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List of publications of AIIMS, New Delhi for the month of September, 2017 [Source: www.pubmed.com].

1: Aathira R, Gulati S, Tripathi M, Shukla G, Chakrabarty B, Sapra S, Dang N, Gupta A, Kabra M, Pandey RM. Prevalence of Sleep Abnormalities in Indian Children With Autism Spectrum Disorder: A Cross-Sectional Study. Pediatr Neurol. 2017 Sep;74:62-67. doi: 10.1016/j.pediatrneurol.2017.05.019. Epub 2017 May 31. PubMed PMID: 28739359.

BACKGROUND: The prevalence of autism spectrum disorder (ASD) is on the rise. Apart from the core behavioral issues of impaired communication, impaired social interaction, and restricted and/or repeated behavioral phenotype, comorbidities like sleep problems are increasingly getting recognized as important determinants of management and overall quality of life.
METHODS: This study was conducted in a tertiary care teaching hospital in northern India over a two year period. Children diagnosed with ASD and normally developing children (control subjects) aged 3 to 10 years were enrolled in the study. Both groups underwent sleep evaluation based on the Children's Sleep Habit Questionnaire. Children with ASD also underwent polysomnography, Childhood Autism Rating Scale, Childhood Behavioral Checklist, and Developmental Profile 3 assessments.
RESULTS: The prevalence of poor sleepers among children with ASD and control subjects was 77.5% (confidence interval 66 to 86.5). and 29.2% (confidence interval 18.6 to 41.5), respectively ($P < 0.001$). The salient findings on polysomnography were reduced sleep efficiency, decreased rapid eye movement and slow wave sleep duration, and desaturation index>1. The Childhood Behavioral Checklist score was significantly high in poor sleepers compared with good sleepers on Children's Sleep Habit Questionnaire ($P = 0.004$). There was no correlation of Childhood Autism Rating Scale or Developmental Profile 3 score with sleep problems in children with ASD.
CONCLUSIONS: Nearly three fourths of children with ASD have sleep abnormalities with a possible effect on the behavioral phenotype. The polysomnographic findings provide further insight with opportunity for pharmacological interventions. Screening for sleep problems is imperative for the appropriate management and overall improvement in quality of life in children with ASD.

DOI: 10.1016/j.pediatrneurol.2017.05.019
PMID: 28739359

2: Agarwal SK, Bagchi S, Yadav RK. Hemodialysis Patients Treated for Hepatitis C Using a Sofosbuvir-based Regimen. Kidney Int Rep. 2017 Apr 26;2(5):831-835. doi: 10.1016/j.ekir.2017.04.003. eCollection 2017 Sep. PubMed PMID: 29270489; PubMed Central PMCID: PMC5733818.

Introduction: There is paucity of data on sofosubvir (SOF)-based therapy in patients on maintenance hemodialysis (MHD). The objective of this report is to describe our experience using SOF-based direct antiviral agent (DAA) therapy in MHD patients in India.
Methods: All patients on MHD and treated with SOF-based therapy were included in this study. Before starting treatment, viral load, genotype, liver fibroscan, and upper gastrointestinal endoscopy were performed in all patients. SOF 400 mg/d or on an alternate day, ribavirin 200 mg/d and daclatasvir 60 mg/d were used in different regimens. Hepatitis C virus RNA was assessed at day 10 and at 4 weeks, at end of therapy, and at 12 weeks after stopping therapy.
Results: A total of 62 treatment-naïve patients were included. Mean age was 33.3 ± 10.2 years; 66% were men. Median number of copies were 106/dl. None had clinical evidence of cirrhosis. The most common genotype was genotype 1 in 64.5% of cases, followed by genotype 3 in 29% of cases. Thirty-nine patients were treated with SOF every other day/ribavirin, 2 patients with SOF daily/ribavirin, 6 with SOF every other day/daclatasvir, and 15 patients with SOF daily/daclatasvir. All patients were treated for 12 weeks. Fifty-nine (95.2%) patients had a sustained viral response (SVR). There was no impact of genotype on SVR. Twenty-three patients (37%) had complications while on therapy; 13 (20.3%)

had dyspepsia, 4 had tuberculosis, and 3 had bacterial pneumonia. Most of the patients (n = 23; 56%) in the ribavirin group required an increase in the erythropoietin dose. No patient discontinued therapy due to complications. Discussion: SOF-based DAAs were well tolerated and efficacious in this cohort of patients on MHD.

DOI: 10.1016/j.ekir.2017.04.003
PMCID: PMC5733818
PMID: 29270489

3: Agrawal M, Borkar SA, Phalak M, Singla R, Mahapatra AK. Does Spinal Cord Line Influence Choice of Surgical Approach in Multilevel Cervical Spondylotic Myelopathy? World Neurosurg. 2017 Sep;105:1007. doi: 10.1016/j.wneu.2017.05.100. PubMed PMID: 28847116.

4: Ahmad F, Patrick S, Sheikh T, Sharma V, Pathak P, Malgulwar PB, Kumar A, Joshi SD, Sarkar C, Sen E. Telomerase reverse transcriptase (TERT) - enhancer of zeste homolog 2 (EZH2) network regulates lipid metabolism and DNA damage responses in glioblastoma. J Neurochem. 2017 Dec;143(6):671-683. doi: 10.1111/jnc.14152. Epub 2017 Sep 22. PubMed PMID: 28833137.

Elevated expression of enhancer of zeste homolog 2 (EZH2), a histone H3K27 methyltransferase, was observed in gliomas harboring telomerase reverse transcriptase (TERT) promoter mutations. Given the known involvement of TERT and EZH2 in glioma progression, the correlation between the two and subsequently its involvement in metabolic programming was investigated. Inhibition of human telomerase reverse transcriptase either pharmacologically or through genetic manipulation not only decreased EZH2 expression, but also (i) abrogated FASN levels, (ii) decreased de novo fatty acid accumulation, and (iii) increased ataxia-telangiectasia-mutated (ATM) phosphorylation levels. Conversely, diminished TERT and FASN levels upon siRNA-mediated EZH2 knockdown indicated a positive correlation between TERT and EZH2. Interestingly, ATM kinase inhibitor rescued TERT inhibition-mediated decrease in FASN and EZH2 levels. Importantly, TERT promoter mutant tumors exhibited greater microsatellite instability, heightened FASN levels and lipid accumulation. Coherent with in vitro findings, pharmacological inhibition of TERT by costunolide decreased lipid accumulation and elevated ATM expression in heterotypic xenograft glioma mouse model. By bringing TERT-EZH2 network at the forefront as driver of dysregulated metabolism, our findings highlight the non-canonical but distinct role of TERT in metabolic reprogramming and DNA damage responses in glioblastoma.

DOI: 10.1111/jnc.14152
PMID: 28833137 [Indexed for MEDLINE]

5: Ashlesh P, Kumar SS, Preet KK, Vinay G. Deep brain stimulation of subthalamic nucleus helps in improving late phase motor planning in Parkinson's disease. Clin Neurol Neurosurg. 2017 Sep;160:30-37. doi: 10.1016/j.clineuro.2017.06.011. Epub 2017 Jun 15. PubMed PMID: 28641127.

OBJECTIVE: Deep brain stimulation of subthalamic nucleus (DBS-STN) is a well-accepted treatment for Parkinson's disease (PD) but its effect on motor planning in the disease is yet unclear. This study examines the effect of switching the stimulation ON and OFF on components of bereitschaftspotentials in PD.
PATIENTS AND METHODS: Scalp bereitschaftspotentials were recorded during self-paced right wrist extensions at Fz, Cz, Pz, C3 and C4 sites in patients on DBS-STN plus medications (DBS-STN group) as treatment modality or on medications only (Med group) and compared with age matched healthy controls. In DBS-STN group, the potentials were recorded in stimulation ON, stimulation OFF, and again

after re-switching stimulation ON-2. Offline analysis of potentials was done to calculate peak amplitude, late slope (-500 to 0ms) and early slope (-1500 to -500ms).
RESULTS: We observed that the two components of bereitschaftspotentials in stimulation ON state were comparable to those in age matched controls. The late slope was found to be significantly reduced during stimulation OFF as compared to stimulation ON at Cz ($p<0.001$), C3 ($p<0.001$) and C4 ($p<0.01$) electrode sites. This parameter failed to improve on re-switching stimulation ON at Cz ($p<0.01$). No significant change was observed in early part of bereitschaftspotentials among any of the conditions.
CONCLUSION: Our study shows that DBS-STN along with anti-parkinsonian medications helps in improving both components of bereitschaftspotentials in PD. Switching stimulation OFF for fifteen minutes principally affects the late component i.e. the execution part of motor planning; which cannot be reversed by re-switching ON. Thus the chronic and acute effects of switching DBS-STN ON are different and principally affect the later part of motor planning.

DOI: 10.1016/j.clineuro.2017.06.011
PMID: 28641127

6: Awale R, Maji R, Patil P, Lingiah R, Mukhopadhyay AK, Sharma S. Toluidine blue: rapid and simple malaria parasite screening and species identification. Pan Afr Med J. 2017 Sep 13;28:27. doi: 10.11604/pamj.2017.28.27.12488. eCollection 2017. PubMed PMID: 29138663; PubMed Central PMCID: PMC5681009.

Malaria, a febrile illness mostly confined to the tropical countries is transmitted by bite of infected female Anopheles mosquito. In 2015 alone, 88% of the malaria burden and 90% deaths due to malaria were confined to the African and Asian countries. Although number of tests are available for rapid diagnosis and screening for malaria, peripheral blood smear examination remains the gold standard. Leishman stain is recommended by WHO however herein we evaluate one of the alternative methods of staining which is simple and rapid. Fifty patients attending the various outpatient departments of the tertiary care hospital with fever and suspected to have malaria were selected. Two thin-air dried smears prepared from the peripheral venous blood from these subjects were stained by Leishman and Toluidine blue method. The findings of the slides by two independent qualified professionals were noted and the results were analyzed. A total of 14% (7/50) cases were diagnosed to have malaria. All the malaria cases which were positive in Leishman stain were also detected in Toluidine blue stain. Malarial parasites were clearly visible against the homogenously light green background in Toluidine blue. The detection of malarial parasite by Toluidine blue was quick, easy and confirmative. Toluidine blue stained peripheral blood smear allows for easy identification and speciation of malarial parasite at low magnification and in shorter period of time.

DOI: 10.11604/pamj.2017.28.27.12488
PMCID: PMC5681009
PMID: 29138663 [Indexed for MEDLINE]

7: Baruah B, Kumar T, Das P, Thakur B, Sreenivas V, Ahuja V, Gupta SD, Makharia GK. Prevalence of eosinophilic esophagitis in patients with gastroesophageal reflux symptoms: A cross-sectional study from a tertiary care hospital in North India. Indian J Gastroenterol. 2017 Sep;36(5):353-360. doi: 10.1007/s12664-017-0789-6. Epub 2017 Oct 12. PubMed PMID: 29022245.

BACKGROUND: Eosinophilic esophagitis (EoE) is being recognized increasingly all over the globe; Indian data is however sparse. We screened patients with symptoms of gastroesophageal reflux disease (GERD) for presence of EoE in them.
METHODS: Consecutive patients with symptoms suggestive of GERD underwent

gastroduodenoscopy and esophageal biopsies, obtained from both the upper esophagus (5 cm below the upper esophageal sphincter) and lower esophagus (5 cm above gastroesophageal junction), as well as from any other endoscopically visible abnormal mucosa. Demographic and clinical characteristics, endoscopic findings, peripheral blood eosinophilic count, and history of use of proton-pump inhibitors (PPIs) were analyzed. Stool examination was done to rule out parasitoids. EoE was diagnosed if number of mucosal eosinophil infiltrate was >20 per high-power field. In the latter, Warthin-Starry stain was performed to rule out presence of H elicobacter pylori.
RESULTS: Of 190 consecutive patients with symptoms of GERD screened, esophageal biopsies were available in 185 cases. Of them, 6 had EoE, suggesting a prevalence of 3.2% among patients with GERD. On univariate analysis, history of allergy, non-response to PPI, and absolute eosinophil counts and on multivariable analysis, history of allergy and no response to PPIs were significant predictors of EoE. Presence of EOE did not correlate with severity of reflux symptoms.
CONCLUSION: In this hospital-based study from northern part of India, prevalence of EoE in patients with GERD was 3.2%. EoE should be considered as a diagnostic possibility, especially in those with history of allergy, no-response to PPI, and absolute eosinophil count of ≥250/cumm.

DOI: 10.1007/s12664-017-0789-6
PMID: 29022245

8: 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. 2017 Sep 13. doi: 10.1111/neup.12426. [Epub ahead of print] 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

9: Bhalla AS, Jana M. MRI Chest: A Game Changer? Indian J Pediatr. 2017 Sep;84(9):655-656. doi: 10.1007/s12098-017-2431-0. Epub 2017 Aug 2. PubMed PMID: 28766054.

10: Bhari N, Sharma VK, Jangid BL, Arava S, Srivastava A. A fleshy growth below the nail plate in an elderly man. Int J Dermatol. 2017 Sep;56(9):899-901. doi: 10.1111/ijd.13458. Epub 2017 Jan 11. PubMed PMID: 28078732.

11: Bhaskar L, Kharya C, Deepak KK, Kochupillai V. Assessment of Cardiac Autonomic Tone Following Long Sudarshan Kriya Yoga in Art of Living Practitioners. J Altern Complement Med. 2017 Sep;23(9):705-712. doi: 10.1089/acm.2016.0391. Epub 2017 Jul 10. PubMed PMID: 28691853.

