33:7-10. doi: 10.1016/j.ajp.2018.02.015. Epub 2018 Feb 24. PubMed PMID: 29500977.

BACKGROUND: Dyslexia is one of the common problems seen in children worldwide. There is high co-morbidity of dyslexia with attentional and behaviour problems which could have familial pattern. This study aims to compare the attentional and behavioural problems in children with dyslexia and their first-degree relatives with controls.
METHODS: This is a cross-sectional comparative study with single interview method

in an out-patient setting. Formally diagnosed (ICD-10) cases of 30 children with specific reading disorder and 30 healthy matched controls and their first-degree relatives were assessed using scales in a single setting after application of inclusion and exclusion criteria.
RESULTS: The children with dyslexia had significantly more problems in the domains of selective attention and behavioural problems as compared to controls and the siblings of the cases had significant problems in selective attention but not in behavioural problems. Also, no difference was seen in ADHD symptoms of parents in cases and controls.
CONCLUSION: The results from our study are keeping with most of the published literature. We expect that this study will help in laying a good foundation for further studies with stronger methodologies incorporating molecular genetics.

DOI: 10.1016/j.ajp.2018.02.015
PMID: 29500977

94: Sharma P. The pursuit of stereopsis. J AAPOS. 2018 Feb;22(1):2.e1-2.e5. doi: 10.1016/j.jaapos.2017.10.009. Epub 2017 Dec 30. PubMed PMID: 29292047.

BACKGROUND: Pediatric ophthalmologists are increasingly expected to promote, preserve, and restore binocular vision.
METHODS: Clinical studies on restoring alignment and stereopsis in the management of amblyopia, esotropia, exotropia, and complex strabismus are reviewed from the perspective of the author's published work and personal experiences.
RESULTS: Treatment of amblyopia by means of optical rehabilitation, occlusion, or penalization has been reinforced by medical treatment and perceptual training with monocular or binocular video games. Studies indicate that early management of esotropia and alignment within 8Δ is required for regaining stereopsis. In the surgical management of intermittent exotropia, distance stereopsis by Frisby Davis Distance stereotest can predict better stereopsis, with patients having preoperative distance stereopsis of <70 arcsec less likely to improve after surgery. The surgeon's armamentarium for correcting alignment and restoring binocular vision include procedures such as adjustable, partial vertical rectus muscle transposition in cases of exotropic Duane syndrome and lateral rectus palsy, periosteal fixation of the globe or of the lateral rectus muscle, and medial transposition of the split lateral rectus muscle.
CONCLUSIONS: The goal for present-day strabismologists is not merely to correct strabismus but also to achieve alignment of eyes in time to ensure normal development of stereopsis in children and to restore alignment and stereopsis in adults.

DOI: 10.1016/j.jaapos.2017.10.009
PMID: 29292047

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AIM: Diagnosis of pleural TB poses serious challenges due to paucibacillary nature of specimens and there is an urgent need to devise a reliable diagnostic

test.
METHODS: We compared GeneXpert Mycobacterium tuberculosis/rifampin assay and the multiplex PCR (M-PCR) targeting mpb64 (Rv1980c) and IS6110 in pleural fluids (n = 78) of pleural TB patients and non-TB controls.
RESULTS: The sensitivities of 89.6 and 33.3%, and specificities of 96.7 and 100%, were observed with M-PCR and Xpert assay, respectively.
CONCLUSION: M-PCR showed superiority over Xpert assay and may facilitate an efficient diagnosis of pleural TB.

DOI: 10.2217/fmb-2017-0147
PMID: 29464970

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98: Sharma VK, Bhari N, Wadhwani AR, Bhatia R. Photo-patch and patch tests in patients with dermatitis over the photo-exposed areas: A study of 101 cases from a tertiary care centre in India. Australas J Dermatol. 2018 Feb;59(1):e1-e5. doi: 10.1111/ajd.12504. Epub 2016 Jun 10. PubMed PMID: 27282531.

BACKGROUND: Many patients with dermatitis over photo-exposed body areas are positive to many contact allergens and have a pre-existing allergic contact dermatitis.
METHODS: This study included patients who presented to a tertiary centre in India with dermatitis on photo-exposed body areas suspected of chronic actinic dermatitis. Their detailed histories were recorded and cutaneous and systemic examinations were performed. Patch testing was done in all the patients and photo-patch testing was carried out in 86 patients.
RESULTS: Altogether 101 patients were included (69 males, 32 females). The most common presentation was lichenified hyperpigmented plaques on the photo-exposed sites. Photosensitivity was recorded in 64 (63%) patients and summer exacerbation in 52 (52%). Exposure to the Parthenium hysterophorus weed was recorded in 70 (69%) patients, 27 (26.7%) had a history of hair dye application and 20 (20%) had a history of atopy. Photo-patch test was positive in 11 (12.8%) patients and patch testing was positive in 71 (70%). Parthenium hysterophorus was the most common allergen implicated and was positive in three (4%) photo-patch and 52 (52%) patch tests. Other positive photo-patch test allergens were perfume mix, balsam of Peru, thiuram mix, Compositae mix and promethazine hydrochloride. Other common patch test allergens were parthenolide, colophony, fragrance mix and p-phenylenediamine (PPD) base.
CONCLUSION: In the Indian population parthenium and perfume mix are the most common photoallergens in patients with dermatitis over photo-exposed areas, while parthenium, colophony, fragrance mix and PPD are the common positive allergens.

DOI: 10.1111/ajd.12504
PMID: 27282531

99: Shaw SC, Sankar MJ, Thukral A, Natarajan CK, Deorari AK, Paul VK, Agarwal R. Assisted Physical Exercise for Improving Bone Strength in Preterm Infants Less than 35 Weeks Gestation: A Randomized Controlled Trial. Indian Pediatr. 2018 Feb 15;55(2):115-120. Epub 2017 Dec 14. PubMed PMID: 29242413.

OBJECTIVE: To compare the efficacy of daily assisted physical exercise (starting from one week of postnatal age) on bone strength at 40 weeks of post menstrual age to no intervention in infants born between 27 and 34 weeks of gestation.
DESIGN: Open-label randomized controlled trial.
SETTING: Tertiary-care teaching hospital in northern India from 16 May, 2013 to 21 November, 2013.
PARTICIPANTS: 50 preterm neonates randomized to Exercise group (n=26) or Control

group (n=24).
INTERVENTION: Neonates in Exercise group underwent one session of physical exercise daily from one week of age, which included range-of-motion exercises with gentle compression, flexion and extension of all the extremities with movements at each joint done five times, for a total of 10-15 min. Infants in Control group underwent routine care and were not subjected to any massage or exercise.
MAIN OUTCOME MEASURES: Primary: Bone speed of sound of left tibia measured by quantitative ultrasound at 40 weeks post menstrual age. Secondary: Anthropometry (weight length and head circumference) and biochemical parameters (calcium, phosphorus, alkaline phosphatase) at 40 weeks post menstrual age.
RESULTS: The tibial bone speed of sound was comparable between the two groups [2858 (142) m/s vs. 2791 (122) m/s; mean difference 67.6 m/s; 95% CI - 11 to 146 m/s; P=0.38]. There was no difference in anthropometry or biochemical parameters.
CONCLUSIONS: Daily assisted physical exercise does not affect the bone strength, anthropometry or biochemical parameters in preterm (27 to 34 weeks) infants.

PMID: 29242413 [Indexed for MEDLINE]

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101: Shruthi M, Gupta N, Jana M, Mridha AR, Kumar A, Agarwal R, Sharma R, Deka D, Gupta AK, Kabra M. Conventional vs virtual autopsy with postmortem MRI in phenotypic characterization of stillbirths and fetal malformations. Ultrasound Obstet Gynecol. 2018 Feb;51(2):236-245. doi: 10.1002/uog.17468. PubMed PMID: 28295775.