OBJECTIVE: The breathing processes are known to modulate cardiac autonomic tone and improve psychological status. We investigated cardiac autonomic tone following long Sudarshan Kriya Yoga (SKY) using heart rate variability (HRV) and skin conductance level (SCL).
METHODS: Thirty healthy volunteers (age 28.3±8.4 years; 23M: 7 F) participated in the study. Electrocardiogram (ECG) and SCL were recorded for 5min each, before and after long SKY. Long SKY is a combination of pranayama and cyclic rhythmic breathing and is performed by following the guided audio instructions. HRV analysis was used for the assessment of cardiac autonomic tone. Time and frequency domain parameters of HRV were calculated by using RR interval of ECG. SCL was acquired using Galvanic skin response (GSR) amplifier of PowerLab in microSeimens (μS).
RESULTS: Time domain parameters of HRV, including mean RR interval (p=0.000), respiratory sinus arrhythmia (RSA) (p=0.037), standard deviation of all NN intervals (SDNN) (p=0.013), NN50 count divided by the total number of all NN intervals (pNN50) (p=0.004), and square root of the mean of the sum of the squares of differences between adjacent NN intervals (RMSSD) (p=0.002) increased, and mean heart rate decreased (p=0.000) following long SKY. In frequency domain analysis, power of low-frequency (LF) component (p=0.010) and LF/HF ratio (p=0.008) decreased significantly, whereas power of high frequency (HF) significantly increased (p=0.010). SCL decreased following long SKY, although it did not attain statistical significance.
CONCLUSIONS: The results suggest that long SKY induces significant oscillations in cardiac autonomic tone. Parasympathetic activity increases and sympathetic activity decreases and sympathovagal balance improves following long SKY. Decrease in sympathetic activity is also demonstrated by decrease in conductance although it did not reach statistical significance. From this study it can be concluded that long SKY has a beneficial effect on cardiac autonomic tone, and psychophysiological relaxation. It may serve as a tool to improve HRV, which is the marker of cardiovascular health.

DOI: 10.1089/acm.2016.0391
PMID: 28691853 [Indexed for MEDLINE]

12: Bhatia R, Sharma VK. Occupational dermatoses: An Asian perspective. Indian J Dermatol Venereol Leprol. 2017 Sep-Oct;83(5):525-535. doi: 10.4103/ijdvl.IJDVL_1041_15. Review. PubMed PMID: 28485305.

Occupational dermatoses contribute to a significant portion of work-related diseases, especially in Asia, where a major portion of the workforce is in the unorganized sector. This review article is focussed on the frequency and pattern of occupational skin diseases reported across Asian countries and type of allergens implicated in different occupations. The literature was searched systematically using key words 'occupational dermatoses,' 'occupational skin disease' and name of each Asian country. Ninty five full-text articles were considered relevant and evaluated. Some of the dermatoses seen in industrial workers in Asian countries are similar to those in Western countries, including dermatoses due to chromate in construction and electroplating workers, epoxy resin, and chromate in painters, wood dust in workers in the furniture industry, azo dyes in textile workers and formaldehyde and chromates in those working in

the leather and dyeing industries, dermatoses in domestic workers, chefs and health-care workers. Dermatoses in workers engaged in agriculture, beedi (tiny cigars) manufacture, agarbatti (incense sticks) production, fish processing, carpet weaving, sanitation and those working in coffee plantations and coal mines appear to be unique to Asian countries. Recognition of clinical patterns and geographic variations in occupational skin diseases will provide an impetus to further strengthen future research in these areas, as well as improving their management.

DOI: 10.4103/ijdvl.IJDVL_1041_15
PMID: 28485305

13: Bhattacharjee S, Som A, Maitra S. Comparison of LMA Supremeâ„¢ with i-gelâ„¢ and
LMA ProSealâ„¢ in children for airway management during general anaesthesia: A meta-analysis of randomized controlled trials. J Clin Anesth. 2017 Sep;41:5-10. doi: 10.1016/j.jclinane.2017.04.019. Epub 2017 Jun 1. PubMed PMID: 28802606.

STUDY OBJECTIVE: A few randomized trials have compared LMA Supreme™ with LMA ProSeal™ and i-gel™ in children but their conclusions varied widely. This systematic review and meta analysis has compared the former device with the latter two devices.
DESIGN: Meta-analysis and systematic review using the Mantel-Haenszel method and pooled mean difference using inverse variance method.
SETTING: Meta-analysis of published prospective randomized controlled trials.
PATIENTS: Paediatric patients undergoing surgery under general anaesthesia.
INTERVENTION: LMA Supreme™ with LMA ProSeal™ or i-gel™ as airway management device.
RESULTS: Electronic database searching revealed four randomized trials where LMA Supreme™ has been compared with LMA ProSeal™ and three trials where a comparison was made between LMA Supreme™ and i-gel™ in paediatric population. LMA Supreme™ provided similar oropharyngeal leak pressure when compared to LMA ProSeal™ [mean difference (95% CI) 1.57 (-1.33, 4.47)cm H2O; p=0.29] and i-gel™ [mean difference (95% CI) 1.18 (-2.11, 4.47)cm H2O; p=0.48]. First insertion success rate is also similar when LMA Supreme™ is compared to LMA ProSeal™ [RR (95% CI) 1.03 (0.97, 1.1); p=0.74] and i-gel™ [RR (95% CI) 0.99 (0.95, 1.03); p=0.51]. Device insertion is significantly faster with LMA Supreme™ than i-gel™ [mean difference (95% CI) 1.87 (0.93, 2.81) s; p<0.0001].
CONCLUSION: We suggest that LMA Supreme™ may be an alternative to LMA ProSeal™ and i-gel™ in children for airway management during general anaesthesia.

DOI: 10.1016/j.jclinane.2017.04.019
PMID: 28802606

14: Bosch I, de Puig H, Hiley M, CarrÃ©-Camps M, Perdomo-Celis F, NarvÃ¡ez CF, Salgado DM, Senthoor D, O'Grady M, Phillips E, Durbin A, Fandos D, Miyazaki H, Yen CW, GÃ©lvez-RamÃ-rez M, Warke RV, Ribeiro LS, Teixeira MM, Almeida RP, MuÃ±Ã³z-Medina JE, Ludert JE, Nogueira ML, Colombo TE, Terzian ACB, Bozza PT, Calheiros AS, Vieira YR, Barbosa-Lima G, Vizzoni A, Cerbino-Neto J, Bozza FA, Souza TML, Trugilho MRO, de Filippis AMB, de Sequeira PC, Marques ETA, Magalhaes T, DÃ-az FJ, Restrepo BN, MarÃ-n K, Mattar S, Olson D, Asturias EJ, Lucera M, Singla M, Medigeshi GR, de Bosch N, Tam J, GÃ³mez-MÃ¡rquez J, Clavet C, Villar L, Hamad-Schifferli K, Gehrke L. Rapid antigen tests for dengue virus serotypes and Zika virus in patient serum. Sci Transl Med. 2017 Sep 27;9(409). pii: eaan1589. doi: 10.1126/scitranslmed.aan1589. PubMed PMID: 28954927.

The recent Zika virus (ZIKV) outbreak demonstrates that cost-effective clinical diagnostics are urgently needed to detect and distinguish viral infections to improve patient care. Unlike dengue virus (DENV), ZIKV infections during

pregnancy correlate with severe birth defects, including microcephaly and neurological disorders. Because ZIKV and DENV are related flaviviruses, their homologous proteins and nucleic acids can cause cross-reactions and false-positive results in molecular, antigenic, and serologic diagnostics. We report the characterization of monoclonal antibody pairs that have been translated into rapid immunochromatography tests to specifically detect the viral nonstructural 1 (NS1) protein antigen and distinguish the four DENV serotypes (DENV1-4) and ZIKV without cross-reaction. To complement visual test analysis and remove user subjectivity in reading test results, we used image processing and data analysis for data capture and test result quantification. Using a 30-µl serum sample, the sensitivity and specificity values of the DENV1-4 tests and the pan-DENV test, which detects all four dengue serotypes, ranged from 0.76 to 1.00. Sensitivity/specificity for the ZIKV rapid test was 0.81/0.86, respectively, using a 150-µl serum input. Serum ZIKV NS1 protein concentrations were about 10-fold lower than corresponding DENV NS1 concentrations in infected patients; moreover, ZIKV NS1 protein was not detected in polymerase chain reaction-positive patient urine samples. Our rapid immunochromatography approach and reagents have immediate application in differential clinical diagnosis of acute ZIKV and DENV cases, and the platform can be applied toward developing rapid antigen diagnostics for emerging viruses.

DOI: 10.1126/scitranslmed.aan1589
PMID: 28954927

15: Chandra P, Kumar V, Takkar B, Kumar A. Epiretinal membrane development after submacular perfluorocarbon liquid removal. Oman J Ophthalmol. 2017 Sep-Dec;10(3):253-254. doi: 10.4103/ojo.OJO_39_2015. PubMed PMID: 29118509; PubMed Central PMCID: PMC5657176.

Optical coherence tomography of submacular perfluorocarbon liquid and its safe removal with a small gauge cannula have been presented in the report. This case was complicated by development of an epiretinal membrane, though visual acuity was preserved.

DOI: 10.4103/ojo.OJO_39_2015
PMCID: PMC5657176
PMID: 29118509

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

16: Chattopadhyay A, Lodha R. Can Inferior Vena Cava Measurement be an Alternative to Central Venous Pressure Measurement? Indian J Pediatr. 2017 Oct;84(10):733-734. doi: 10.1007/s12098-017-2443-9. Epub 2017 Sep 8. PubMed PMID: 28884299.

17: Chaudhari PB, Pathy S, Deo SSV, Chawla B, Mridha AR. Alveolar soft part sarcoma of orbit: A rare diagnosis. J Egypt Natl Canc Inst. 2017 Sep;29(3):167-170. doi: 10.1016/j.jnci.2017.07.001. Epub 2017 Aug 23. PubMed PMID: 28844593.

OBJECTIVE: Alveolar soft part sarcoma (ASPS) is an aggressive, rare tumour with unique morphological and histopathological features.
METHODS: We report a rare case of orbital ASPS and its management in a young male who presented with painless proptosis and progressive loss of vision.
RESULT: Twenty-two year male presented with a history of gradually increasing proptosis with loss of vision since 12months. He underwent radical re-excision of mass with right orbital exenteration and reconstruction using temporalis muscle

flap. Adjuvant radiotherapy to a dose of 64Gy in 32 fractions over 6.5weeks was planned in view of positive surgical margins. Patient is free of disease and currently under follow up in multidisciplinary clinic.
CONCLUSION: Function preserving surgery remains the standard treatment approach in localised disease however the complex anatomy and locally aggressive nature makes it difficult to achieve clear surgical margin. Adjuvant radiotherapy has shown to improve local control in patients with positive surgical margins.

DOI: 10.1016/j.jnci.2017.07.001
PMID: 28844593

18: Chaudhry R, Sharma N, Gupta N, Kant K, Bahadur T, Shende TM, Kumar L, Kabra SK. Nagging Presence of Clostridium difficile Associated Diarrhoea in North India. J Clin Diagn Res. 2017 Sep;11(9):DC06-DC09. doi: 10.7860/JCDR/2017/29096.10592. Epub 2017 Sep 1. PubMed PMID: 29207702; PubMed Central PMCID: PMC5713724.

Introduction: Clostridium Difficile Associated Diarrhoea (CDAD) is a significant cause of morbidity in hospitalised patients worldwide. The data on clinical epidemiology of this disease in Indian subcontinent is scarce.
Aim: To evaluate the risk factors and clinical course of patients with CDAD.
Materials and Methods: A cross-sectional study was planned at our tertiary care centre, All India Institute of Medical Sciences, whereby, all patients who had nosocomial diarrhea between 2010 and 2014 were included in the study. Their clinical and laboratory profile were recorded using structured questionnaire and their stool samples were subjected to ELISA for detection of toxins A and B (Premier toxins A and B). Those patients who had toxins A and B in their stool samples were diagnosed as CDAD. The clinical and laboratory profile of CDAD patients were further analysed.
Results: A total of 791 patients with nosocomial diarrhea were included in this study. CDAD was diagnosed in a total of 48(6%) patients. The year wise breakdown of the positive patients is as follows: 7/135 (5.2%), 4/156 (2.6%), 5/141 (3.5%), 9/193 (4.7%) and 23/166 (13.8%), respectively. A total of 16/48 (33.3%) of CDAD cases belonged to the age group of 51-60 years. Malignancy (n=15, 31.25%) was the most common underlying pathological condition. All the patients had a history of antibiotic intake. Most common antibiotic used in the patients of CDAD was third generation cephalosporins (n=27, 56.25%). The use of clindamycin, carbapenems and colistin increased in the year 2014. Mean duration of hospital stay was 9.8 days. Diarrhoea was associated with fever in 50% of the patients while abdominal pain was seen in 39.6% of the patients.
Conclusion: The control of Clostridium difficile infection suffers from the rampant use of higher antibiotics. There is a need for proper implementation of antimicrobial stewardship programmes and better hospital infection control to stop the transmission of this nagging bug.

DOI: 10.7860/JCDR/2017/29096.10592
PMCID: PMC5713724
PMID: 29207702

19: Chaudhry R, Valavane A, Sreenath K, Choudhary M, Sagar T, Shende T, Varma-Basil M, Mohanty S, Kabra SK, Dey AB, Thakur B. Detection of Mycoplasma pneumoniae and Legionella pneumophila in Patients Having Community-Acquired Pneumonia: A Multicentric Study from New Delhi, India. Am J Trop Med Hyg. 2017 Dec;97(6):1710-1716. doi: 10.4269/ajtmh.17-0249. Epub 2017 Sep 21. PubMed PMID: 29016299.

Atypical pathogens including Mycoplasma pneumoniae and Legionella pneumophila are increasingly recognized as important causes of community-acquired pneumonia (CAP). Mycoplasma pneumoniae accounts for 20-40% of all CAP and L. pneumophila is

responsible for 3-15% of cases. The paucity of data from India in this regard prompted us to conduct this prospective multicentric analysis to detect the prevalence of M. pneumoniae and L. pneumophila in our geographical region. A total of 453 patients with symptoms of pneumonia and 90 controls with no history of lower respiratory tract infections were included in the study. A duplex polymerase chain reaction (PCR) targeting 543 bp region of P1 adhesin gene of M. pneumoniae and 375 bp region of macrophage infectivity potentiator (mip) gene of L. pneumophila was standardized for simultaneous detection of these atypical pathogens. Respiratory secretions, blood, and urine samples were collected from each patient and control and were subjected to duplex PCR, culture and serology for M. pneumoniae and L. pneumophila. Urine samples were subjected for detecting L. pneumophila antigen. Among the 453 patients investigated for M. pneumoniae, 52 (11.4%) were positive for IgM antibodies, 17 were positive by culture, and seven tested positive by PCR (P1 gene). Similarly for L. pneumophila, 50 cases (11%) were serologically positive for IgM antibodies, one was positive by PCR (mip gene) and urine antigen detection. A total of eight samples were positive by duplex PCR for M. pneumoniae P1 gene (N = 7) and L. pneumophila mip gene (N = 1). Of the 90 controls, two samples (2.2%) showed IgM positivity, and 15 (16.7%) showed IgG positivity for M. pneumoniae. For L. pneumophila, three samples (3.3%) tested positive for IgM, and 12 (13.3%) tested positive for IgG antibodies. The study findings indicate the presence of M. pneumoniae and L. pneumophila in our geographical region, and a combination of laboratory approaches including PCR, culture, and serology is required for effective detection of these agents.