OBJECTIVE: To compare virtual autopsy using postmortem magnetic resonance imaging (MRI) with conventional autopsy with respect to phenotypic characterization of stillbirths and malformed fetuses, and acceptability to parents.
METHODS: This was a prospective diagnostic evaluation study, conducted from June 2013 to June 2015, including stillbirths and pregnancies terminated owing to fetal malformation at ≥20 weeks' gestation, for which parental consent to both conventional autopsy and postmortem MRI was obtained. Cases of maternal and obstetric cause of fetal demise were excluded. Whole-body postmortem MRI (at 1.5T) was performed prior to conventional autopsy. Taking conventional autopsy as the diagnostic gold standard, postmortem MRI findings alone, or in conjunction with other minimally invasive prenatal and postmortem investigations, were assessed and compared for diagnostic accuracy.
RESULTS: Parental consent for both conventional autopsy and postmortem MRI was obtained in 52 cases of which 43 were included in the analysis. In 35 (81.4%) cases, the final diagnosis based on virtual autopsy with postmortem MRI was in agreement with that of conventional autopsy. With conventional autopsy as the reference standard, sensitivity, specificity, positive and negative predictive values of postmortem MRI were, respectively: 77.7%, 99.8%, 97.4% and 98.0% for whole-body assessment; 93.1%, 99.0%, 87.1% and 99.5% for the nervous system; 61.0%, 100.0%, 100.0% and 96.7% for the cardiovascular system; 91.1%, 100.0%, 100.0% and 98.0% for the pulmonary system; 80.6%, 99.8%, 96.7% and 98.7% for the abdomen; 96.2%, 99.7%, 96.2% and 99.7% for the renal system; and 66.7%, 100.0%, 100.0% and 97.2% for the musculoskeletal system. Virtual autopsy was acceptable to 96.8% of families as compared with conventional autopsy to 82.5%.
CONCLUSIONS: Virtual autopsy using postmortem MRI and other minimally invasive investigations can be an acceptable alternative to conventional autopsy when the latter is refused by the parents. Postmortem MRI is more acceptable to parents and can provide additional diagnostic information on brain and spinal cord malformations. Copyright © 2017 ISUOG. Published by John Wiley & Sons Ltd.

DOI: 10.1002/uog.17468

PMID: 28295775

102: Singh A, Pandey PK, Agrawal A, Rana KM, Mittal SK, Kumar B. Simultaneous Superior Rectus Recession and Anterior Transposition of Inferior Oblique Muscle as a Surgical Option for Traumatically Lost Inferior Rectus Muscle. Strabismus. 2018 Jun;26(2):90-95. doi: 10.1080/09273972.2018.1444066. Epub 2018 Feb 27. PubMed PMID: 29485307.

PURPOSE: To evaluate the role of simultaneous superior rectus (SR) recession and anterior transposition of inferior oblique (ATIO) muscle in patients with traumatically lost inferior rectus (IR) muscle.
METHODS: Six patients with history of ocular trauma, followed by sudden onset vertical diplopia along with marked hypertropia (HT) and limitation of depression in abduction in the affected eye suggestive of IR disinsertion, were included in this prospective study. The patients were treated by simultaneous SR recession and ATIO muscle in the affected eye by limbal conjunctival approach under local anesthesia.
RESULTS: Preoperatively, primary position HT of 40-50 (mean 44.16 ± 4.91) prism diopters (PD) was present in all cases which increased to 65-70 (mean 65.83 ± 5.84) PD in down and in the ipsilateral gaze along with marked limitation of depression in abduction and A pattern. On exploration, the IR could not be traced in four cases. Fibrotic muscle sheath with retracted IR was found 10-12 mm away from the limbus in rest of the two patients. ATIO (6.5 mm from the limbus) with simultaneous recession of ipsilateral SR was done under local anesthesia. At 12 weeks postoperatively, three patients were orthophoric in primary position and vertical alignment with in 4-7 PD in primary position was achieved in rest of the three patients.
CONCLUSION: Simultaneous SR recession with ATIO seems to be a good alternative to achieve satisfactory vertical alignment for patients with traumatically lost inferior rectus muscle.

DOI: 10.1080/09273972.2018.1444066
PMID: 29485307

103: 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.

104: Singh K, Patel SA, Biswas S, Shivashankar R, Kondal D, Ajay VS, Anjana RM, Fatmi Z, Ali MK, Kadir MM, Mohan V, Tandon N, Narayan KMV, Prabhakaran D. Multimorbidity in South Asian adults: prevalence, risk factors and mortality. J Public Health (Oxf). 2018 Feb 7. doi: 10.1093/pubmed/fdy017. [Epub ahead of print] PubMed PMID: 29425313.

Background: We report the prevalence, risk factors and mortality associated with

multimorbidity in urban South Asian adults.
Methods: Hypertension, diabetes, heart disease, stroke and chronic kidney disease were measured at baseline in a sample of 16 287 adults ages ≥20 years in Delhi, Chennai and Karachi in 2010-11 followed for an average of 38 months. Multimorbidity was defined as having ≥2 chronic conditions at baseline. We identified correlates of multimorbidity at baseline using multinomial logistic models, and we assessed the prospective association between multimorbidity and mortality using Cox proportional hazards models.
Results: The adjusted prevalence of multimorbidity was 9.4%; multimorbidity was highest in adults who were aged ≥60 years (37%), consumed alcohol (12.3%), body mass index ≥25 m/kg2 (14.1%), high waist circumference (17.1%) and had family history of a chronic condition (12.4%). Compared with adults with no chronic conditions, the fully adjusted relative hazard of death was twice as high in adults with two morbidities (hazard ratio [HR] = 2.3; 95% confidence interval [CI]: 1.6, 3.3) and thrice as high in adults with ≥3 morbidities (HR = 3.1; 95% CI: 1.9, 5.1).
Conclusion: Multimorbidity affects nearly 1 in 10 urban South Asians, and each additional morbidity carries a progressively higher risk of death. Identifying locally appropriate strategies for prevention and coordinated management of multimorbidity will benefit population health in the region.

DOI: 10.1093/pubmed/fdy017
PMID: 29425313

105: Singh PK, Rao VR. Explaining suicide attempt with personality traits of aggression and impulsivity in a high risk tribal population of India. PLoS One. 2018 Feb 15;13(2):e0192969. doi: 10.1371/journal.pone.0192969. eCollection 2018. PubMed PMID: 29447300; PubMed Central PMCID: PMC5814010.

INTRODUCTION: Suicide is a spectrum of behavior including suicide ideation and suicidal attempt and is undoubtedly the outcome of the interaction of several factors. The role of two main constructs of human nature, aggression and impulsivity, has been discussed broadly in relation to suicide, as endophenotypes or traits of personality, in research and in clinical practice across diagnoses. The objective of our study was to assess impulsive and aggressive behaviors among primitive people of the Idu Mishmi tribe, who are known for high suicide completer and attempter rates.
METHODS: The study group was comprised of 177 unrelated Idu Mishmi participants divided into two sets: 39 suicide attempters and 138 non-attempters. Data on demographic factors and details of suicide attempts were collected. Participants completed a set of instruments for assessment of aggression and impulsivity traits.
RESULTS: In the Idu Mishimi population we screened (n = 177), 22.03% of the individuals had attempted suicide, a high percentage. The suicide attempters also showed a significant sex difference: 35.9% were male and 64.10% were female (p = .002*). The suicide attempters (A) scored significantly higher than non-attempters (NA) on aggression (A = 23.93,NA = 18.46) and impulsivity (A = 75.53,NA = 71.59, with p value = 0.05). The trait impulsiveness showed a significantly higher difference (F (1, 117) = 7.274) in comparison to aggression (F (1, 117) = 2.647), suggesting a profound role of impulsiveness in suicide attempts in the Idu Mishmi population. Analysis of sub-traits of aggression and impulsivity revealed significant correlations between them. Using different models, multivariate logistic regression implied roles of gender (OR = 1.079 (0.05)) and impulsiveness (OR = 3.355 (0.013)) in suicide attempts.
CONCLUSION: Results demonstrate that gender and impulsivity are strong risk factors for suicide attempts in the Idu Mishmi population.

DOI: 10.1371/journal.pone.0192969

PMCID: PMC5814010
PMID: 29447300 [Indexed for MEDLINE]

106: Singh PM, Borle A, Makkar JK, Trikha A, Fish D, Sinha A. Haloperidol Versus 5-HT(3) Receptor Antagonists for Postoperative Vomiting and QTc Prolongation: A Noninferiority Meta-Analysis and Trial Sequential Analysis of Randomized Controlled Trials. J Clin Pharmacol. 2018 Feb;58(2):131-143. doi: 10.1002/jcph.999. Epub 2017 Sep 15. Review. PubMed PMID: 28914976.