DOI: 10.4269/ajtmh.17-0249
PMID: 29016299 [Indexed for MEDLINE]

20: Chawla R, Venkatesh P. Correspondence. Retina. 2017 Sep;37(9):e104-e105. doi: 10.1097/IAE.0000000000001801. PubMed PMID: 28800021.

21: Chawla R, Kumar V, Tripathy K, Kumar A, Venkatesh P, Shaikh F, Vohra R, Molla K, Verma S. Combined Hamartoma of the Retina and Retinal Pigment Epithelium: An Optical Coherence Tomography-Based Reappraisal. Am J Ophthalmol. 2017 Sep;181:88-96. doi: 10.1016/j.ajo.2017.06.020. Epub 2017 Jun 29. PubMed PMID: 28669779.

PURPOSE: To analyze the optical coherence tomography (OCT) characteristics of combined hamartoma of the retina and retinal pigment epithelium (CHRRPE) involving the macula.
DESIGN: Retrospective, observational case series.
METHODS: setting: Single institutional.
STUDY POPULATION: Fourteen consecutive patients of CHRRPE were included.
OBSERVATION PROCEDURES: The authors analyzed the clinical features, color fundus photography, and swept-source or spectral-domain OCT of all the involved eyes.
MAIN OUTCOME MEASURES: OCT characteristics, especially the involvement of the retinal pigment epithelium (RPE).
RESULTS: A total of 16 eyes of 5 female and 9 male patients were analyzed. The mean age (± SD) was 17.9 ± 6.4 (range 10-34) years. Mean best-corrected visual acuity (± SD) in logMAR was 0.9 ± 0.5 (20/160 ± 20/60). The OCT was suggestive of a focal mass-like lesion primarily involving the inner retinal layers limited externally by the outer plexiform layer (OPL) in 15 eyes (93.7%). The OPL appeared to have a saw-tooth appearance ("intraretinal peaks") in 12 eyes (75%). The convolutions of the OPL were broader and deeper in some eyes (5 eyes, 31.2%), giving an "omega sign" (ω) appearance. The ellipsoid zone appeared intact in 13 eyes (81.2%). The RPE band appeared intact in all eyes.
CONCLUSIONS: Considering the OCT features, available evidence, and embryology, we propose that the true nature of CHRRPE should be reanalyzed. In our series, CHRRPE was noted to be primarily a hamartoma arising from the inner retinal layers. A majority of cases were limited posteriorly by the OPL without any involvement of the outer retinal layers and RPE.

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PMID: 28669779 [Indexed for MEDLINE]

22: Chhabra YK, Sood S, Rathi O, Mahajan S. Effect of renal transplantation on cognitive function in hemodialysis patients: a longitudinal study. Int Urol Nephrol. 2017 Nov;49(11):2071-2078. doi: 10.1007/s11255-017-1700-1. Epub 2017 Sep 12. Erratum in: Int Urol Nephrol. 2017 Dec 8;:. PubMed PMID: 28900874.

BACKGROUND: The literature notes high prevalence of cognitive function (CF) impairment among hemodialysis patients. Renal transplantation by reversing metabolic factors should improve cognitive function; however, results in post-transplant patients are inconsistent. Lack of longitudinal studies, variable and small patient population, variable renal function and post-transplantation period and use of non-specific tests make results difficult to interpret. We looked at CF in stable hemodialysis patients just prior to live renal transplantation and approximately 3 months subsequently using well-validated electrophysiological study of P300 cognitive potential obtained by auditory oddball paradigm using multiple scalp electrodes.
METHODS: Ten healthy age- and gender-matched controls (group 1) and 20 end-stage kidney disease (ESKD) male patients on maintenance hemodialysis with no other comorbidities that affect CF were studied before (group 2) and 3 months after successful transplantation (group 3).
RESULTS: ESKD population had mean age of 29.7 ± 7.5 years, with mean dialysis vintage and post-transplant period being 10.3 ± 6.9 and 3.2 ± 0.4 months, respectively. Mean P300 latencies in groups 1, 2 and 3 were 319 ± 33.6, 348.6 ± 27.8 and 316.4 ± 33.4 ms, respectively ($P < 0.001$ group 1 vs 2 and group 2 vs 3; group 1 vs 3 NS). Mean P300 amplitude in groups 1, 2 and 3 was 27.9 ± 12.8, 13.4 ± 8.6 and 14.6 ± 9.4 μV, respectively ($P < 0.001$ group 1 vs 2 and group 1 vs 3; group 2 vs 3 NS). P300 latencies correlated negatively with hemoglobin and serum albumin.
CONCLUSIONS: ESKD patients have impaired CF as documented by prolonged P300 latencies. There was normalization of P300 latencies post-transplantation indicating role of uremic toxins in CF impairment.

DOI: 10.1007/s11255-017-1700-1
PMID: 28900874

23: Chowdhury UK, Avneesh S, Ray R, Reddy SM, Kalaivani M, Hasija S, Kumari L. A Comparative Study of Histopathological Changes in the Ascending Aorta and the Risk Factors Related to Histopathological Conditions and Aortic Dilatation in Patients with Tetralogy of Fallot and a Functionally Univentricular Heart. Heart Lung Circ. 2017 Sep 6. pii: S1443-9506(17)31354-9. doi: 10.1016/j.hlc.2017.08.011. [Epub ahead of print] PubMed PMID: 29111162.

BACKGROUND: The purposes of this study were to prospectively evaluate the histologic characteristics of the aortic wall of patients undergoing univentricular type of repair and compare the same with the findings observed in patients undergoing intracardiac repair of tetralogy of Fallot (TOF).
PATIENTS AND METHODS: Operatively excised full-thickness aortic wall tissue from 99 consecutive patients undergoing either intracardiac repair of TOF (group I; n=42) or univentricular repair (group II; n=57) were studied by light microscopy. Age at operation was 13 months to 28 years (mean 99.97±73.21months) for group I and 9 months to 25 years (mean 79.52±60.09) months for group II patients.
RESULTS: Dilatation of the ascending aorta was present in 85.7% patients with TOF and 91.2% patients with a univentricular heart. Seventeen (17.2%) aortic specimens were histologically normal and were used as normal controls (group I, n=5; group II, n=12). A lamellar count of less than 60 was associated with a sensitivity of 97.2% and a specificity of 66.7% in patients undergoing repair of TOF and a sensitivity of 84.6% and a specificity of 80% in patients undergoing univentricular type of repairs respectively. Patients undergoing intracardiac

repair of TOF and those undergoing univentricular repair exhibited 23.67 times (15.91-147.40) and 8.48 times (3.62-15.84) increased risk of aortic dilatation respectively.
CONCLUSIONS: Our findings indicate the existence of significant elastic fragmentation, muscle disarray, medionecrosis and fibrosis involving the ascending aortic media in patients with a functionally univentricular heart and dilated aorta. These histopathological changes are similar to those encountered in patients with TOF and dilated aorta.

DOI: 10.1016/j.hlc.2017.08.011
PMID: 29111162

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PMCID: PMC5684236
PMID: 29151680

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25: Datta G, Hossain ME, Asad M, Rathore S, Mohmmed A. Plasmodium falciparum OTU-like cysteine protease (PfOTU) is essential for apicoplast homeostasis and associates with noncanonical role of Atg8. Cell Microbiol. 2017 Sep;19(9). doi: 10.1111/cmi.12748. Epub 2017 May 17. PubMed PMID: 28423214.

The metabolic pathways associated with the mitochondrion and the apicoplast in Plasmodium, 2 parasite organelles of prokaryotic origin, are considered as suitable drug targets. In the present study, we have identified functional role of a novel ovarian tumour unit (OTU) domain-containing cysteine protease of Plasmodium falciparum (PfOTU). A C-terminal regulatable fluorescent affinity tag on native protein was utilised for its localization and functional characterization. Detailed studies showed vesicular localization of PfOTU and its association with the apicoplast. Degradation-tag mediated knockdown of PfOTU resulted in abnormal apicoplast development and blocked development of parasites beyond early-schizont stages in subsequent cell cycle; downregulation of PfOTU hindered apicoplast protein import. Further, the isoprenoid precursor-mediated parasite growth-rescue experiments confirmed that PfOTU knockdown specifically effect development of functional apicoplast. We also provide evidence for a possible biological function of PfOTU in membrane deconjugation of Atg8, which may be linked with the apicoplast protein import. Overall, our results show that the PfOTU is involved in apicoplast homeostasis and associates with the noncanonical function of Atg8 in maintenance of parasite apicoplast.

DOI: 10.1111/cmi.12748
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26: Dayal P, Balhara YPS. A naturalistic study of predictors of retention in treatment among emerging adults entering first buprenorphine maintenance treatment for opioid use disorders. J Subst Abuse Treat. 2017 Sep;80:1-5. doi:

10.1016/j.jsat.2017.06.004. Epub 2017 Jun 15. PubMed PMID: 28755768.

INTRODUCTION: Emerging adulthood (between the ages 18-25years) has been conceptualized as a specific developmental stage based on unique psychosocial characteristics. Opioids are commonly used drugs in this population. Few studies have reported predictors of retention in buprenorphine maintenance treatment among opioid-dependent emerging adults, particularly from India. Moreover, no study has examined outcomes with opioid maintenance treatment among emerging adults in non-clinical trial, naturalistic settings. The current study aimed to assess retention in buprenorphine maintenance treatment among emerging adults in a naturalistic setting. Also, it aimed to assess the factors associated with retention in treatment among these individuals.
METHODS: The current study was a retrospective cohort study conducted at a substance use disorder treatment centre in northern part of India. The patients who received buprenorphine maintenance treatment between 1st January 2012 and 31st December 2014 were eligible for inclusion in the current study. The follow-up data of these subjects were assessed up to and including 31st March 2015. Information was retrieved on socio-demographic variables. The information related to substance use included type of substance, duration of use, age of onset, motive of use, route of administration and source of procurement. Additionally, details of buprenorphine dose, dispensing pattern, induction settings were recorded. Cox regression analysis was carried out to assess the predictors of retention in buprenorphine maintenance treatment.
RESULTS: Of 68 emerging adults, 33.8% were retained in treatment at 90days, 19.1% at 6months and 11.7% at one year. After controlling for various covariates in adjusted Cox regression analysis, substance use in first degree relatives (AHR: 2.40, 95% CI 1.33-4.31), lower daily buprenorphine dose (AHR: 0.86, 95% CI 0.78-0.94) and past month injection drug use (AHR: 0.30, 95% CI 0.14-0.66) were found to be the significant predictors of treatment dropout.
CONCLUSIONS: The findings of the current study help understand the predictors of retention in buprenorphine maintenance treatment among emerging adults in a real-world situation. These findings will help guide formulation of responsive and relevant buprenorphine maintenance treatment program for the emerging adults.

DOI: 10.1016/j.jsat.2017.06.004
PMID: 28755768

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INTRODUCTION: Antiphospholipid antibodies (APLAs) have been variably reported in 14% to 75% of patients with immune thrombocytopenia (ITP). There is lack of Indian data on incidence of APLA in ITP.
OBJECTIVE: We studied the incidence of APLA in patients with pediatric and adult Indian ITP.
MATERIALS AND METHODS: We prospectively studied 100 patients including acute (n = 37), persistent (n = 13), and chronic (n = 50) ITP. Male to female ratio was 1.22:1. Median age was 18 years (1.5-56). All patients underwent investigations for lupus anticoagulant (LA), anticardiolipin (aCL) immunoglobulin G (IgG) and IgM antibodies, and anti-β2 glycoprotein 1 (β2GP1) IgG and IgM antibodies. Patients with secondary ITP were excluded. Bleeding manifestations were recorded. Patients with acute and persistent ITP were assessed for steroid response. Response rates were compared between APLA-positive and APLA-negative patients.
RESULTS: Antiphospholipid antibodies were detected in ~12% of patients with ITP: 8.1% (3 of 37) in acute, 0% (0 of 13) in persistent, and 18% (9 of 50) in chronic ITP. Anti-β2GP1 antibodies were most frequent (9%). Only 2 patients each were positive for anti-aCL antibodies and LA. Although platelet counts were

significantly higher in APLA-positive patients, there was no significant difference in bleeding between the APLA-positive versus APLA-negative patients with ITP. There was also no significant difference in steroid response between APLA-positive and APLA-negative patients with acute/persistent ITP. In the short follow-up (median 8 months), none of the APLA-positive patients developed thrombosis.
CONCLUSIONS: Incidence of APLA in Indian population was lower than reported in the West, which indicates that not all patients of ITP need to be subjected to these manifestations upfront at diagnosis.

DOI: 10.1177/1076029616643820
PMID: 27067744

28: Dwivedi DK, Kumar R, Dwivedi AK, Bora GS, Thulkar S, Sharma S, Gupta SD, Jagannathan NR. Prebiopsy multiparametric MRI-based risk score for predicting prostate cancer in biopsy-naive men with prostate-specific antigen between 4-10â€‰ng/mL. J Magn Reson Imaging. 2017 Sep 4. doi: 10.1002/jmri.25850. [Epub ahead of print] PubMed PMID: 28872226.

BACKGROUND: Risk calculators have traditionally utilized serum prostate-specific antigen (PSA) values in addition to clinical variables to predict the likelihood of prostate cancer (PCa).
PURPOSE: To develop a prebiopsy multiparametric MRI (mpMRI)-based risk score (RS) and a statistical equation for predicting the risk of PCa in biopsy-naive men with serum PSA between 4-10 ng/mL that may help reduce unnecessary biopsies.
STUDY TYPE: Prospective cross-sectional study.
SUBJECTS: In all, 137 consecutive men with PSA between 4-10 ng/mL underwent prebiopsy mpMRI (diffusion-weighted [DW]-MRI and MR spectroscopic imaging [MRSI]) during 2009-2015 were recruited for this study.
FIELD STRENGTH/SEQUENCE: 1.5T (Avanto, Siemens Health Care, Erlangen, Germany); T1 -weighted, T2 -weighted, DW-MRI, and MRSI sequences were used.
ASSESSMENT: All eligible patients underwent mpMRI-directed, cognitive-fusion transrectal ultrasound (TRUS)-guided biopsies.
STATISTICAL TESTS: An equation model and an RS were developed using receiver operating characteristic (ROC) curve analysis and a multivariable logistic regression approach. A 10-fold crossvalidation and simulation analyses were performed to assess diagnostic performance of various combinations of mpMRI parameters.
RESULTS: Of 137 patients, 32 were diagnosed with PCa on biopsy. Multivariable analysis, adjusted with positive pathology, showed apparent diffusion coefficient (ADC), metabolite ratio, and PSA as significant predictors of PCa ($P < 0.05$). A statistical equation was derived using these predictors. A simple 6-point mpMRI-based RS was derived for calculating the risk of PCa and it showed that it is highly predictive for PCa (odds ratio = 3.74, 95% confidence interval [CI]: 2.24-6.27, area under the curve [AUC] = 0.87). Both models (equation and RS) yielded high predictive performance (AUC ≥0.85) on validation analysis.
DATA CONCLUSION: A statistical equation and a simple 6-point mpMRI-based RS can be used as a point-of-care tool to potentially help limit the number of negative biopsies in men with PSA between 4 and 10 ng/mL.
LEVEL OF EVIDENCE: 1 Technical Efficacy: Stage 2 J. Magn. Reson. Imaging 2017.

DOI: 10.1002/jmri.25850
PMID: 28872226

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Spinocerebellar ataxia type 7 (SCA7) is a rare neurogenetic disorder caused by highly unstable CAG repeat expansion mutation in coding region of SCA7. We aimed to understand the effect of diverse ATXN7 cis-element in correlation with CAG expansion mutation of SCA7. We initially performed an analysis to identify the haplotype background of CAG expanded alleles using eight bi-allelic single nucleotide polymorphisms (SNPs) flanking an ATXN7-CAG expansion in 32 individuals from nine unrelated Indian SCA7 families and 88 healthy controls. Subsequent validation of the findings was performed in 89 ATXN7-CAG mutation carriers and in 119 unrelated healthy controls of Mexican ancestry. The haplotype analyses showed a shared haplotype background and C allele of SNP rs6798742 (approximately 6 kb from the 3'-end of CAG repeats) is in complete association with expanded, premutation, intermediate, and the majority of large normal (≥12) CAG allele. The C allele (ancestral/chimp allele) association was validated in SCA7 subjects and healthy controls from Mexico, suggesting its substantial association with CAG expanded and expansion-prone chromosomes. Analysis of rs6798742 and other neighboring functional SNPs within 6 kb in experimental datasets (Encyclopedia of DNA Elements; ENCODE) shows functional marks that could affect transcription as well as histone methylation. An allelic association of the CAG region to an intronic SNP in two different ethnic and geographical populations suggests a -cis factor-dependent mechanism in ATXN7 CAG-region expansion.

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PMID: 28597910 [Indexed for MEDLINE]

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BACKGROUND CONTEXT: Degenerative cervical myelopathy (DCM) is a progressive degenerative spine disease and the most common cause of spinal cord impairment in adults worldwide. There is a paucity of studies reporting on regional variations in demographics, clinical presentation, disease causation, and surgical effectiveness.
PURPOSE: The objective of this study was to evaluate differences in demographics, causative pathology, management strategies, surgical outcomes, length of hospital stay, and complications across four geographic regions.
STUDY DESIGN/SETTING: This is a multicenter international prospective cohort study.
PATIENT SAMPLE: This study includes a total of 757 symptomatic patients with DCM undergoing surgical decompression of the cervical spine.
OUTCOME MEASURES: The outcome measures are the Neck Disability Index (NDI), the Short Form 36 version 2 (SF-36v2), the modified Japanese Orthopaedic Association (mJOA) scale, and the Nurick grade.
MATERIALS AND METHODS: The baseline characteristics, disease causation, surgical approaches, and outcomes at 12 and 24 months were compared among four regions: Europe, Asia Pacific, Latin America, and North America.
RESULTS: Patients from Europe and North America were, on average, older than those from Latin America and Asia Pacific (p=.0055). Patients from Latin America had a significantly longer duration of symptoms than those from the other three regions (p<.0001). The most frequent causes of myelopathy were spondylosis and disc herniation. Ossification of the posterior longitudinal ligament was most prevalent in Asia Pacific (35.33%) and in Europe (31.75%), and hypertrophy of the ligamentum flavum was most prevalent in Latin America (61.25%). Surgical approaches varied by region; the majority of cases in Europe (71.43%), Asia

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

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Posterior subtalar dislocation is an exceedingly rare entity. Clinically, the appearance of the foot can simulate a complex fracture dislocation. It is important to recognize that not all posterior subtalar dislocations are true posterior dislocations. We report a true posterior subtalar dislocation in a 34-year-old female, managed promptly with closed reduction and resulting in an excellent functional outcome. A chronic dislocation or an irreducible dislocation may need open reduction.

DOI: 10.7860/JCDR/2017/27794.10553
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BACKGROUND: Controlled attenuation parameter (CAP) is a novel, noninvasive technique for assessing hepatic steatosis. However, its role in morbidly obese individuals is unclear. The effect of bariatric surgery on inflammation and fibrosis needs to be explored.
OBJECTIVES: To assess the utility of CAP for assessment of hepatic steatosis in morbidly obese individuals and evaluate the effect of bariatric surgery on hepatic steatosis and fibrosis.
SETTING: A tertiary care academic hospital.
METHODS: Baseline details of anthropometric data, laboratory parameters, FibroScan (XL probe), and liver biopsy were collected. Follow-up liver biopsy was done at 1 year.
RESULTS: Of the 124 patients screened, 76 patients were included; mean body mass index was 45.2 ± 7.1 kg/m2. FibroScan success rate was 87.9%. The median liver

stiffness measurement (LSM) and CAP were 7.0 (5.0-9.5) kPa and 326.5 (301-360.5) dB/m, respectively. On liver histopathology, severe steatosis and nonalcoholic steatohepatitis were present in 5.3% and 15.8%; significant fibrosis (≥stage 2) and cirrhosis in 39.5% and 2.6%, respectively. Area under receiver operator characteristic curve of LSM for prediction of significant fibrosis (F2-4 versus F0-1) and advanced fibrosis (F3-4 versus F0-2) was .65 (95% confidence interval [CI]: .52-.77) and .83 (95% CI: .72-.94), respectively. The area under receiver operator characteristic curve of CAP for differentiating moderate hepatic steatosis (S2-3 versus S0-1) and severe hepatic steatosis (S3 versus S0-2) was .74 (95% CI: .62-.86) and .82 (95% CI: .73-.91), respectively. At 1-year follow-up, 32 patients underwent liver biopsy. In these patients, there was significant improvement in hepatic steatosis (P = .001), lobular inflammation (P = .033), ballooning (P<.001), and fibrosis (P = .003). Nonalcoholic steatohepatitis was resolved in 3 of 4 (75%) patients. LSM and CAP significantly declined.
CONCLUSIONS: LSM and CAP are feasible and accurate at diagnosing advanced fibrosis and severe hepatic steatosis in morbidly obese individuals. Bariatric surgery is associated with significant improvement in LSM, CAP, steatohepatitis, and fibrosis.

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Postprocedural bleeding is a rare but life threatening complication of endoscopic cystogastrostomy which may require surgical management in some patients. The presence of adhesions and inflammation due to antecedent acute pancreatitis, difficult location of the bleeding site and breach in the posterior wall of stomach pose significant challenges during the surgical management. Here we have described the surgical approach and technique that we used to manage three patients who required surgery for life threatening bleeding after endoscopic cystogastrostomy.

DOI: 10.1080/08941939.2017.1362081
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Detection of metabolic pattern following decompressive craniectomy in severe traumatic brain injury: A microdialysis study. Brain Inj. 2017;31(12):1660-1666. doi: 10.1080/02699052.2017.1370553. Epub 2017 Sep 19. PubMed PMID: 28925731.

BACKGROUND: During colonoscopic screening, only macroscopic lesions will be identified, and these are usually the result of multiple genetic abnormalities. Magnification endoscopic detection of aberrant crypt foci (ACF), long before they acquire complex genetic abnormalities, is promising. However, the features of high-risk ACF-like lesions need to be identified.
MATERIALS AND METHODS: In the present cross-sectional study, grossly visible normal mucosal flaps were shaved from 152 colectomies, including 96 colorectal cancer (CRC) cases and 56 controls (22 control specimens with disease with malignant potential and 34 without malignant potential). Methylene and Alcian blue stains were performed directly on the unfixed mucosal flaps to identify ACF and mucin-depleted foci (MDF). Detailed topographic analyses, with immunohistochemical staining for β-catenin and cancer stem cell (CSC) markers (CD44, CD24, and CD166) were performed.
RESULTS: ACF, MDF, and β-catenin-accumulated crypts were detected more in specimens with adjacent CRC. The left colon had ACF with a larger diameter and greater crypt multiplicity, density, and gyriform pit pattern and were considered the high-risk ACF group. MDF, more commonly associated with dysplasia, is also a marker of possible carcinogenesis. The CD44 CSC marker was significantly upregulated in ACF specimens compared with normal controls. Our 3-tier ACF-only pit pattern classification system showed better linearity with mucosal dysplasia than did the 6-tier Kudo classification.
CONCLUSION: High-risk ACF, when detected during chromoendoscopic screening, should be followed up. CSCs might play an important role in pathogenesis. Larger studies and genotypic risk stratification for definite identification of high-risk ACF are needed.

DOI: 10.1016/j.clcc.2016.09.001
PMID: 27789195

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We report a case of a young man who allegedly consumed 100 mL of an indigenous pesticide which is used for the killing of rats in households in India. The constituents were azadirachtin oil (40%), tea oil (15%), pine oil (25%) and kerosene oil (20%). He presented to us with shortness of breath and altered sensorium and was found to have fMetHb (fraction of methaemoglobin) level of 80%, which has been postulated to have a fatal outcome. He responded to a low dose of methylene blue along with intravenous vitamin C and the level of fMetHb came down to 20% within 1 hour. His sensorium improved markedly with a decrease in fMetHb to non-toxic levels and he was discharged 5 days after admission. A literature review pertaining to these constituents individually or in combination causing methaemoglobinaemia is discussed in the context of this case.

DOI: 10.1136/bcr-2017-220802
PMID: 28942403

Conflict of interest statement: Competing interests: None declared.

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The drift kinetic energy of ionic flow through single ion channels cause vibrations of the pore walls which are observed as open-state current fluctuations (open-channel noise) during single-channel recordings. Vibration of the pore wall leads to transitions among different conformational sub-states of the channel protein in the open-state. Open-channel noise analysis can provide important information about the different conformational sub-state transitions and how biochemical modifications of ion channels would affect their transport properties. It has been shown that c-Jun N-terminal kinase-3 (JNK3) becomes activated by phosphorylation in various neurodegenerative diseases and phosphorylates outer mitochondrion associated proteins leading to neuronal apoptosis. In our earlier work, JNK3 has been reported to phosphorylate purified rat brain mitochondrial voltage-dependent anion channel (VDAC) in vitro and modify its conductance and opening probability. In this article we have compared the open-state noise profile of the native and the JNK3 phosphorylated VDAC using Power Spectral Density vs frequency plots. Power spectral density analysis of open-state noise indicated power law with average slope value $\alpha \approx 1$ for native VDAC at both positive and negative voltage whereas average α value < 0.5 for JNK3 phosphorylated VDAC at both positive and negative voltage. It is proposed that 1/f1 power law in native VDAC open-state noise arises due to coupling of ionic transport and conformational sub-states transitions in open-state and this coupling is perturbed as a result of channel phosphorylation.

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Percutaneous perforation of pulmonary valve, using 0.014" guidewires meant for coronary artery chronic total occlusion (CTO), is increasingly being performed for select cases of pulmonary atresia with intact ventricular septum (PA-IVS). Despite growing experience, procedural failures and complications are not uncommon. Even in infants treated successfully, the orifice created in the atretic pulmonary valve is eccentric. In this report, we present usefulness of coronary microcatheter in alignment of perforating coronary guidewire to the center of atretic pulmonary valve resulting in central perforation.

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

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The description of totally anomalous systemic venous connection is limited to case reports. In this review, we seek to clarify anatomic, physiologic, and

hemodynamic aspects of this extremely rare anomaly. We also present findings of two patients in whom connection of all the systemic veins was anomalous. In the first patient, with usual atrial arrangement, all systemic veins, including the coronary sinus, were connected anomalously to the morphologically left atrium. Limited left-to-right shunt across an atrial septal defect provided the only source of blood flow to the lungs. The diagnosis was established by saline contrast echocardiography and cardiac catheterization. Extreme hypoplasia of the right ventricle precluded corrective surgery, so we performed a bidirectional Glenn operation, along with atrial septectomy. The second patient had isomerism of the left atrial appendages, which creates problems in the definition in anatomic terms since the connection of the systemic veins can never be normal anatomically when both atriums possess a morphologically left appendage. Our patient, nonetheless, had all the systemic and pulmonary veins, connected to the left-sided atrial chamber which then connected to the left ventricle, thus producing hemodynamics of totally anomalous systemic venous connection. We propose an algorithm for evaluation of this hemodynamic combination and discuss management options. We also intend to clarify the potential differences between connection and drainage, with particular attention to the arrangement of atrial appendages. Even though the hemodynamics may be comparable, in anatomic terms, both systemic and pulmonary venoatrial connection will always be anomalous with isomeric atrial appendages.

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

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AIM: To evaluate phenotypic differences among familial and non-familial JOAG patients.
METHODS: First degree relatives of unrelated JOAG patients were screened for glaucoma and ocular hypertension. JOAG probands were grouped as familial or non-familial and phenotypic differences in terms of age of onset, gender, baseline untreated IOP, presence angle dysgenesis, and refractive error was compared between the two groups.
RESULTS: Out of 368 unrelated JOAG patients, 134 in whom all first degree relatives had been examined were included in the study. The non-familial JOAG (n = 96) had similar age of onset as familial JOAG (n = 38); (p = 0.076) but had greater male preponderance (p = 0.046), and had the higher baseline IOP (p = 0.044) compared to familial JOAG. However, on adjustment using the Bonferroni correction, the observed differences were not found to be significant. Both groups had similar proportion of patients with angle dysgenesis (p = 0.46) and high myopia (p = 0.72).
CONCLUSIONS: Non-familial JOAG were not found to be phenotypically different from the familial JOAG patients in this cohort.