Haloperidol is an antipsychotic with well-known antiemetic potential. It is underutilized for postoperative nausea vomiting due to reported corrected QT interval (QTc) prolongation. This meta-analysis evaluates its safety and efficacy as an antiemetic in the perioperative period. Trials comparing haloperidol to 5-HT3 -receptor antagonists (5-HT3 -RA) for 24 postoperative vomiting incidences published up to May 2017 were searched in the medical database. Comparisons were made for antiemetic efficiency variables (vomiting incidence, rescue antiemetic need, and patients with complete response) during early (until 6 hours) and late postoperative phases. Eight randomized controlled double-blinded trials were included in the final analysis. Twenty-four-hour vomiting incidence was similar in groups (fixed effects, P = 0.52, I2 = 0%). Trial-sequential analysis confirmed noninferiority of haloperidol over 5-HT3 -RAs (α = 5%, β = 20%, δ = 10%), with "information size" being 859 (required > 812). Pooled results did not demonstrate superiority/inferiority of 5-HT3 -RAs over haloperidol in all other antiemetic efficacy variables (early and delayed). Negligible heterogeneity was found in all the comparisons made. Pooled Mantel Haenszel odds ratio for QTc prolongation was equivalent in both groups (fixed effects, P = 0.23, I2 = 0%). The mean dose of haloperidol used was 1.34 mg, and no trial reported extrapyramidal side effects. Trial-sequential analysis showed statistical equivalence (α = 5%, β = 20%, δ = 10%), with information size being 745 (required > 591). Publication bias was unlikely (Egger test, X-intercept = 2.07, P = 0.10). We conclude that haloperidol is equivalent to the well-established 5-HT3 -RAs in preventing vomiting during the first day after surgery. The incidence of QTc prolongation with haloperidol is statistically equivalent to 5-HT3 -RAs and thus should not be the factor that discourages its use for treatment/prophylaxis of postoperative nausea vomiting.

DOI: 10.1002/jcph.999
PMID: 28914976

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108: Singh S, Sharma BB, Salvi S, Chhatwal J, Jain KC, Kumar L, Joshi MK, Pandramajal SB, Awasthi S, Bhave S, Rego S, Sukumaran TU, Khatav VA, Singh V, Sharma SK, Sabir M. Allergic rhinitis, rhinoconjunctivitis, and eczema: prevalence and associated factors in children. Clin Respir J. 2018 Feb;12(2):547-556. doi: 10.1111/crj.12561. Epub 2016 Oct 12. PubMed PMID: 27663282.

OBJECTIVE: We aim to describe the data collected from India during phase 3 of the International study of asthma and allergy in childhood (ISAAC) study. Prevalence, severity, and population characteristics associated with rhinitis, rhinoconjunctivitis, and eczema were assessed.
METHODS: Children from two age groups (6-7 and 13-14 years) were included in the study as per the ISAAC protocol. The symptoms of allergy and associated features were assessed using a questionnaire.
RESULTS: The prevalence of allergic rhinitis among the 6-7 years age group was 11.3%, while it was 24.4% in the 13-14 years age group. The prevalence of allergic rhinoconjunctivitis was 3.9% in the 6-7 years age group and 10.9% in the 13-14 years age group. The prevalence of eczema was 2.8% in the 6-7 years age

group and 3.7% in the 13-14 years age group. The passage of trucks near home, parental smoking, use of paracetamol, use of antibiotics, cooking with firewood, and television watching were associated with allergic rhinitis, rhinoconjunctivitis, and eczema. Maternal smoking was the strongest of all the associated features for allergic rhinitis, rhinoconjunctivitis, and eczema, especially in the 6-7 years age group (odds ratio: 1.9, 95% CI: 1.5-2.4; odds ratio: 2.9, 95% CI, 2.2-3.9; and odds ratio: 3.5, 95% CI: 2.6-4.8, respectively). CONCLUSION: Allergic conditions like allergic rhinitis, rhinoconjunctivitis, and eczema are prevalent among Indian children and are associated with environmental tobacco smoke, paracetamol use, antibiotic use, television watching, and outdoor and indoor air pollution.

DOI: 10.1111/crj.12561
PMID: 27663282

109: Sivaram S, Majumdar G, Perin D, Nessa A, Broeders M, Lynge E, Saraiya M, Segnan N, Sankaranarayanan R, Rajaraman P, Trimble E, Taplin S, Rath GK, Mehrotra R. Population-based cancer screening programmes in low-income and middle-income countries: regional consultation of the International Cancer Screening Network in India. Lancet Oncol. 2018 Feb;19(2):e113-e122. doi: 10.1016/S1470-2045(18)30003-2. Review. PubMed PMID: 29413465; PubMed Central PMCID: PMC5835355.

The reductions in cancer morbidity and mortality afforded by population-based cancer screening programmes have led many low-income and middle-income countries to consider the implementation of national screening programmes in the public sector. Screening at the population level, when planned and organised, can greatly benefit the population, whilst disorganised screening can increase costs and reduce benefits. The International Cancer Screening Network (ICSN) was created to share lessons, experience, and evidence regarding cancer screening in countries with organised screening programmes. Organised screening programmes provide screening to an identifiable target population and use multidisciplinary delivery teams, coordinated clinical oversight committees, and regular review by a multidisciplinary evaluation board to maximise benefit to the target population. In this Series paper, we report outcomes of the first regional consultation of the ICSN held in Agartala, India (Sept 5-7, 2016), which included discussions from cancer screening programmes from Denmark, the Netherlands, USA, and Bangladesh. We outline six essential elements of population-based cancer screening programmes, and share recommendations from the meeting that policy makers might want to consider before implementation.

DOI: 10.1016/S1470-2045(18)30003-2
PMCID: PMC5835355 [Available on 2019-02-01]
PMID: 29413465

110: Sondhi P, Yadav S. Facilitating Microneedling Over the Cheeks. Dermatol Surg. 2018 Feb;44(2):295. doi: 10.1097/DSS.0000000000001159. PubMed PMID: 28406865.

111: Sonika U, Jadaun S, Ranjan G, Rout G, Gunjan D, Kedia S, Nayak B, Shalimar. Alcohol-related acute-on-chronic liver failure-Comparison of various prognostic scores in predicting outcome. Indian J Gastroenterol. 2018 Jan;37(1):50-57. doi: 10.1007/s12664-018-0827-z. Epub 2018 Feb 23. PubMed PMID: 29476404.

BACKGROUND AND AIMS: Various prognostic scores are available for predicting outcome in acute-on-chronic liver failure (ACLF). We compared the available prognostic models as predictors of outcome in alcohol-related ACLF patients. METHODS: All consecutive patients with alcohol-related ACLF were included. At

admission, prognostic indices-acute physiology and chronic health evaluation score (APACHE II), model for end-stage liver disease (MELD), MELD-Na, Maddrey's discriminant function (DF), age-bilirubin-INR-creatinine (ABIC), and Chronic Liver Failure Consortium (CLIF-C) ACLF score (CLIF-C ACLF) score were calculated. Receiver operator characteristic (ROC) curves were plotted for all prognostic scores with in-hospital, 90-day, and 1-year mortality as outcome.
RESULTS: Of the 171 patients, 170 were males, and grade 1 ACLF in 20 (11.7%), grade 2 in 52 (30.4%), and grade 3 in 99 (57.9%) patients. One hundred and nineteen (69.6%) died in-hospital. The median (IQR) Maddrey's score, MELD, MELD-Na, ABIC, APACHE II, and CLIF-C ACLF were 87.8 (66.5-123.0), 33.1 (27.6-40.0), 34.4 (29.5-40.0), 8.5 (7.3-9.6), 15 (12-21), and 51.1 (44.1-56.4), respectively. On multivariate Cox regression analysis, independent predictors of in-hospital outcome were presence of hepatic encephalopathy (early HR, 2.078; 95%CI, 1.173-3.682, p = 0.012 and advanced, HR, 2.330; 95% CI, 1.270-4.276, p = 0.006), elevated serum creatinine (HR, 1.140; 95% CI, 1.023-1.270, p = 0.018), and infection at admission (HR, 1.874; 95% CI, 1.160-23.029, p = 0.010). On comparison of ROC curves, APACHE II and CLIF-C ACLF AUROC were significantly higher than MELD, MELD-Na, DF, and ABIC ($p < 0.05$) for predicting in-hospital, 90-day, and 1-year mortality. The AUROC was highest for APACHE II followed by CLIF-C ACLF (Hanley and McNeil, p = 0.660).
CONCLUSIONS: Alcohol-related ACLF has high in-hospital mortality. Among the available prognostic scores, CLIF-C ACLF and APACHE II perform best.