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Influence of polymorphisms in the genes coding for imatinib transporters and metabolizing enzymes on cytogenetic relapse in patients with chronic myeloid leukemia (CML) is not known. One hundred and four patients (52 cases with cytogenetic relapse and 52 controls without relapse) with chronic-phase CML on imatinib therapy and have completed 5 years of follow-up were enrolled. The following single nucleotide polymorphisms (SNPs) were genotyped; C1236T, C3435T, G2677T/A in MDR1 gene and A6986G in CYP3A5 gene, using PCR-RFLP method and validated by direct gene sequencing. Imatinib trough levels were measured using LC-MS/MS. Patients with CC genotype for MDR1-C1236T polymorphism were at significantly higher risk for cytogenetic relapse [OR =4.382, 95% CI (1.145, 16.774), p=.022], while those with TT genotype for MDR1-C3435T polymorphism had significantly lower risk of relapse [OR =0.309, 95% CI (0.134, 0.708), p=.005]. Imatinib trough levels were lower in patients with relapse compared to those without relapse (1551.4±1324.1 vs. 2154.2±1358.3 ng/mL; p=.041). MDR1-C3435T genotype [adjusted-OR: 0.266; 95% CI (0.111, 0.636); p=.003] and trough levels (p=.014) were independent predictors of relapse in multivariate analysis. To conclude, C1236T and C3435T polymorphisms in MDR1 gene and trough levels significantly influence the risk of cytogenetic relapse. MDR1-C3435T genotype might emerge as a potential biomarker to predict the risk of cytogenetic relapse in patients with CML.

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OBJECTIVE: To identify risk factors for microbiologically confirmed intrathoracic tuberculosis in children.
METHODS: Children, 6 mo to 15 y of age, attending the out-patient department of a tertiary care centre in India, with probable intrathoracic tuberculosis were enrolled. Microbiological confirmation of tuberculosis was defined as positivity on smear (Ziehl-Neelsen staining) and/or Xpert MTB/RIF and/or MGIT-960 culture. Association of various factors with microbiological confirmation were assessed by univariate and multivariate analysis.

RESULTS: Microbiologic confirmation was documented in 39 (25%) of 153 patients enrolled. On univariate analysis, microbiological positivity was associated with female gender, higher mean (SD) age [136.6 (31.8) vs. 117.3 (41.4) mo], parenchymal lesion on chest radiograph, low body mass index for age, having symptoms of cough and weight loss, lower mean (SD) hemoglobin [10.4 (1.37) g/dl vs. 11(1.52) g/dl; p = 0.04], and higher mean (SD) monocyte: lymphocyte ratio [0.38 (0.30) vs. 0.24 (0.02); p = 0.37]. Higher proportion of microbiologically negative children were BCG vaccinated (95% vs. 79%; p = 0.002). On multivariate analysis, microbiological positivity showed significant association with low body mass index for age (p = 0.033) and higher monocyte: lymphocyte ratio (p = 0.037). CONCLUSIONS: Low body mass index for age and higher monocyte: lymphocyte ratios were associated with microbiological confirmation in children with intrathoracic tuberculosis.

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Psychiatric research has increased remarkably over recent decades to help in understanding the current trends and better therapeutic options for illness. On the other hand, there is also a trend toward higher rates of retraction of published papers in the recent years. Ethics is required to maintain and increase the overall quality and morality of research. Psychiatric research faces several unique ethical challenges. Ethical guidelines are very important tool of research which safeguards participants; however, there is a dearth of such guidelines in India. The present paper aims to review available ethical issues and guidelines pertaining to psychiatric research. A search was conducted on Pubmed using search terms (e.g., "ethics," "psychiatry," "research"). Relevant studies were selected for the review after manual screening of title/abstract. Additional sources were referred to using cross references and Google Scholar. Psychiatric research has several important ethical issues which are different from other medical disciplines. These issues are related to informed consent, confidentiality, conflict of interest, therapeutic misconception, placebo related, vulnerability, exploitation, operational challenges, among others. The current paper has made several recommendations to deal with ethical challenges commonly faced in psychiatric research. The ethical guidelines are utmost needed for Indian psychiatric research. Specific guidelines are lacking pertaining to psychiatric research. The issues and recommendations merit a further discussion and consideration.

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

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BACKGROUND: Gangliogliomas (GGs) are slow-growing glioneuronal tumors seen in children and young adults. They are associated with intractable epilepsy, and have recently been found to harbor BRAF (B- rapidly accelerated fibrosarcoma) gene mutations. However, the mammalian target of rapamycin (mTOR) signaling pathway, downstream of BRAF, has not been evaluated extensively in GGs.
MATERIALS AND METHODS: GG cases were retrieved, clinical data obtained, and histopathological features reviewed. Sequencing for BRAF V600E mutation, analysis of BRAF copy number by quantitative real-time polymerase chain reaction, and immunohistochemistry for mTOR pathway markers p-S6 and p-4EBP1 were performed.
RESULTS: Sixty-four cases of GG were identified (0.9% of central nervous system tumors). Of these, 28 had sufficient tumor tissue for further evaluation. Mixed glial and neuronal morphology was the commonest (64%) type. Focal cortical dysplasia was identified in the adjacent cortex (6 cases). BRAF V600E mutation was identified in 30% of GGs; BRAF copy number gain was observed in 50% of them. p-S6 and p-4EBP1 immunopositivity was seen in 57% cases each. Thus, mTOR pathway activation was seen in 81% cases, and was independent of BRAF alterations. 87% patients had Engel grade I outcome, while 13% had Engel grade II outcome. Both the Engel grade II cases analyzed showed BRAF V600E mutation.
CONCLUSION: BRAF V600E mutation is frequent in GGs, as is BRAF gain; the former may serve as a target for personalized therapy in patients with residual tumors, necessitating its assessment in routine pathology reporting of these tumors. Evidence of mTOR pathway activation highlights similarities in the pathogenetic mechanisms underlying GG and focal cortical dysplasia, and suggests that mTOR inhibitors may be of utility in GG patients with persistent seizures after surgery.

DOI: 10.4103/neuroindia.NI_207_17
PMID: 28879901

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NUT midline carcinomas (NMCs) are rare, poorly differentiated tumors with aggressive biological behavior and a characteristic molecular signature. Availability of NUT antibody has facilitated diagnosis of NMC without molecular testing. We report a series of head and neck NMCs diagnosed using NUT IHC at our institute, including one case with an unusual course. Immunohistochemistry for NUT was performed in nasal and sinonasal tumors with diagnoses of undifferentiated carcinoma, poorly differentiated squamous cell carcinoma and malignant neoplasm, not otherwise specified, to identify cases of NMC. Clinicopathological features were reviewed. Five cases of NMC were identified, accounting for 9.6% of poorly differentiated/undifferentiated carcinomas of the sinonasal region. These patients had a sex ratio of 2:3, and ranged in age from of 10 to 31 years (mean: 25.2 years). Patient 4 had previously been diagnosed with basal cell carcinoma arising in left nasolacrimal duct, and inverted papilloma of nasal cavity. She presented to us with a left lacrimal fossa mass extending into nasal cavity, which was diagnosed as NMC. NMC is a rare neoplasm, the awareness of which is imperative for pathologists to identify cases in which NUT IHC should be ordered. NUT IHC should be performed in all cases of a poorly differentiated carcinoma, particularly those with foci of squamous differentiation, irrespective of patient age and unusual tumor location, as seen

in one of our cases. Although considered a highly aggressive and lethal neoplasm, NMC can have a more prolonged clinical course on occasion.

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PURPOSE: To evaluate the role of umbilical cord serum (UCS) and autologous serum (AS) therapy in reepithelialization of corneal graft after keratoplasty in a randomized controlled trial.
METHODS: A total of 105 eyes with epithelial defect (ED) after keratoplasty (penetrating keratoplasty-67 and anterior lamellar keratoplasty-38) on the first postoperative day were included in the study. The eyes were randomized into three groups: UCS (n=35), AS (n=35), and artificial tears (AT) (n=35). All patients received standard postoperative medical therapy. The primary outcome measure was time to epithelialization, and secondary outcome measures were best-corrected visual acuity and graft clarity.
RESULTS: The ED healed completely in 103 eyes. The mean time for complete reepithelialization was 2.5±2.1, 3.1±2.2, and 4.5±1.4 days in UCS, AS, and AT groups, respectively. The mean percentage decrease in the size of the ED was significantly better in the UCS and AS groups as compared with the AT group (P=0.001). The rate of reepithelialization was comparable between the AS and UCS groups (P=0.3). On bivariate analysis, significant correlation was found between the mean size of postoperative ED, grade of the donor cornea (P=0.001), and the presence of preoperative ED (P=0.001). No complications were associated with the use of serum therapy.
CONCLUSION: Most of the cases of postkeratoplasty corneal ED can be managed with AT only. The serum therapy (AS/UCS) helps in the faster reepithelialization of postkeratoplasty ED as compared with AT and may be considered as a treatment option for early epithelial healing.

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Osteo-articular tuberculosis continues to be a major global pandemic, with its greatest impact in the third-world countries. Among osteo-articular tuberculosis, plantar localisation, particularly isolated involvement of the talus is an extremely rare event. We discuss the case of a 20-year-old male diagnosed with isolated tuberculosis of right talus without the radiological involvement of the distal tibia, fibula or calcaneum. The diagnosis was made with the help of magnetic resonance imaging and confirmed through core biopsy of the talus. He was treated with multi-drug antitubercular chemotherapy and ankle immobilization with

protected weight bearing with good results.

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

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BACKGROUND: The tuberculum sellae is a relatively common location for meningiomas. We assessed our experience with the use of transcranial resection, which, although criticized for its more invasive nature compared with endonasal approaches, may be the ideal approach in selected patients with tuberculum sellae meningiomas (TSMs).
METHODS: We retrospectively reviewed the charts of patients with TSMs treated by frontotemporal or bifrontal open cranial resection. Clinical, radiographic, and surgical variables were analyzed.
RESULTS: Forty-nine patients with a TSM treated by frontotemporal or bifrontal open cranial resection were identified. The mean patient age was 53.2 ± 14.0 years, and the mean duration of follow-up was 42.3 ± 45.4 months. The mean tumor volume was 12.4 ± 18.0 cm3. Optic canal invasion was seen in 46.9% of the patients, and 91.8% presented with visual deficits. Gross total resection (GTR) was achieved in 42 patients (85.7%), and near-total resection was performed in 7 patients (14.3%). Postoperatively, visual outcomes improved in 17 patients (34.7%), remained stable in 22 (44.9%), were intact in 6 (12.2%), and worsened in 1 (2.0%). Good outcome (Glasgow Outcome Scale [GOS] ≥4) was achieved by 46 of 49 patients (93%) at discharge and by 39 of 41 patients (95.1%) at 6 months. A total of 16 manageable and self-limiting complications occurred in 16 patients.
CONCLUSIONS: In most patients undergoing a frontotemporal approach, a GTR/Simpson grade I resection with manageable and self-limiting surgical complications, a good 6-month GOS in most patients, and improved to stable vision were seen at follow-up. Various treatment approaches can be considered for TSM resection, but the ability to decompress the optic canal and achieve a GTR makes the frontotemporal approach attractive in many cases.

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The significant advantages of percutaneous tracheostomy over surgical (open) tracheostomy has enabled its widespread acceptability and practice in intensive care units. Over the years, various modifications in the technique of percutaneous tracheostomy has increased its safety profile and reduced the overall complication rate. However, even though it is a bedside procedure, inappropriate patient selection and poor adherence to protocols can lead to

devastating complications. One such complication, namely pneumothorax, is often overlooked. In this article, we have highlighted all the possible etiologies of pneumothorax during percutaneous tracheostomy. A brief insight into some of the preventable strategies is also discussed.

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BACKGROUND & OBJECTIVES: Diagnosis of paroxysmal nocturnal haemoglobinuria (PNH), a rare haematopoietic stem cell disorder, is challenging in patients with bone marrow failure (BMF) syndrome like aplastic anaemia (AA). This study was conducted with the aim to test the efficacy of the newly recommended markers viz. anti-CD16 and CD66b antibody over the existing anti-CD55 and CD59 antibody for PNH diagnosis in India.
METHODS: This study was conducted on 193 suspected cases of PNH by flow cytometry using lyse wash technique to stain the granulocytes with CD16/CD66b and CD55/CD59.
RESULTS: Of the 193 suspected cases, 62 patients showed the presence of PNH clone. Forty six patients were detected by CD55/CD59/CD45, whereas 61 were detected by CD16/CD66b/CD45. CD16/CD66b detected 16 (25.8%) additional patients over CD55/CD59 ($P<0.05$) and was more sensitive in detecting the PNH clone with higher negative predictive value. Most of the patients (11/16) who were picked up by CD16/CD66b were of AA who had small clone sizes. Further, the PNH clones were more discreetly identified in CD16/CD66b plots than by CD55/CD59. Clone size assessed by CD16/CD66b which reflects the clinical severity of classical PNH (thrombosis/haemolysis), was more representative of the underlying clinical condition than CD55/59.
INTERPRETATION & CONCLUSIONS: In our experience of 62 patients of PNH, CD16/CD66b proved to be more efficacious in detecting PNH. The new panel was especially useful in monitoring PNH associated with BMF which had small clone sizes.

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PMID: 29355143

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Neurosurgical patients with suspected DIC receive large amount of transfusion support in form of red cell concentrates (RCC), platelet rich plasma (PRP) and fresh frozen plasma (FFP). However, there are very few studies which have studied the effect of blood components load in the outcome of the patient. We conducted a prospective observational study on 61 post operative neurosurgery patients suspected with DIC and had at least one deranged haemostatic parameter namely platelet count, prothrombin time, partial thromboplastin time and thrombin time. Their blood components load was co-related with the outcome and with the hemostatic derangements. Twenty-eight patients died in our study group. 19/28 died patients had DIC. The red cell load was significantly more in patients who died compared to those who were alive ($p = 0.041$). On the other hand, load of PRP as well as FFP was significantly different between the patients who were alive

and dead. This difference was further heightened when the DIC deaths were compared with the other patients. This is especially true for FFP transfusion which was significantly higher in DIC deaths (p = 0.006). Also, the number of FFPs received by neurosurgical patients suspected with DIC was significantly more in patients >2 coagulation abnormalities (p = 0.008). However, no correlation was found between PRP and RCC received and number of coagulation abnormalities present. To conclude, the load of FFP was maximum in patients with DIC deaths and the load of RCC was associated with overall mortality.