DOI: 10.1007/s12664-018-0827-z
PMID: 29476404 [Indexed for MEDLINE]

112: Srivastava C, Irshad K, Dikshit B, Chattopadhyay P, Sarkar C, Gupta DK, Sinha S, Chosdol K. FAT1 modulates EMT and stemness genes expression in hypoxic glioblastoma. Int J Cancer. 2018 Feb 15;142(4):805-812. doi: 10.1002/ijc.31092. Epub 2017 Oct 17. PubMed PMID: 28994107.

Glioblastoma (GBM) is characterized by the presence of hypoxia, stemness and local invasiveness. We have earlier demonstrated that FAT1 promotes invasiveness, inflammation and upregulates HIF-1α expression and its signaling in hypoxic GBM. Here, we have identified the role of FAT1 in regulating EMT (epithelial-mesenchymal transition) and stemness characteristics in GBM. The expression of FAT1, EMT (Snail/LOX/Vimentin/N-cad), stemness (SOX2/OCT4/Nestin/REST) and hypoxia markers (HIF-1α/VEGF/PGK1/CA9) was upregulated in ≥39% of GBM tumors (n = 31) with significant positive correlation ($p \leq 0.05$) of the expression of FAT1 with LOX/Vimentin/SOX2/HIF-1α/PGK1/VEGF/CA9. Furthermore, positive correlation ($p \leq 0.01$) of FAT1 with Vimentin/N-cad/SOX2/REST/HIF-1α has been observed in TCGA GBM-dataset (n = 430). Analysis of cells (U87MG/A172) exposed to severe hypoxia (0.2%O2) revealed elevated mRNA expression of FAT1, EMT (Snail/LOX/Vimentin/N-cad), stemness (SOX2/OCT4/Nestin/REST) and hypoxia markers (HIF-1α/PGK1/VEGF/CA9) as compared to their normoxic (20%O2) counterparts. FAT1 knockdown in U87MG/A172 maintained in severe hypoxia and in normoxic primary glioma cultures led to significant reduction of EMT/stemness markers as compared to controls. HIF-1α knockdown in U87MG cells markedly reduced the expression of all the EMT/stemness markers studied except for Nestin and SOX2 which were more under the influence of FAT1. This indicates FAT1 has a novel regulatory effect on EMT/stemness markers both via or independent of HIF-1α. The functional relevance of our study was corroborated by significant reduction in the number of soft-agar colonies formed in hypoxic-siFAT1 treated U87MG cells. Hence, our study for the first time reveals FAT1 as a novel regulator of EMT/stemness in hypoxic GBM and suggests FAT1 as a potential therapeutic candidate.

DOI: 10.1002/ijc.31092
PMID: 28994107

113: Stewart RAH, Szalewska D, Stebbins A, Al-Khalidi HR, Cleland JGH, Rynkiewicz A, Drazner MH, White HD, Mark DB, Roy A, Kosevic D, Rajda M, Jasinski M, Leng CY, Tungsubutra W, Desvigne-Nickens P, Velazquez EJ, Petrie MC. Six-minute walk distance after coronary artery bypass grafting compared with medical therapy in ischaemic cardiomyopathy. Open Heart. 2018 Feb 20;5(1):e000752. doi: 10.1136/openhrt-2017-000752. eCollection 2018. PubMed PMID: 29531766; PubMed Central PMCID: PMC5845417.

Background: In patients with ischaemic left ventricular dysfunction, coronary artery bypass surgery (CABG) may decrease mortality, but it is not known whether CABG improves functional capacity.
Objective: To determine whether CABG compared with medical therapy alone (MED) increases 6 min walk distance in patients with ischaemic left ventricular dysfunction and coronary artery disease amenable to revascularisation.
Methods: The Surgical Treatment in Ischemic Heart disease trial randomised 1212 patients with ischaemic left ventricular dysfunction to CABG or MED. A 6 min walk distance test was performed both at baseline and at least one follow-up assessment at 4, 12, 24 and/or 36 months in 409 patients randomised to CABG and 466 to MED. Change in 6 min walk distance between baseline and follow-up were compared by treatment allocation.
Results: 6 min walk distance at baseline for CABG was mean 340±117 m and for MED 339±118 m. Change in walk distance from baseline was similar for CABG and MED groups at 4 months (mean +38 vs +28 m), 12 months (+47 vs +36 m), 24 months (+31 vs +34 m) and 36 months (-7 vs +7 m), P>0.10 for all. Change in walk distance between CABG and MED groups over all assessments was also similar after adjusting for covariates and imputation for missing values (+8 m, 95% CI -7 to 23 m, P=0.29). Results were consistent for subgroups defined by angina, New York Heart Association class ≥3, left ventricular ejection fraction, baseline walk distance and geographic region.
Conclusion: In patients with ischaemic left ventricular dysfunction CABG compared with MED alone is known to reduce mortality but is unlikely to result in a clinically significant improvement in functional capacity.
Trial registration number: NCT00023595.

DOI: 10.1136/openhrt-2017-000752
PMCID: PMC5845417
PMID: 29531766

Conflict of interest statement: Competing interests: JGHC: Medtronic advisory board. HDW: grants and non-financial support from GlaxoSmithKline during the conduct of the study; grants from Sanofi Aventis, Eli Lilly and Company, National Institutes of Health, Merck Sharpe & Dohm, Omthera Pharmaceuticals, Pfizer New Zealand, Intarcia Therapeutics Inc, Elsai Inc, DalGenE Products and Services; grants and personal fees from AstraZeneca, outside the submitted work. EJV: research grants from NHLBI, Alnylam Pharmaceuticals, Amgen, Novartis Pharmaceutical Corp and Pfizer; consulting services for Amgen, Merck & Co and Novartis Pharmaceutical Corp; and speakers bureau honoraria from Expert Exchange.

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115: Sudhanshu S, Riaz I, Sharma R, Desai MP, Parikh R, Bhatia V. Newborn Screening Guidelines for Congenital Hypothyroidism in India: Recommendations of the Indian Society for Pediatric and Adolescent Endocrinology (ISPAE) - Part II: Imaging, Treatment and Follow-up. Indian J Pediatr. 2018 Jun;85(6):448-453. doi: 10.1007/s12098-017-2576-x. Epub 2018 Feb 17. Review. PubMed PMID: 29455331.

The Indian Society for Pediatric and Adolescent Endocrinology has formulated

Clinical Practice Guidelines for newborn screening, diagnosis and management of congenital hypothyroidism (CH). This manuscript, part II addresses management and follow-up.RECOMMENDATIONS: Screening should be done for every newborn using cord blood, or postnatal blood ideally at 48 to 72 h of age. Neonates with screen TSH>20 mIU/L serum units (or >34 mIU/L for samples taken between 24 and 48 h of age) should be recalled for confirmation. For screen TSH>40 mIU/L, immediate confirmatory venous T4/FT4 and TSH, and for mildly elevated screen TSH, a second screening TSH at 7 to 10 d of age, should be taken. Preterm and low birth weight infants should undergo screening at 48-72 h age. Sick babies should be screened at least by 7 d of age. Venous confirmatory TSH >20 mIU/L before age 2 wk and >10 mIU/L after age 2 wk, with low T4 (<10 µg/dL) or FT4 (<1.17 ng/dL) indicate primary CH and treatment initiation. Imaging is recommended by radionuclide scintigraphy and ultrasonography after CH is biochemically confirmed but treatment should not be delayed till scans are performed. Levothyroxine is commenced at 10-15 µg/kg in the neonatal period. Serum T4/FT4 is measured at 2 wk and TSH and T4/FT4 at 1 mo, then 2 monthly till 6 mo, 3 monthly from 6 mo-3 y and every 3-6 mo thereafter. Babies with the possibility of transient CH should be re-evaluated at age 3 y, to assess the need for lifelong therapy.