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PMCID: PMC5544652 [Available on 2018-09-01]
PMID: 28824246

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INTRODUCTION: Depression and diabetes are highly prevalent worldwide and often co-exist, worsening outcomes for each condition. Barriers to diagnosis and treatment are exacerbated in low and middle-income countries with limited health infrastructure and access to mental health treatment. The INtegrating DEPrEssioN and Diabetes treatmENT (INDEPENDENT) study tests the sustained effectiveness and cost-effectiveness of a multi-component care model for individuals with poorly-controlled diabetes and depression in diabetes clinics in India.
MATERIALS AND METHODS: Adults with diabetes, depressive symptoms (Patient Health Questionnaire-9 score≥10), and ≥1 poorly-controlled cardiometabolic indicator (either HbA1c≥8.0%, SBP≥140mmHg, and/or LDL≥130mg/dl) were enrolled and randomized to the intervention or usual care. The intervention combined collaborative care, decision-support, and population health management. The primary outcome is the between-arm difference in the proportion of participants achieving combined depression response (≥50% reduction in Symptom Checklist score from baseline) AND one or more of: ≥0.5% reduction in HbA1c, ≥5mmHg reduction in SBP, or ≥10mg/dl reduction in LDL-c at 24months (12-month intervention; 12-month observational follow-up). Other outcomes include control of individual parameters, patient-centered measures (i.e. treatment satisfaction), and cost-effectiveness.
RESULTS: The study trained seven care coordinators. Participant recruitment is complete - 940 adults were screened, with 483 eligible, and 404 randomized (196 to intervention; 208 to usual care). Randomization was balanced across clinic sites.
CONCLUSIONS: The INDEPENDENT model aims to increase access to mental health care and improve depression and cardiometabolic disease outcomes among complex patients with diabetes by leveraging the care provided in diabetes clinics in India (clinicaltrials.gov number: NCT02022111).

DOI: 10.1016/j.cct.2017.06.013
PMCID: PMC5580499 [Available on 2018-09-01]
PMID: 28642211

69: Kumar A, Bakhshi S, Agarwala S. Is Pre-operative Chemotherapy Desirable in all Patients of Wilms' Tumor? Indian J Pediatr. 2017 Sep;84(9):709-714. doi: 10.1007/s12098-017-2410-5. Epub 2017 Jul 8. PubMed PMID: 28687950.

The timing and role of chemotherapy in the management of Wilms' tumor has long been the matter of debate, with different groups showing equally comparable and encouraging results. Over the last decade, however, both the ideol-ogies seem to

be converging and the attempt has been to identify groups benefitting with pre-operative chemotherapy, as well as those, where upfront resection should be attempted. In this article authors intend to discuss pros and cons of both the strategies and their applicability in a resource poor setting in developing countries like India.

DOI: 10.1007/s12098-017-2410-5
PMID: 28687950

70: Kumar A, Singh M, Sharma MC, Chandra PS, Sharma BS, Mahapatra AK. Giant Bicompartmental Cystic Tentorial Schwannoma Mimicking a Meningioma. World Neurosurg. 2017 Sep;105:1038.e17-1038.e22. doi: 10.1016/j.wneu.2017.06.077. Epub 2017 Jun 20. PubMed PMID: 28642183.

BACKGROUND: Intracranial schwannomas most commonly arise from the vestibulocochlear nerve and less frequently from trigeminal, facial, and hypoglossal nerves. Intracranial schwannomas unrelated to cranial nerves are very rare; only approximately 50 cases have been reported in the literature. Tentorial schwannoma (TS) is even rarer, with only 13 cases reported to date. We present a rare case of giant TS.
CASE DESCRIPTION: A 21-year-old man presented with generalized headache and dizziness for the past 6 months and worsening of symptoms for the past 2 months. On evaluation, he was found to have a cystic lesion arising from the right tentorium with multiple internal septa and fluid levels, with both supratentorial and infratentorial extension. The presence of a dural tail sign and tentorial origin led us to make a preoperative diagnosis of tentorial meningioma. The patient underwent complete excision, and a diagnosis of TS was made based on histopathologic analysis.
CONCLUSIONS: TSs are extremely rare. Knowledge of radiologic and morphologic features can be helpful in making a preoperative diagnosis. The dural tail sign, which is considered a characteristic feature of meningioma, is commonly seen in TS as well, and thus TS should always be considered in the differential diagnosis of lesions arising from the tentorium.

DOI: 10.1016/j.wneu.2017.06.077
PMID: 28642183 [Indexed for MEDLINE]

71: Kumar R, Nair V, Gupta YK, Singh S. Anti-inflammatory and anti-arthritic activity of aqueous extract of Rosa centifolia in experimental rat models. Int J Rheum Dis. 2017 Sep;20(9):1072-1078. doi: 10.1111/1756-185X.12625. Epub 2015 Jul 27. PubMed PMID: 26222375.

AIM: The present study was carried out to evaluate the anti-inflammatory and antiarthritic activity of Rosa centifolia aqueous extract (RC) in a carrageenan-induced paw edema model and complete Freund's adjuvant (CFA)-induced arthritis.
METHODS: Anti-inflammatory activity of RC was evaluated using the carrageenan-induced paw edema model in rats. Arthritis was induced in rats by sub-plantar administration of CFA. Joint size was measured at regular intervals by using a micrometer screw gauge. Serum and ankle joints of rats immunized with CFA were collected and subjected to enzyme-linked immunosorbent assay for estimation of tumor necrosis factor (TNF)-α level and dot blot for secretory cytokines interleukin (IL)-1β and IL-6. An acute and 28-day oral toxicity study was carried out to evaluate the safety of the test drug.
RESULTS: Pre-treatment with RC produced a dose-dependent reduction in carrageenan-induced paw edema and CFA-induced arthritis models and was effective as indomethacin. RC also inhibited the delayed increase in joint diameter as seen in control and indomethacin-treated animals in CFA-induced arthritis. The expression of proinflammatory mediators TNF-α, IL-6 and IL-1β was also found to be less in the RC-treated group as compared to controls.

CONCLUSION: Based on these results, it was suggested that Rosa centifolia could be considered as a potential anti-inflammatory and anti-arthritic agent.

DOI: 10.1111/1756-185X.12625
PMID: 26222375

72: Kumar S, Singhal S, Kansal Y, Sharma D. Recurrent Vaginal Cuff Dehiscence in a Treated Case of Carcinoma Cervix. J Clin Diagn Res. 2017 Sep;11(9):QD01-QD02. doi: 10.7860/JCDR/2017/28389.10508. Epub 2017 Sep 1. PubMed PMID: 29207786; PubMed Central PMCID: PMC5713808.

Vaginal Cuff Dehiscence (VCD) is partial or total separation of anterior and posterior vaginal cuff layers. We report a case of recurrent vault cuff dehiscence in a patient of cervical carcinoma. A 60-year-old treated case of carcinoma cervix post surgery and radiotherapy was found to have vault dehiscence and intestinal prolapse second time during a routine speculum examination. She underwent an emergency laparotomy and closure of vault. Vaginal Cuff Dehiscence with Evisceration (VCDE) is a rare but potentially fatal complication following hysterectomy. Postoperative infection, poor technique, hematoma, coitus before healing, radiotherapy, corticosteroid therapy are the risk factors. Radiotherapy leads to progressive obliterative endarteritis and resultant tissue hypoxia. There is paucity of literature regarding the best management of VCD, but early corrective intervention is necessary. Patients and the treating physicians should be made aware of this possibility especially those receiving adjuvant radiation or cases of robotic or laparoscopic hysterectomies.

DOI: 10.7860/JCDR/2017/28389.10508
PMCID: PMC5713808
PMID: 29207786

73: Kumar V. Spontaneous Separation of ERM in Combined Hamartoma of Retina and Retinal Pigment Epithelium. Ophthalmology. 2017 Sep;124(9):1402. doi: 10.1016/j.ophtha.2017.03.008. PubMed PMID: 28823351.

74: Kumari P, Sikri K, Kaur K, Gupta UD, Tyagi JS. Sustained expression of DevR/DosR during long-term hypoxic culture of Mycobacterium tuberculosis. Tuberculosis (Edinb). 2017 Sep;106:33-37. doi: 10.1016/j.tube.2017.06.003. Epub 2017 Jun 27. PubMed PMID: 28802402.

DevR/DosR is a key mediator of 'dormancy' adaptation in Mycobacterium tuberculosis in response to gaseous stresses such as hypoxia that inhibit aerobic mode of respiration. In the present study, a temporal analysis over a 1 year period has revealed robust expression of representative DevR regulon genes devR, hspX and tgs1, during long-term 'dormancy' adaptation to hypoxia. Notably, a predominant proportion of long-term hypoxia-adapted bacteria were characterized by their inability to grow on solid media, accumulation of triacylglycerols and recovery of growth in liquid media. Persistent expression of HspX and the accumulation of triacylglycerols reveal a previously underappreciated role of DevR during adaptation to extended hypoxia, and endorse DevR as an effective target for thwarting the sustained survival of 'dormant' subpopulation of M. tuberculosis.

DOI: 10.1016/j.tube.2017.06.003
PMID: 28802402

75: Kundu R, Khanna P. Sepsis Awareness in India from Internet Search Trends:

Where Do We Stand? Indian J Crit Care Med. 2017 Sep;21(9):616-617. doi: 10.4103/ijccm.IJCCM_479_16. PubMed PMID: 28970666; PubMed Central PMCID: PMC5613618.

76: Lahlali R, Song T, Chu M, Yu F, Kumar S, Karunakaran C, Peng G. Evaluating Changes in Cell-Wall Components Associated with Clubroot Resistance Using Fourier Transform Infrared Spectroscopy and RT-PCR. Int J Mol Sci. 2017 Sep 26;18(10). pii: E2058. doi: 10.3390/ijms18102058. PubMed PMID: 28954397; PubMed Central PMCID: PMC5666740.

Clubroot disease is a serious threat to canola production in western Canada and many parts of the world. Rcr1 is a clubroot resistance (CR) gene identified recently and its molecular mechanisms in mediating CR have been studied using several omics approaches. The current study aimed to characterize the biochemical changes in the cell wall of canola roots connecting to key molecular mechanisms of this CR gene identified in prior studies using Fourier transform infrared (FTIR) spectroscopy. The expression of nine genes involved in phenylpropanoid metabolism was also studied using qPCR. Between susceptible (S) and resistance (R) samples, the most notable biochemical changes were related to an increased biosynthesis of lignin and phenolics. These results were supported by the transcription data on higher expression of BrPAL1. The up-regulation of PAL is indicative of an inducible defence response conferred by Rcr1; the activation of this basal defence gene via the phenylpropanoid pathway may contribute to clubroot resistance conferred by Rcr1. The data indicate that several cell-wall components, including lignin and pectin, may play a role in defence responses against clubroot. Principal components analysis of FTIR data separated non-inoculated samples from inoculated samples, but not so much between inoculated S and inoculated R samples. It is also shown that FTIR spectroscopy can be a useful tool in studying plant-pathogen interaction at cellular levels.

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PMCID: PMC5666740
PMID: 28954397

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.

77: Maharshi V, Hasan S. Nusinersen: The First Option Beyond Supportive Care for Spinal Muscular Atrophy. Clin Drug Investig. 2017 Sep;37(9):807-817. doi: 10.1007/s40261-017-0557-5. Review. PubMed PMID: 28755059.

Spinal muscular atrophy (SMA) is an autosomal recessive neuromuscular disorder characterized by degeneration of spinal motor neurons and poses significant adverse outcome in affected population. Survival motor neuron 1 (SMN1) protein encoded by SMN1 gene located on 5q13 is critical for survival and functioning of motor neurons. Almost identical gene SMN2, present on the same chromosome, produces a small truncated protein (SMN2) because of skipping of exon 7 from translation due to translation silent C6U substitution in exon 7 of SMN2 pre-mRNA transcript. Only 10% of the SMN2 mRNAs produce full length SMN2 protein by including exon 7 in healthy individuals. A large deletion or sometimes a point mutation in SMN1 gene is responsible for SMA. In this case the number of copies of SMN2 genes in an individual determines the severity of disease (the more the number of copies the less severe the disease). Nusinersen (ISIS 396443) binds to intron splicing silencer-N1 (ISS-N1; a site present ten nucleotides down to the junction of exon 7 and intron 7), modulating the splicing of SMN2 pre-mRNA transcript to increase the inclusion of exon 7, thereby increasing the production of full length SMN2 protein. Major evidence of its efficacy came from a sham controlled phase 3 clinical study ENDEAR. The study was stopped early based on significantly favorable results in interim analysis and all the patients were

transitioned to receive nusinersen in an ongoing open-label, phase 3 study, SHINE, which will evaluate the long-term efficacy, safety and tolerability of the drug. Nusinersen is globally the first drug approved (by the US FDA) for treatment of SMA in children and adults.

DOI: 10.1007/s40261-017-0557-5
PMID: 28755059

78: Malik MA, Gupta V, Shukla S, Kaur J. Glutathione S-transferase (GSTM1, GSTT1) polymorphisms and JOAG susceptibility: A case control study and meta-analysis in glaucoma. Gene. 2017 Sep 10;628:246-252. doi: 10.1016/j.gene.2017.07.028. Epub 2017 Jul 12. PubMed PMID: 28710033.

PURPOSE: Glutathione S transferase (GST) polymorphisms have been considered risk factors for the development of glaucoma. The aim of the present study was to investigate the association of glutathione S-transferase GSTT1 and GSTM1 genotypes with juvenile open-angle glaucoma (JOAG) in Indian patients.
METHODS: A case-control study was performed to investigate the associations of GSTM1 and GSTT1 in juvenile open-angle glaucoma. The genotype of GSTM1 and GSTT1 were determined in 73 juvenile open-angle glaucoma patients, and 70 controls matched by age and sex by polymerase chain reaction method. We also performed a meta-analysis of sixteen published studies on GSTM1 and GSTT1 and evaluated the association between the GSTM1 and GSTT1 polymorphisms and glaucoma (JOAG & POAG). Published literature from PubMed and other databases were retrieved. All studies evaluating the association between GSTM1 and GSTT1 polymorphisms and glaucoma (JOAG & POAG) risk were included. Pooled odds ratio (OR) and 95% confidence interval (CI) were calculated using random- or fixed-effects model.
RESULTS: In the present study, we observed there is no association of GSTM1 (OR=0.680; 95% CI=0.323-1.433; p=0.311) or GSTT1 (OR=0.698; 95% CI=0.307-1.586; p=0.391) with JOAG. In the present meta-analysis, significantly increased glaucoma (JOAG & POAG) risk was found among subjects carrying GSTM1 null genotype (OR=1.177; 95% CI=1.028-1.348; p=0.018) but not among subjects carrying GSTT1 deletion genotype (OR=1.186; 95% CI=0.992-1.417; p=0.061).
CONCLUSIONS: The present case-control study found that GSTM1 and GSTT1 polymorphism are not associated with JOAG risk in North Indian population. The present meta-analysis suggested that there might be a significant association of GSTM1 null genotype with glaucoma (JOAG & POAG) risk. To the best of our knowledge, this is the first study in the world to investigate role of GSTM1 and GSTT1 polymorphisms with JOAG susceptibility. Given the limited sample size, the associations between GST polymorphism and glaucoma risk needs further investigation.