DOI: 10.1007/s12098-017-2576-x
PMID: 29455331

116: Talukdar A, Rai R, Aparna Sharma K, Rao DN, Sharma A. Peripheral Gamma Delta T cells secrete inflammatory cytokines in women with idiopathic recurrent pregnancy loss. Cytokine. 2018 Feb;102:117-122. doi: 10.1016/j.cyto.2017.07.018. Epub 2017 Aug 9. PubMed PMID: 28802663.

BACKGROUND: Gamma delta (γδ) T cells are known to link innate and adaptive immunity. Decidual γδ T cells are known to provide immunotolerance by producing IL-10 and TGF-β. In recurrent pregnancy loss (RPL) females, the role of peripheral γδ T cells remain unstudied.
OBJECTIVE: To investigate the different phenotypes of γδ T cells in the peripheral blood of women with idiopathic RPL and their possible involvement in RPL condition.
METHODS: A total of 120 women were recruited for the study. Peripheral blood lymphocytes were isolated and they were stained with appropriate antibodies to determine the phenotype of γδ T cells and major cytokines produced by them in the blood using flow cytometry.
RESULTS: We observed a significant decrease in the proportion of CD3+CD4-CD8-γδ T cells ($p<0.001$) and increase in the percentage of IFN-γ ($p<0.05$) and IL-17 ($p<0.001$) producing γδ T cells in RPL pregnant as compared to normal pregnant females.
CONCLUSION: Increase in IFN-γ and IL-17-producing CD3+ CD4-CD8- γδ T cells is associated with creating inflammatory cytokine milieu, thereby, may contribute towards pregnancy loss in RPL females.

DOI: 10.1016/j.cyto.2017.07.018
PMID: 28802663

117: Talwar S, Siddarth B, Choudhary SK, Airan B. Multiple saccular aortic aneurysms following the arterial switch operation. J Card Surg. 2018 Mar;33(3):156-159. doi: 10.1111/jocs.13552. Epub 2018 Feb 27. PubMed PMID: 29486518.

We report a 3-month-old male presenting with multiple aortic aneurysms arising de novo 2 months following the arterial switch operation. Successful repair of the aneurysms was performed under total circulatory arrest and at seven years follow-up, the patient has no recurrence.

DOI: 10.1111/jocs.13552
PMID: 29486518 [Indexed for MEDLINE]

118: Tan D, Lee JH, Chen W, Shimizu K, Hou J, Suzuki K, Nawarawong W, Huang SY, Sang Chim C, Kim K, Kumar L, Malhotra P, Chng WJ, Durie B; Asian Myeloma Network. Recent advances in the management of multiple myeloma: clinical impact based on resource-stratification. Consensus statement of the Asian Myeloma Network at the 16th international myeloma workshop. Leuk Lymphoma. 2018 Feb 2:1-13. doi: 10.1080/10428194.2018.1427858. [Epub ahead of print] PubMed PMID: 29390932.

Predicated on our improved understanding of the disease biology, we have seen remarkable advances in the management of multiple myeloma over the past few years. Recently approved drugs have radically transformed the treatment paradigm and improved survivals of myeloma patients. The progress has necessitated revision of the diagnostic criteria, risk-stratification and response definition. The huge disparities in economy, healthcare infrastructure and access to novel drugs among different Asian countries will hinder the delivery of optimum myeloma care to patients managed in resource-constrained environments. In the light of the tremendous recent changes and evolution in myeloma management, it is timely that the resource-stratified guidelines from the Asian Myeloma Network be revised to provide updated recommendations for Asia physicians practicing under various healthcare reimbursement systems. This review will highlight the most recent advances and our recommendations on how they could be integrated in both resource-abundant and resource-constrained facilities.

DOI: 10.1080/10428194.2018.1427858
PMID: 29390932

119: Tandon V, Lang M, Chandra PS, Sharan A, Garg A, Tripathi M. Is Edema a Matter of Concern After Laser Ablation of Epileptogenic Focus? World Neurosurg. 2018 May;113:366-372.e3. doi: 10.1016/j.wneu.2018.01.201. Epub 2018 Feb 6. PubMed PMID: 29425986.

BACKGROUND: A stereotactically placed laser fiber can deliver thermal energy to an epileptogenic focus in the brain. This procedure is done under intraoperative (thermography) magnetic resonance imaging (MRI) guidance. Thermoablation can lead to edema in the surrounding area and can cause a secondary insult. In this report of 3 cases, we have quantified the edema produced after laser ablation by sequential MRI in the immediate postoperative period.
CASE DESCRIPTIONS: Three patients with intractable epilepsy underwent a detailed neurologic and neuroradiologic workup to localize the site of epileptogenic foci. Two of the patients had mesial temporal lobe sclerosis, and the other patient had hypothalamic hamartoma. A laser fiber was placed stereotactically in the epileptogenic zone, and MRI-guided thermoablation was done. Postoperatively, T1-weighted and fluid-attenuated inversion recovery (FLAIR)-based volumetric MRI sequences were performed on postoperative days 1, 3, and 5 to quantify the edema. I-Plan software was used for volumetric analysis. Targeted volumes were 0.22, 4.2, and 3.5 mL, and lesions were 0.3, 6.5, and 6 mL, respectively. FLAIR hyperintensity was 2.3, 11.8, and 8.4 mL on the first postoperative day and 1.5, 12.6, and 6.3 mL on postoperative day 8. All patients remained seizure-free during the postoperative period. No complications were observed.
CONCLUSIONS: Laser ablation of epileptic focus is safe. FLAIR hyperintensity in the postoperative period is 3-5 times the targeted volume. However, no significant increase occurs during the first 8 days, and thus steroids can be stopped within 5 days of surgery.

DOI: 10.1016/j.wneu.2018.01.201
PMID: 29425986 [Indexed for MEDLINE]

120: 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]

121: Tewari R, Kumar V, Chandra P, Kumar A. Documentation of active bleed from retinal neovascularization during fluorescein angiography. Indian J Ophthalmol. 2018 Feb;66(2):297-298. doi: 10.4103/ijo.IJO_700_17. PubMed PMID: 29380782; PubMed Central PMCID: PMC5819119.

122: Thakkar PA, Rohit HR, Ranjan Das R, Thakkar UP, Singh A. Effect of oral stimulation on feeding performance and weight gain in preterm neonates: a randomised controlled trial. Paediatr Int Child Health. 2018 Feb 19:1-6. doi: 10.1080/20469047.2018.1435172. [Epub ahead of print] PubMed PMID: 29457986.

Background In preterm infants, oral stimulation enhances muscle tone and movement which facilitates normal oral motor developmental patterns improving oral feeding performance. Aim To study the effects on feeding performance, transition to independent oral feeding, weight gain and length of hospital stay of an oral stimulation programme in preterm neonates. Study design This randomised controlled trial was conducted in a tertiary care teaching hospital over a period of 10 months. Altogether, 102 preterm neonates (30-34 weeks gestation) were randomised into the intervention group (oro-motor stimulation for 5 min twice a day, n = 51) or the control group (routine care only, n = 51). The primary outcome measures were feeding performance, and transition period to reach independent oral feeding. Results There was better feeding performance (overall intake and rate of milk transfer), shorter transition to independent oral feeding, better weight gain and shorter length of hospital stay in the intervention group ($p < 0.001$). Conclusions Oral stimulation improves feeding

performance, weight gain rate and reduces hospital stay in preterm neonates born between 30 and 34 weeks of gestation. [Trial registration number: CTRI/2017/05/008630].

DOI: 10.1080/20469047.2018.1435172
PMID: 29457986

123: Tikhomirov AS, Lin CY, Volodina YL, Dezhenkova LG, Tatarskiy VV, Schols D, Shtil AA, Kaur P, Chueh PJ, Shchekotikhin AE. New antitumor anthra[2,3-b]furan-3-carboxamides: Synthesis and structure-activity relationship. Eur J Med Chem. 2018 Mar 25;148:128-139. doi: 10.1016/j.ejmech.2018.02.027. Epub 2018 Feb 10. PubMed PMID: 29459273.

Chemical modifications of the anthraquinone scaffold are aimed at optimization of this exceptionally productive class of antitumor drugs. In particular, our previously reported anthra[2,3-b]furan-3-carboxamides demonstrated a high cytotoxic potency in cell culture and in vivo. In this study, we expanded our series of anthra[2,3-b]furan-3-carboxamides by modifying the key functional groups and dissected the structure-activity relationship within this chemotype. The majority of new compounds inhibited the growth of mammalian tumor cell lines at submicromolar to low micromolar concentrations. We found that 4,11-hydroxy groups as well as the carbonyl moiety in the carboxamide fragment were critical for cytotoxicity whereas the substituent at the 2-position of anthra[2,3-b]furan was not. Importantly, the new derivatives were similarly potent against wild type cells and their variants resistant to doxorubicin due to P-glycoprotein (Pgp) expression or p53 inactivation. The most cytotoxic derivatives 6 and 9 attenuated plasmid DNA relaxation by topoisomerase 1. Finally, we demonstrated that 6 and 9 at 1 μM induced intracellular oxidative stress, accumulation in G2/M phase of the cell cycle, and apoptosis in gastric carcinoma cell lines regardless of their p53 status. These results further substantiate the potential of anthra[2,3-b]furan-3-carboxamides as antitumor drug candidates.

DOI: 10.1016/j.ejmech.2018.02.027
PMID: 29459273 [Indexed for MEDLINE]

124: Titiyal JS, Falera RC, Kaur M, Sharma V, Sharma N. Prevalence and risk factors of dry eye disease in North India: Ocular surface disease index-based cross-sectional hospital study. Indian J Ophthalmol. 2018 Feb;66(2):207-211. doi: 10.4103/ijo.IJO_698_17. PubMed PMID: 29380759; PubMed Central PMCID: PMC5819096.

PURPOSE: This study aims to study the prevalence of DED and analyze risk factors in North Indian population.
METHODS: This was a cross-section hospital-based, observational study. Cases enrolled over 2 years (systematic random sampling) were administered ocular surface disease index questionnaire to evaluate the prevalence and risk factors of DED. Schirmer's test and tear break-up time were performed only in the subset of patients giving consent. Categorical data were assessed with Chi-square/Fisher's Exact test, and odds ratio was analyzed using bivariate and multivariate logistic regression. $P < 0.05$ was statistically significant.
RESULTS: A total of 15,625 patients were screened. The prevalence of DED was 32% (5000/15625); 9.9% (496/5000) had mild DED; 61.2% (3060/5000) had moderate DED; and 28.9% (1444/5000) had severe DED. Age group of 21-40 years, male sex, urban region, and desk job were associated with increased risk of DED. Hours of visual display terminal (VDT) usage significantly correlated with DED ($P < 0.001$), and 89.98% of patients with 4 h or more of VDT use had severe dry eye. Cigarette smoking and contact lens usage had increased odds of developing severe DED ($P < 0.001$). Objective tests were undertaken in 552 patients; of these, 81.3% (449/552) had severe DED.
CONCLUSIONS: The prevalence of DED in North India is 32%, with the age group of 21-40 years affected most commonly. VDT use, smoking, and contact lens use were

associated with increased odds of developing DED.

DOI: 10.4103/ijo.IJO_698_17
PMCID: PMC5819096
PMID: 29380759 [Indexed for MEDLINE]

125: Tiwari V, Kedia S, Garg SK, Rampal R, Mouli VP, Purwar A, Mitra DK, Das P, Dattagupta S, Makharia G, Acharya SK, Ahuja V. CD4+ CD25+ FOXP3+ T cell frequency in the peripheral blood is a biomarker that distinguishes intestinal tuberculosis from Crohn's disease. PLoS One. 2018 Feb 28;13(2):e0193433. doi: 10.1371/journal.pone.0193433. eCollection 2018. PubMed PMID: 29489879; PubMed Central PMCID: PMC5830992.

BACKGROUND: Distinguishing between Crohn's Disease (CD) and Intestinal Tuberculosis (ITB) has been a challenging task for clinicians due to their similar presentation. CD4+FOXP3+ T regulatory cells (Tregs) have been reported to be increased in patients with pulmonary tuberculosis. However, there is no such data available in ITB. The aim of this study was to investigate the differential expression of FOXP3+ T cells in patients with ITB and CD and its utility as a biomarker.
METHODS: The study prospectively recruited 124 patients with CD, ITB and controls: ulcerative colitis (UC) and patients with only haemorrhoidal bleed. Frequency of CD4+CD25+FOXP3+ Tregs in peripheral blood (flow cytometry), FOXP3 mRNA expression in blood and colonic mucosa (qPCR) and FOXP3+ T cells in colonic mucosa (immunohistochemistry) were compared between controls, CD and ITB patients.
RESULTS: Frequency of CD4+CD25+FOXP3+ Treg cells in peripheral blood was significantly increased in ITB as compared to CD. Similarly, significant increase in FOXP3+ T cells and FOXP3 mRNA expression was observed in colonic mucosa of ITB as compared to CD. ROC curve showed that a value of >32.5% for FOXP3+ cells in peripheral blood could differentiate between CD and ITB with a sensitivity of 75% and a specificity of 90.6%.
CONCLUSION: Phenotypic enumeration of peripheral CD4+CD25+FOXP3+ Treg cells can be used as a non-invasive biomarker in clinics with a high diagnostic accuracy to differentiate between ITB and CD in regions where TB is endemic.

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PMCID: PMC5830992
PMID: 29489879 [Indexed for MEDLINE]

126: Trikha V, Das S, Agrawal P, M A, Kumar Dhaka S. Role of percutaneous cerclage wire in the management of subtrochanteric fractures treated with intramedullary nails. Chin J Traumatol. 2018 Feb;21(1):42-49. doi: 10.1016/j.cjtee.2018.01.001. Epub 2018 Feb 14. PubMed PMID: 29426797; PubMed Central PMCID: PMC5835546.

PURPOSE: Cerclage wire application has emerged as a potential therapeutic adjunct to intramedullary nailing for subtrochanteric fractures. But its popularity is plagued by the concern of possible negative effect on fracture zone biology. This study was intended to analyze the clinico-radiological outcome and complications associated with cerclage wire application.
METHODS: Retrospective analysis was performed on all the subtrochanteric fractures operated with intramedullary nailing between January 2012 and January 2016. After exclusion, 48 patients were available with an average follow-up of 20.8 months. Long oblique, spiral, spiral wedge or comminuted fracture configurations with butterfly fragments were particularly considered for cerclage wire application, which was employed by percutaneous cerclage passer in 21 patients. Assessment was done in terms of operation time, blood loss, quality of reduction, neck-shaft angle, follow-up redisplacement, union time, complications, and final functional evaluation by Merle d'Aubigne'-Postel score.
RESULTS: Average operation time and blood loss were significantly higher in cerclage group ($p < 0.05$). However, cerclage use substantially improved quality

of reduction in terms of maximum cortical displacement (p = 0.003) and fracture angulation (p = 0.045); anatomical reduction was achieved in 95.23% of cases as compared to 74.07% without cerclage. Union time was shorter, although not statistically different (p = 0.208), in cerclage group. Four patients in non-cerclage group developed non-union, 2 of them had nail breakage. No infection or any other implant related complications were reported with cerclage use.
CONCLUSION: Minimally-invasive cerclage wire application has proved to be beneficial for anatomical reconstruction in difficult subtrochanteric fractures, whenever applicable, without any harmful effect on fracture biology.

DOI: 10.1016/j.cjtee.2018.01.001
PMCID: PMC5835546
PMID: 29426797

127: Tripathi M, Tripathi M, Roy SG, Parida GK, Ihtisham K, Dash D, Damle N, Shamim SA, Bal C. Metabolic topography of autoimmune non-paraneoplastic encephalitis. Neuroradiology. 2018 Feb;60(2):189-198. doi: 10.1007/s00234-017-1956-2. Epub 2017 Dec 18. PubMed PMID: 29255919.