DOI: 10.1016/j.gene.2017.07.028
PMID: 28710033 [Indexed for MEDLINE]

79: Manivannan P, Tyagi S, Chandra D, Mishra P, Pati HP, Saxena R. Flow cytometric analysis of patients with hereditary spherocytosis - an Indian scenario. Hematology. 2017 Sep 15:1-6. doi: 10.1080/10245332.2017.1376855. [Epub ahead of print] PubMed PMID: 28914173.

OBJECTIVES: Flow cytometry osmotic fragility test (FC-OFT) was a recently introduced screening test for hereditary spherocytosis (HS). This study was conducted to evaluate the utility of FC-OFT in all newly diagnosed cases of HS, to compare its diagnostic value with conventional OFT and to correlate with clinical disease severity.
METHODS: In this study, the percentage of residual red cells (%RRC) was measured using flow cytometer after creating a red cell suspension. Subsequently, this was spiked with deionized water for FC-OFT in all cases of HS (n = 40), healthy subjects (n = 40) and beta-thalassemia traits (BTT) (n = 20).
RESULTS: The receiver operator curve analysis defined the optimal cut-offs for

FC-OFT-derived indices, such as %RRC value (≤16.29%) and %RRC ratio (>1.72), for HS cases when compared with healthy subjects and BTT ($p < 0.05$). The FC-OFT (96%) achieved higher test efficiency than the conventional OF test (68.9%). A significant positive and a negative correlation were found between number of spherocytes/hpf and %RRC ratio ($p = 0.001$) and %RRC values ($p = 0.0486$). No significant correlation was observed between %RRC value ($p = 0.8934$), %RRC ratio ($p = 0.6348$) and HS disease severity score.
CONCLUSION: Our results suggest that FC-OFT could be the better screening test for HS cases in developing countries if flow cytometer is available.

DOI: 10.1080/10245332.2017.1376855
PMID: 28914173

80: Manivannan P, Ahuja A, Pati HP. Diagnosis of Paroxysmal Nocturnal Hemoglobinuria: Recent Advances. Indian J Hematol Blood Transfus. 2017 Dec;33(4):453-462. doi: 10.1007/s12288-017-0868-y. Epub 2017 Sep 8. Review. PubMed PMID: 29075054; PubMed Central PMCID: PMC5640555.

Paroxysmal nocturnal hemoglobinuria (PNH) is an acquired clonal hematopoietic stem cell disorder with its protean clinical manifestations. This is due to partial or complete absence of 'glycophosphatidyl-inositol-anchor proteins' (GPI-AP). The main aim of this review is to highlight various diagnostic modalities available, basic principle of each test and recent advances in the diagnosis of PNH. Recently among various tests available, the flow cytometry has become 'the gold standard' for PNH testing. In order to overcome the difficulties encountered by the testing and research laboratories throughout the world, International Clinical Cytometry Society has come up with guidelines regarding the indications for testing, protocol for sample collection, processing, panel of antibodies as well as gating strategies to be used, how to interpret the test and reporting format to be used. It is essential to test at least two GPI-linked markers on at least two different lineages particularly on red cells and granulocytes/monocytes. The fluorescent aerolysin combined with other monoclonal antibodies in multicolour flow cytometry offered an improved assay not only for diagnosis but also for monitoring of PNH clones. It is equally important to diagnose this rare entity with high index of suspicion.

DOI: 10.1007/s12288-017-0868-y
PMCID: PMC5640555 [Available on 2018-12-01]
PMID: 29075054

81: Maqbool M, War FA, Kumar M. Can We Call It "Stinky-finger Syndrome?" Indian J Psychol Med. 2017 Sep-Oct;39(5):663-664. doi: 10.4103/0253-7176.217025. PubMed PMID: 29200565; PubMed Central PMCID: PMC5688896.

Many accounts refer to insertion of finger into anus mostly for gratification from stimulation of prostate gland, but index case Mr. M. continued doing this to get rid of constipation that eventually led to feelings of guilt, stinky fingers, not able to defecate normally, and dysphoric emotions. Further research is needed to find out the phenomenology of this condition.

DOI: 10.4103/0253-7176.217025
PMCID: PMC5688896
PMID: 29200565

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

82: Menon V, Shanmuganathan B, Thamizh JS, Arun AB, Sarkar S. Efficacy of Adjunctive Single Session Counseling for Medically Unexplained Symptoms: A Randomized Controlled Trial. Indian J Psychol Med. 2017 Sep-Oct;39(5):641-647. doi: 10.4103/IJPSYM.IJPSYM_73_17. PubMed PMID: 29200561; PubMed Central PMCID: PMC5688892.

Context: Medically unexplained symptoms (MUS) are often poorly responsive to standard treatments.
Aim: The aim of the study is to assess short-term efficacy of adjunctive single session cognitive behavior therapy (CBT)-based counseling for patients with MUS.
Setting and Design: Randomized controlled trial at a psychosomatic clinic of a tertiary care hospital.
Materials and Methods: Patients with MUS were randomized to receive either the single session counseling (intervention group) (n = 41) or control group which received treatment as usual (n = 35). The counseling intervention focused on three areas - cognitive reattribution, shifting focus, and guided muscular relaxation and lasted around 30 min. The two groups were assessed at baseline and after 1 month for change in outcome measures.
Statistical Analysis Used: Repeated measures analysis of variance. P value was adjusted for multiple comparisons using Bonferroni correction and set at <0.01 for significance.
Results: Both groups did not differ on change in the primary outcome measure: Patient Health Questionnaire - 15 scores (P = 0.055). However, at follow-up, the intervention group showed statistically greater reduction in the number of workdays lost (P = 0.005). Trend level changes were noted for depressive symptom reduction only in the intervention group (P = 0.022).
Conclusions: One session CBT-based therapy demonstrates potentially important benefits over standard care among Indian patients with MUS. Further testing in larger samples with longer follow-up periods is therefore recommended.

DOI: 10.4103/IJPSYM.IJPSYM_73_17
PMCID: PMC5688892
PMID: 29200561

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

83: Misra S, Kumar A, Kumar P, Yadav AK, Mohania D, Pandit AK, Prasad K, Vibha D. Blood-based protein biomarkers for stroke differentiation: A systematic review. Proteomics Clin Appl. 2017 Sep;11(9-10). doi: 10.1002/prca.201700007. Epub 2017 May 29. Review. PubMed PMID: 28452132.

Computed tomography (CT) scan is the mainstay for diagnosis of stroke; but the facility of CT scan is not easily available. A blood-based biomarker approach is required to distinguish ischemic stroke (IS) from hemorrhagic stroke (HS) in pre-hospital settings.To conduct a systematic review of diagnostic utility of blood biomarkers for differential diagnosis of stroke.A comprehensive literature search was carried out till March 7, 2017 in PubMed, Cochrane, Medline, OVID, and Google Scholar databases. Methodological quality of each study was assessed using the modified Quality Assessment of Diagnostic Accuracy Studies questionnaire.Eighteen studies were identified relevant to our systematic review. Ten single biomarkers and seven panels of different biomarkers were identified which showed potential for differentiating IS and HS. Activated Protein C-Protein C Inhibitor Complex (APC-PCI) (sensitivity-96%), Glial Fibrillary Acidic Protein (GFAP) (specificity-100%) and a panel of APC-PCI & GFAP (sensitivity-71%) and Retinol Binding Protein 4 (RBP4) & GFAP (specificity- 100%) were found to have high sensitivity and specificity for differentiating the two stroke types.Our systematic review does not recommend the use of any blood biomarker for clinical purposes yet based on the studies conducted till date.

DOI: 10.1002/prca.201700007
PMID: 28452132

84: Mohanti BK, Thakar A, Kaur J, Bahadur S, Malik M, Gandhi AK, Bhasker S, Sharma A. Postoperative radiotherapy dose requirement in standard combined-modality practice for head and neck squamous cell carcinoma: Analysis of salient surgical and radiotherapy parameters in 2 cohorts. Head Neck. 2017

Sep;39(9):1788-1796. doi: 10.1002/hed.24836. Epub 2017 Jun 6. PubMed PMID: 28586138.

BACKGROUND: This study compared 2 sequential cohorts to identify the postoperative radiotherapy (PORT) dose requirement for head and neck squamous cell carcinoma (HNSCC).
METHODS: Two distinct PORT dose regimens were prescribed over 11 years; group 1 received 56 Gy or less, and group 2 received 60 Gy or more. The 2D and 3D techniques were used.
RESULTS: Two sequential cohorts consisted of 478 patients, with mean and median follow-up for group 1 and 2 as: 37.0 versus 28.5 months and 13.8 versus 13.1 months, respectively. Grades 3-4 mucosal toxicities (11.4% vs 28.3%), hospitalization (3.2% vs 17.4%), and nasogastric feeding (11.9% vs 29.7%) were higher in group 2. The 2-year disease-free survival (DFS) was higher with PORT >60 Gy for the following factors: age≤50 years (P=.041); ≥4 positive nodes (P=.029); and overall treatment time (OTT)≥100 days (P=.042).
CONCLUSION: Except for the benefit of doses >60 Gy for limited parameters, a lower PORT dose did not compromise the results and can potentially reduce the morbidities and healthcare costs.

DOI: 10.1002/hed.24836
PMID: 28586138

85: Mohanty K, Dada R, Dada T. Oxidative DNA damage and reduced expression of DNA repair genes: Role in primary open angle glaucoma (POAG). Ophthalmic Genet. 2017 Sep-Oct;38(5):446-450. doi: 10.1080/13816810.2016.1261904. Epub 2017 Jan 27. PubMed PMID: 28129013.

BACKGROUND: Controversy exists regarding the role of oxidative DNA damage and DNA repair in primary open angle glaucoma (POAG). We performed a case control study to test the hypothesis that oxidative DNA damage and base excision repair (BER) genes PARP1 and OGG1 are involved in POAG pathogenesis.
MATERIALS AND METHODS: The study included 116 POAG patients and 116 cataract patients as controls. The 8-hydroxy-2'-deoxyguanosine (8-OHdG) levels were measured by ELISA. RNA was extracted from blood by Trizol and converted to cDNA. The relative quantification of PARP1 and OGG1 genes normalized to β-actin was calculated by the 2-ΔCt method. Comparisons between groups were done by student's t-test and correlation between parameters was seen by Pearson correlation coefficient. All p values less than 0.05 were considered significant.
RESULTS: Mean levels of 8-OHdG were (patients v/s controls) 19.53 ± 1.40 vs. 15.0 ± 2.6 ng/ml in plasma and 8.55 ± 1.94 vs. 5.15 ± 1.09 ng/ml in aqueous humor ($p < 0.0001$). Expression levels of PARP1 (0.44 ± 0.05 vs. 0.88 ± 0.04) and OGG1 (0.46 ± 0.05 vs. 0.8 ± 0.01) were significantly ($p < 0.0001$) less in the patients than controls. There was a significant negative correlation between the expression levels of PARP1 and OGG1 with plasma and aqueous 8-OHdG. There was a strong positive correlation between plasma and aqueous 8-OHdG levels.
CONCLUSION: These results support our hypothesis that oxidative stress-induced DNA damage is associated with POAG. Increased oxidative DNA damage in POAG may be attributed to decreased expression of DNA repair enzymes of the BER pathway.

DOI: 10.1080/13816810.2016.1261904
PMID: 28129013 [Indexed for MEDLINE]

86: Mundra S, Thakur V, Bello AM, Rathore S, Asad M, Wei L, Yang J, Chakka SK, Mahesh R, Malhotra P, Mohmmed A, Kotra LP. A novel class of Plasmodial ClpP protease inhibitors as potential antimalarial agents. Bioorg Med Chem. 2017 Oct 15;25(20):5662-5677. doi: 10.1016/j.bmc.2017.08.049. Epub 2017 Sep 5. PubMed PMID: 28917450.

The prokaryotic ATP-dependent ClpP protease, localized in the relict plastid of

malaria parasite, represents a potential drug target. In the present study, we utilized in silico structure-based screening and medicinal chemistry approaches to identify a novel pyrimidine series of compounds inhibiting P. falciparum ClpP protease activity and evaluated their antiparasitic activities. Structure-activity relationship indicated that morpholine moiety at C2, an aromatic substitution at N3 and a 4-oxo moiety on the pyrimidine are important for potent inhibition of ClpP enzyme along with antiparasiticidal activity. Compound 33 exhibited potent antiparasitic activity (EC_{50} 9.0±0.2μM), a 9-fold improvement over the antiparasitic activity of the hit molecule 6. Treatment of blood stage P. falciparum cultures with compound 33 caused morphological and developmental abnormalities in the parasites; further, compound 33 treatment hindered apicoplast development indicating the targeting of apicoplast.

DOI: 10.1016/j.bmc.2017.08.049
PMID: 28917450

87: Mutha V, Salunkhe N, Kumar V, Chandra P. Posteriorly dislocated capsular tension ring leading to rhegmatogenous retinal detachment. BMJ Case Rep. 2017 Sep 21;2017. pii: bcr-2017-221634. doi: 10.1136/bcr-2017-221634. PubMed PMID: 28939620.

88: Nambirajan A, Suri V, Kataria V, Sharma MC, Goyal V. Progressive multifocal leukoencephalopathy in a 44-year old male with idiopathic CD4+ T-lymphocytopenia treated with mirtazapine and mefloquine. Neurol India. 2017 Sep-Oct;65(5):1061-1064. doi: 10.4103/neuroindia.NI_535_16. PubMed PMID: 28879898.