PURPOSE: F-18 fluorodeoxyglucose (FDG) positron emission tomography (PET) is emerging to be a useful tool in supporting the diagnosis of AIE. In this study, we describe the metabolic patterns on F-18 FDG PET imaging in AIE.
METHODS: Twenty-four antibody-positive patients (anti-NMDA-15, anti-VGKC/LGI1-6, and anti-GAD-3), 14 females and 10 males, with an age range of 2-83 years were included in this study. Each PET study was evaluated visually for the presence of hypometabolism or hypermetabolism and semiquantitatively using Cortex ID (GE) and Scenium (Siemens) by measuring regional Z-scores. These patterns were correlated with corresponding antibody positivity once available.
RESULTS: Visually, a pattern of hypometabolism, hypermetabolism, or both in various spatial distributions was appreciated in all 24 patients. On quantitative analysis using scenium parietal and occipital lobes showed significant hypometabolism with median Z-score of -3.8 (R) and -3.7 (L) and -2.2 (R) and -2.5 (L) respectively. Two-thirds (16/24) showed significant hypermetabolism involving the basal ganglia with median Z-score of 2.4 (R) and 3.0 (L). Similarly on Cortex ID, the median Z-score for hypometabolism in parietal and occipital lobes was -2.2 (R) and -2.4 (L) and -2.6 (R) and -2.4 (L) respectively, while subcortical regions were not evaluated. MRI showed signal alterations in only 11 of these patients.
CONCLUSION: There is heterogeneity in metabolic topography of AIE which is characterized by hypometabolism most commonly involving the parietal and occipital cortices and hypermetabolism most commonly involving the basal ganglia. Scenium analysis using regional Z-scores can complement visual evaluation for demonstration of these metabolic patterns on FDG PET.

DOI: 10.1007/s00234-017-1956-2
PMID: 29255919 [Indexed for MEDLINE]

128: 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

129: Vashist A, Kaushik A, Vashist A, Sagar V, Ghosal A, Gupta YK, Ahmad S, Nair M. Advances in Carbon Nanotubes-Hydrogel Hybrids in Nanomedicine for Therapeutics. Adv Healthc Mater. 2018 May;7(9):e1701213. doi: 10.1002/adhm.201701213. Epub 2018 Feb 1. Review. PubMed PMID: 29388356.

In spite of significant advancement in hydrogel technology, low mechanical strength and lack of electrical conductivity have limited their next-level biomedical applications for skeletal muscles, cardiac and neural cells. Host-guest chemistry based hybrid nanocomposites systems have gained attention as they completely overcome these pitfalls and generate bioscaffolds with tunable electrical and mechanical characteristics. In recent years, carbon nanotube (CNT)-based hybrid hydrogels have emerged as innovative candidates with diverse applications in regenerative medicines, tissue engineering, drug delivery devices, implantable devices, biosensing, and biorobotics. This article is an attempt to recapitulate the advancement in synthesis and characterization of hybrid hydrogels and provide deep insights toward their functioning and success as biomedical devices. The improved comparative performance and biocompatibility of CNT-hydrogels hybrids systems developed for targeted biomedical applications are addressed here. Recent updates toward diverse applications and limitations of CNT hybrid hydrogels is the strength of the review. This will provide a holistic approach toward understanding of CNT-based hydrogels and their applications in nanotheranostics.

DOI: 10.1002/adhm.201701213
PMID: 29388356

130: Venkatesh P. Editorial: Pediatric Ophthalmology - Part II. Indian J Pediatr. 2018 Mar;85(3):207-208. doi: 10.1007/s12098-018-2619-y. Epub 2018 Feb 9. PubMed PMID: 29423668.

131: 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

132: Venkatesulu B, Mallick S, Giridhar P, Upadhyay AD, Rath GK. Pattern of care and impact of prognostic factors on the outcome of head and neck extramedullary

plasmacytoma: a systematic review and individual patient data analysis of 315 cases. Eur Arch Otorhinolaryngol. 2018 Feb;275(2):595-606. doi: 10.1007/s00405-017-4817-z. Epub 2017 Dec 9. Review. PubMed PMID: 29224044.

INTRODUCTION: Head and neck extramedullary plasmacytoma is a rare localized plasma cell neoplasm. We intended to perform this review of the published literature to assess the demographic profile, pattern of care and survival outcomes.
METHODS: Two authors independently searched PubMed, Google search and Cochrane library for eligible studies from 1950 till July 1, 2016, published in English language.
RESULTS: Median age of the cohort was 57 years (range 11-85). Site-wise distributions were paranasal sinuses 22.3% (70), nasal cavity 17.5% (55), nasopharynx 10.8% (34). Median size of SEMP was 3 cm (range 0.3-12 cm). Treatment distribution was radiotherapy (RT) in 52% (164), surgery (S) 19% (60), chemotherapy (C) 5% (16), S+RT 23.49% (74),CRT 1.9% (6), S+C 0.6% (2), S+RT+C 0.95% (3).Radiation was used as a modality in 78.4%(247), surgery in 44.1%(139), chemotherapy in 4.8%(15). Median radiation dose used was 45 Gy with range 20-61 Gy. Median overall survival (OS) was 40 months (range 0.5-298). Median local progression-free survival was 36 months (range 0-298). Median myeloma relapse-free survival was 36 months (range 0.5-298). Five- and 10-year OS was 78.33 and 68.61%. Five-year cause-specific survival (CSS) and 10-year CSS was 90.15 and 83.31%. Five-year LPFS was 94.78%, and 10-year LPFS was 88.43%. Five-year myeloma progression-free survival was 84.46%, and 10-year myeloma PFS was 80.44%. The factors associated with risk of local relapse were site of disease (sinonasal), secretory EMP, type of treatment received (surgery+RT>RT alone>surgery on univariate analysis). Risk factors for myeloma relapse were coexisting diseases, site of disease (sinonasal), bony erosion, size of lesion>5 cm and type of treatment received on univariate analysis.
CONCLUSION: Our study shows that combined modality S+RT is superior compared to uni-modality in preventing local recurrence. Radiation dose of 45 Gy is optimal. Nodal irradiation has no impact on local recurrence.

DOI: 10.1007/s00405-017-4817-z
PMID: 29224044 [Indexed for MEDLINE]

133: Venkatesulu BP, Mallick S, Lin SH, Krishnan S. A systematic review of the influence of radiation-induced lymphopenia on survival outcomes in solid tumors. Crit Rev Oncol Hematol. 2018 Mar;123:42-51. doi: 10.1016/j.critrevonc.2018.01.003. Epub 2018 Feb 2. Review. PubMed PMID: 29482778.

Lymphopenia is a common accompaniment of multimodal cancer therapy. As the most radiosensitive cells of the hematopoietic system, lymphocytes residing within or circulating through a radiation portal are frequently depleted by radiation therapy. The recognition that radiation-induced reduction of circulating lymphocyte counts and eventual lymphocyte infiltration of tumors have a tangible impact on overall survival outcomes has revived the interest in understanding the causes of treatment-associated lymphopenia and developing strategies to predict, prevent and ameliorate this well-documented phenomenon. In this systematic review, we have performed a comprehensive search of the literature to elucidate the studies that document a correlation between radiation-associated lymphopenia and survival outcomes in solid malignancies. We also summarize potential unifying paradigms that account for radiation-induced lymphopenia across studies and lay the groundwork for attempting to explain and/or counter this phenomenon.

DOI: 10.1016/j.critrevonc.2018.01.003
PMID: 29482778 [Indexed for MEDLINE]

134: Vijayakumar V, Shankar NR, Mavathur R, Mooventhan A, Anju S, Manjunath NK.

Diet enriched with fresh coconut decreases blood glucose levels and body weight in normal adults. J Complement Integr Med. 2018 Feb 20. pii: /j/jcim.ahead-of-print/jcim-2017-0097/jcim-2017-0097.xml. doi: 10.1515/jcim-2017-0097. [Epub ahead of print] PubMed PMID: 29461972.

Background There exist controversies about the health effects of coconut. Fresh coconut consumption on human health has not been studied substantially. Fresh coconut consumption is a regular part of the diet for many people in tropical countries like India, and thus there is an increasing need to understand the effects of fresh coconut on various aspects of health. Aim To compare the effects of increased saturated fatty acid (SFA) and fiber intake, provided by fresh coconut, versus monounsaturated fatty acid (MUFA) and fiber intake, provided by a combination of groundnut oil and groundnuts, on anthropometry, serum insulin, glucose levels and blood pressure in healthy adults. Materials Eighty healthy volunteers, randomized into two groups, were provided with a standardized diet along with either 100 g fresh coconut or an equivalent amount of groundnuts and groundnut oil for a period of 90 days. Assessments such as anthropometric measurements, blood pressure, blood sugar and insulin levels were performed before and after the supplementation period. Results Results of this study showed a significant reduction in fasting blood sugar (FBS) in both the groups. However, a significant reduction in body weight was observed in the coconut group, while a significant increase in diastolic pressure was observed in the groundnut group. Conclusions Results of this study suggest that fresh coconut-added diet helps reduce blood glucose levels and body weight in normal healthy individuals.

DOI: 10.1515/jcim-2017-0097
PMID: 29461972

135: Wahal N, Gaba S, Malhotra R, Kumar V, Pegg EC, Pandit H. Reduced Bearing Excursion After Mobile-Bearing Unicompartmental Knee Arthroplasty is Associated With Poor Functional Outcomes. J Arthroplasty. 2018 Feb;33(2):366-371. doi: 10.1016/j.arth.2017.09.057. Epub 2017 Oct 6. PubMed PMID: 29103778.

BACKGROUND: A small proportion of patients with mobile unicompartmental knee arthroplasty (UKA) report poor functional outcomes in spite of optimal component alignment on postoperative radiographs. The purpose of this study is to assess whether there is a correlation between functional outcome and knee kinematics.
METHODS: From a cohort of consecutive cases of 150 Oxford medial UKA, patients with fair/poor functional outcome at 1-year postsurgery (Oxford Knee Score [OKS] < 34, n = 15) were identified and matched for age, gender, preoperative clinical scores, and follow-up period with a cohort of patients with good/excellent outcome (OKS ≥ 34, n = 15). In vivo kinematic assessment was performed using step-up and deep knee bend exercises under fluoroscopic imaging. The fluoroscopic videos were analyzed using MATLAB software to measure the variation in time taken to complete the exercises, patellar tendon angle, and bearing position with knee flexion angle.
RESULTS: Mean OKS in the fair/poor group was 29.9 and the mean OKS in the good/excellent group was 41.1. The tibial slope, time taken to complete the exercises, and patellar tendon angle trend over the flexion range were similar in both the groups; however, bearing position and the extent of bearing excursion differed significantly. The total bearing excursion in the OKS < 34 group was significantly smaller than the OKS ≥ 34 group (35%). Furthermore, on average, the bearing was positioned 1.7 mm more posterior on the tibia in the OKS < 34 group.
CONCLUSION: This study provides evidence that abnormal knee kinematics, in particular bearing excursion and positioning, are associated with worse functional outcomes after mobile UKA.

DOI: 10.1016/j.arth.2017.09.057
PMID: 29103778

136: Yadav P, Masroor M, Nandi K, Kaza RCM, Jain SK, Khurana N, Saxena A. Promoter Methylation of BRCA1, DAPK1 and RASSF1A is Associated with Increased Mortality among Indian Women with Breast Cancer. Asian Pac J Cancer Prev. 2018 Feb 26;19(2):443-448. PubMed PMID: 29480000; PubMed Central PMCID: PMC5980932.

Background: Promoter methylation has been observed for several genes in association with cancer development and progression. Hypermethylation mediated-silencing of tumor suppressor genes (TSGs) may contribute to breast cancer pathogenesis. The present study was conducted to investigate the promoter methylation status of BRCA1, DAPK1 and RASSF1A genes in Indian women with breast cancer. Materials and Methods: Promoter methylation was evaluated in DNA extracted from mononuclear cells (MNCs) in peripheral blood samples of 60 histopathologically confirmed newly diagnosed, untreated cases of breast cancer as well as 60 age and sex matched healthy controls using MS-PCR. Association of promoter methylation with breast cancer-specific mortality was analyzed with Cox proportional hazards models. Kaplan-Meier survival analysis was performed for overall survival of the breast cancer patients. Results: We observed a significant increase of BRCA1, DAPK1 and RASSF1A promoter methylation levels by 51.7% (P <0.001), 55.0% (P <0.001) and 46.6% (P <0.001), respectively, when compared to healthy controls. A strong correlation was noted between hypermethylation of the tumor suppressor genes BRCA1 (P= 0.009), DAPK1 (P= 0.008) and RASSF1A (P= 0.02)) with early and advanced stages of breast cancer patients. We also found that breast cancer-specific mortality was significantly associated with promoter methylation of BRCA1 [HR and 95% CI: 3.25 (1.448-7.317)] and DAPK1 [HR and 95% CI: 2.32 (1.05-5.11)], whereas limited significant link was evident with RASSF1A [HR and 95% CI: 1.54 (0.697-3.413]. Conclusion: Our results suggest that promoter methylation of BRCA1, DAPK1 and RASSF1A genes may be associated with disease progression and poor overall survival of Indian women with breast cancer.

DOI: 10.22034/APJCP.2018.19.2.443
PMCID: PMC5980932
PMID: 29480000

137: Yoganathan S, Bagga A, Gulati S, Toteja GS, Hari P, Sinha A, Pandey RM, Irshad M. Prevalence and predictors of peripheral neuropathy in nondiabetic children with chronic kidney disease. Muscle Nerve. 2018 May;57(5):792-798. doi: 10.1002/mus.26027. Epub 2018 Feb 14. PubMed PMID: 29193154.

INTRODUCTION: This study sought to determine the prevalence and predictors of peripheral neuropathy in nondiabetic children with chronic kidney disease (CKD).
METHODS: Fifty-one consecutive normally nourished children, 3-18 years of age, with CKD stages IV and V of nondiabetic etiology were enrolled from May to December 2012. Nerve conduction studies were performed in 50 children. Blood samples were analyzed for the biochemical parameters, trace elements, and micronutrients.
RESULTS: The prevalence of peripheral neuropathy in our cohort was 52% (95% confidence interval 37.65, 66.34). The majority (80.8%) of the children had axonal neuropathy, and 11.5% had demyelinating neuropathy. Isolated motor neuropathy was identified in 92.3% of the children, and sensorimotor neuropathy was identified in 7.6%. The significant risk factors associated with peripheral neuropathy were older age, low serum copper, and dialysis therapy.
DISCUSSION: Electrodiagnostic studies should be performed in children with CKD to assess for peripheral neuropathy for the purpose of optimizing medical care. Muscle Nerve 57: 792-798, 2018.

DOI: 10.1002/mus.26027
PMID: 29193154

138: Zafar A, Singh S, Satija YK, Saluja D, Naseem I. Deciphering the molecular mechanism underlying anticancer activity of coumestrol in triple-negative breast cancer cells. Toxicol In Vitro. 2018 Feb;46:19-28. doi: 10.1016/j.tiv.2017.10.007. Epub 2017 Oct 3. PubMed PMID: 28986287.

Triple-negative breast cancer (TNBC) represents the highly aggressive subgroup of breast cancers with poor prognosis due to absence of estrogen receptor (ER). Therefore, alternative targeted therapies are required against ER-negative breast cancers. Coumestrol, a phytoestrogen inhibits cell growth of ER-negative breast cancer MDA-MB-231 cells; the exact mechanism has not yet been reported. Unlike normal cells, cancer cells contain elevated copper which play an integral role in angiogenesis. The current focus of the work was to identify any possible role of copper in coumestrol cytotoxic action against breast cancer MDA-MB-231 cells. Results demonstrated that coumestrol inhibited cell viability, induced ROS generation, DNA damage, G1/S cell cycle arrest, up-regulation of Bax and apoptosis induction via caspase-dependent mitochondrial mediated pathway in MDA-MB-231 cells. Further, addition of copper chelator, neocuproine and ROS scavenger, N-acetyl cysteine were ineffective in abrogating coumestrol-mediated apoptosis. This suggests non-involvement of copper and ROS in coumestrol-induced apoptosis. To account for coumestrol-mediated up-regulation of Bax and apoptosis induction, direct binding potential between coumestrol and Bax/Bcl-2 was studied using in silico molecular docking studies. We propose that coumestrol directly enters cells and combines with Bax/Bcl-2 to alter their structures, thereby causing Bax binding to the outer mitochondrial membrane and Bcl-2 release from the mitochondria to initiate apoptosis. Thus, non-copper targeted ROS independent DNA damage is the central mechanism of coumestrol in ER-negative MDA-MB-231 cells. These findings will be useful in better understanding of anticancer mechanisms of coumestrol and establishing it as a lead molecule for TNBC treatment.

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