Progressive multifocal leukoencephalopathy (PML) is an opportunistic viral infection of the central nervous system caused by the reactivation of John Cunningham virus (JCV) in immunocompromised patients, most commonly in human immunodeficiency virus (HIV) infection, and less commonly in those receiving various immunosuppressive regimens. Prognosis of untreated PML is grave and the mainstay of treatment is the reversal of immunosuppression, usually by institution of antiretroviral drugs in HIV patients and cessation of immunosuppressive therapies in others. PML is increasingly being reported in those with minimal or occult immunosuppression. A small fraction of these patients meet the criteria for idiopathic CD4+ T-lymphocytopenia (ICL) after exclusion of all secondary causes of lymphocytopenia, including HIV. A 44-year-old previously healthy male presented with clinical and radiological features suggestive of PML. Cerebrospinal fluid samples were repeatedly negative for JCV. Immunohistochemistry on brain biopsy eventually confirmed PML. Despite extensive work-up, the only abnormality detected was an unexplained and persistently low absolute CD4+ T-lymphocyte count. Based on the limited available literature on the treatment of non-HIV PML, he was treated with a combination of mirtazapine and mefloquine with clinical improvement. Non-HIV PML remains relatively uncommon, and PML as a presenting feature of ICL is rare. It is important to document and follow these patients to be able to assess the relative risks associated with various causes and formulate effective therapeutic strategies.

DOI: 10.4103/neuroindia.NI_535_16
PMID: 28879898

89: Neelapu BC, Kharbanda OP, Sardana HK, Gupta A, Vasamsetti S, Balachandran R, Rana SS, Sardana V. The reliability of different methods of manual volumetric segmentation of pharyngeal and sinonasal subregions. Oral Surg Oral Med Oral Pathol Oral Radiol. 2017 Dec;124(6):577-587. doi: 10.1016/j.oooo.2017.08.020. Epub 2017 Sep 18. PubMed PMID: 29169513.

OBJECTIVES: The purpose of the study was to test the intra and interobserver reliability of manual volumetric segmentation of pharyngeal and sinonasal airway subregions.
STUDY DESIGN: Cone beam computed tomography data of 15 patients were collected from an orthodontic clinical database. Two experienced orthodontists independently performed manual segmentation of the airway subregions. Four performance measures were considered to test intra and interobserver reliability of manual segmentation: (1) volume correlation, (2) mean slice correlation, (3) percentage of volume difference, and (4) percentage of nonoverlapping voxels.
RESULTS: Intra and interobserver reliability was observed to be greater than 0.96 for the entire pharyngeal and sinonasal airway sinus subregions by both observers using the volume correlation method. Mean slice correlation was found to be greater than 0.84, showing the existence of nonoverlapping voxels. Therefore, the percentage of nonoverlapping voxels was used as a reliability measure and was found to be less than 20% for both intra and interobserver markings.
CONCLUSIONS: The mean slice correlation and percentage of nonoverlapping voxels were the most reliable performance measures of segmentation correctness. Volume correlation and the percentage of volume difference were observed to be the most reliable performance measures for volume correctness.

DOI: 10.1016/j.oooo.2017.08.020
PMID: 29169513

90: Negi N, Das BK. CNS: Not an immunoprivilaged site anymore but a virtual secondary lymphoid organ. Int Rev Immunol. 2018 Jan 2;37(1):57-68. doi: 10.1080/08830185.2017.1357719. Epub 2017 Sep 29. PubMed PMID: 28961037.

The cardinal dogma of central nervous system (CNS) immunology believed brain is an immune privileged site, but scientific evidences gathered so far have overturned this notion proving that CNS is no longer an immune privileged site, but rather an actively regulated site of immune surveillance. Landmark discovery of lymphatic system surrounding the duramater of the brain, made possible by high resolution live imaging technology has given new dimension to neuro-immunology. Here, we discuss the immune privilege status of CNS in light of the previous and current findings, taking into account the differences between a healthy state and changes that occur during an inflammatory response. Cerebrospinal fluid (CSF) along with interstitial fluid (ISF) drain activated T cells, natural killer cells, macrophages and dendritic cells from brain to regional lymph nodes present in the head and neck region. To keep an eye on inflammation, this system hosts an army of regulatory T cells (CD25+ FoxP3+) that regulate T cell hyper activation, proliferation and cytokine production. This review is an attempt to fill the gaps in our understanding of neuroimmune interactions, role of innate and adaptive immune system in maintaining homeostasis, interplay of different immune cells, immune tolerance, knowledge of communication pathways between the CNS and the peripheral immune system and lastly how interruption of immune surveillance leads to neurodegenerative diseases. We envisage that discoveries should be made not only to decipher underlying cellular and molecular mechanisms of immune trafficking, but should aid in identifying targeted cell populations for therapeutic intervention in neurodegenerative and autoimmune disorders.

DOI: 10.1080/08830185.2017.1357719
PMID: 28961037

91: Neuzil KM, Bresee JS, de la Hoz F, Johansen K, Karron RA, Krishnan A, Madhi SA, Mangtani P, Spiro DJ, Ortiz JR; WHO Preferred Product Characteristics for Next-Generation Influenza Vaccines Advisory Group. Data and product needs for influenza immunization programs in low- and middle-income countries: Rationale and main conclusions of the WHO preferred product characteristics for next-generation influenza vaccines. Vaccine. 2017 Oct 13;35(43):5734-5737. doi: 10.1016/j.vaccine.2017.08.088. Epub 2017 Sep 20. PubMed PMID: 28893473.

In 2017, WHO convened a working group of global experts to develop the Preferred Product Characteristics (PPC) for Next-Generation Influenza Vaccines. PPCs are intended to encourage innovation in vaccine development. They describe WHO preferences for parameters of vaccines, in particular their indications, target groups, implementation strategies, and clinical data needed for assessment of safety and efficacy. PPCs are shaped by the global unmet public health need in a priority disease area for which WHO encourages vaccine development. These preferences reflect WHO's mandate to promote the development of vaccines with high public health impact and suitability in Low- and Middle-Income Countries (LMIC). The target audience is all entities intending to develop or to achieve widespread adoption of a specific influenza vaccine product in these settings. The working group determined that existing influenza vaccines are not well suited for LMIC use. While many developed country manufactures and research funders prioritize influenza vaccine products for use in adults and the elderly, most LMICs do not have sufficiently strong health systems to deliver vaccines to these groups. Policy makers from LMICs are expected to place higher value on vaccines indicated for prevention of severe illness, however the clinical development of influenza vaccines focuses on demonstrating prevention of any influenza illness. Many influenza vaccine products do not meet WHO standards for programmatic suitability of vaccines, which introduces challenges when vaccines are used in low-resource settings. And finally, current vaccines do not integrate well with routine immunization programs in LMICs, given age of vaccine licensure, arbitrary expiration dates timed for temperate country markets, and the need for year-round immunization in countries with prolonged influenza seasonality. While all interested parties should refer to the full PPC document for details, in this article we highlight data needs for new influenza vaccines to better demonstrate the value proposition in LMICs.

DOI: 10.1016/j.vaccine.2017.08.088
PMID: 28893473

92: Pal R, Hameed S, Kumar P, Singh S, Fatima Z. Comparative lipidomics of drug sensitive and resistant Mycobacterium tuberculosis reveals altered lipid imprints. 3 Biotech. 2017 Oct;7(5):325. doi: 10.1007/s13205-017-0972-6. Epub 2017 Sep 16. PubMed PMID: 28955622; PubMed Central PMCID: PMC5602786.

Lipids are most adaptable molecules that acclimatize to the development of multidrug resistance (MDR). The precise molecular mechanism of this acclimatization achieved in Mycobacterium tuberculosis (MTB) remains elusive. Although lipids of MTB have been characterized to some details, a comparable resource does not exist between drug sensitive (DS) and resistant (DR) strains of MTB. Here, by employing high-throughput mass spectrometry-based lipidomic approach, we attempted to analyze the differential lipidome profile of DS and DR MTB clinical isolates. We analyzed three major classes of lipids viz fatty acyls, glycerophospholipids and glycerolipids and their respective subclasses. Notably, we observed differential fatty acyls and glycerophospholipids as evident from increased mycolic acids phosphatidylinositol mannosides, phosphatidylinositol, cardiolipin and triacylglycerides abundance, respectively, which are crucial for MTB virulence and pathogenicity. Considering the fact that 30% of the MTB genome codes for lipid, this comprehensive lipidomic approach unravels extensive lipid alterations in DS and DR that will serve as a resource for identifying biomarkers aimed at disrupting the functions of MTB lipids responsible for MDR acquisition in MTB.

DOI: 10.1007/s13205-017-0972-6
PMCID: PMC5602786 [Available on 2018-10-01]
PMID: 28955622

93: Paliwal S, Kakkar A, Sharma R, Airan B, Mohanty S. Differential reduction of

reactive oxygen species by human tissuespecific mesenchymal stem cells from different donors under oxidative stress. J Biosci. 2017 Sep;42(3):373-382. PubMed PMID: 29358551.
Clinical trials using human Mesenchymal Stem Cells (MSCs) have shown promising results in the treatment of various diseases. Different tissue sources, such as bone marrow, adipose tissue, dental pulp and umbilical cord, are being routinely used in regenerative medicine. MSCs are known to reduce increased oxidative stress levels in pathophysiological conditions. Differences in the ability of MSCs from different donors and tissues to ameliorate oxidative damage have not been reported yet. In this study, for the first time, we investigated the differences in the reactive oxygen species (ROS) reduction abilities of tissue-specific MSCs to mitigate cellular damage in oxidative stress. Hepatic Stellate cells (LX-2) and cardiomyocytes were treated with Antimycin A (AMA) to induce oxidative stress and tissue specific MSCs were co-cultured to study the reduction in ROS levels. We found that both donor's age and source of tissue affected the ability of MSCs to reduce increased ROS levels in damaged cells. In addition, the abilities of same MSCs differed in LX-2 and cardiomyocytes in terms of magnitude of reduction of ROS, suggesting that the type of recipient cells should be kept in consideration when using MSCs in regenerative medicine for treatment purposes.

PMID: 29358551

94: Parakh N, Utagi B, Arava S, Verma S, Karthikeyan G, Singh S, Bhargava B, Ray R, Patel CD, Bahl VK. Clinical significance of intracoronary thrombus aspirated during primary percutaneous intervention: An immunohistopathological study. Cardiovasc Revasc Med. 2017 Sep 22. pii: S1553-8389(17)30376-7. doi: 10.1016/j.carrev.2017.09.009. [Epub ahead of print] PubMed PMID: 29113867.

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

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

95: Pathak P, Kumar A, Jha P, Purkait S, Faruq M, Suri A, Suri V, Sharma MC, Sarkar C. Genetic alterations related to BRAF-FGFR genes and dysregulated MAPK/ERK/mTOR signaling in adult pilocytic astrocytoma. Brain Pathol. 2017 Sep;27(5):580-589. doi: 10.1111/bpa.12444. Epub 2017 Jan 6. PubMed PMID: 27608415.

Pilocytic astrocytomas occur rarely in adults and show aggressive tumor behavior. However, their underlying molecular-genetic events are largely uncharacterized. Hence, 59 adult pilocytic astrocytoma (APA) cases of classical histology were studied (MIB-1 LI: 1%-5%). Analysis of BRAF alterations using qRT-PCR, confirmed KIAA1549-BRAF fusion in 11 (19%) and BRAF-gain in 2 (3.4%) cases. BRAF-V600E mutation was noted in 1 (1.7%) case by sequencing. FGFR1-mutation and FGFR-TKD duplication were seen in 7/59 (11.9%) and 3/59 (5%) cases, respectively. Overall 36% of APAs harbored BRAF and/or FGFR genetic alterations. Notably, FGFR related genetic alterations were enriched in tumors of supratentorial region (8/25, 32%) as compared with other locations (P = 0.01). The difference in age of cases with FGFR1-mutation (Mean age ± SD: 37.2 ± 15 years) vs. KIAA1549-BRAF fusion (Mean age ± SD: 25.1 ± 4.1 years) was statistically significant (P = 0.03). Combined BRAF and FGFR alterations were identified in 3 (5%) cases. Notably, the cases with more than one genetic alteration were in higher age group (Mean age ± SD: 50 ± 12 years) as compared with cases with single genetic alteration (Mean age ± SD: 29 ± 10; P = 0.003). Immunopositivity of p-MAPK/p-MEK1 was found in all the cases examined. The pS6-immunoreactivity, a marker of mTOR activation was observed in 34/39 (87%) cases. Interestingly, cases with BRAF and/or FGFR related alteration showed significantly lower pS6-immunostatining (3/12; 25%) as compared with those with wild-type BRAF and/or FGFR (16/27; 59%) (P = 0.04). Further, analysis of seven IDH wild-type adult diffuse astrocytomas (DA) showed FGFR related genetic alterations in 43% cases. These and previous results suggest that APAs are genetically similar to IDH wild-type adult DAs. APAs harbor infrequent BRAF alterations but more frequent FGFR alterations as compared with pediatric cases. KIAA1549-BRAF fusion inversely correlates with increasing age whereas FGFR1-mutation associates with older age. Activation of MAPK/ERK/mTOR signaling appears to be an important oncogenic event in APAs and may be underlying event of aggressive tumor behavior. The findings provided a rationale for potential therapeutic advantage of targeting MAPK/ERK/mTOR pathway in APAs.

DOI: 10.1111/bpa.12444
PMID: 27608415

96: Patil M, Ganger A, Sharma S, Saxena R. Metastatic renal cell carcinoma presenting as one-and-a-half syndrome. Indian J Ophthalmol. 2017 Sep;65(9):895-897. doi: 10.4103/ijo.IJO_347_17. PubMed PMID: 28905844; PubMed Central PMCID: PMC5621283.

We report a case of 43-year-old male, presented with sudden onset binocular diplopia on lateral gazes. Ocular examination showed features of ipsilateral one-and-a-half syndrome. Comprehensive systemic work in conjunction with magnetic resonance imaging of the brain illustrated irregular mixed solid and cystic lesions in the brainstem, possibly indicative of brain metastases. Further imaging revealed hidden renal cell carcinoma as a primary neoplasm, which led to secondary manifestations.

DOI: 10.4103/ijo.IJO_347_17
PMCID: PMC5621283
PMID: 28905844 [Indexed for MEDLINE]

97: Pol MM, Chawla LU, Rathore YS, Goel R. Combined caesarean with splenectomy in pregnancy with portal hypertension: defining plausibility. BMJ Case Rep. 2017 Sep 15;2017. pii: bcr-2017-220561. doi: 10.1136/bcr-2017-220561. PubMed PMID: 28918404.

24-year-old woman at 28 weeks gestation was referred from peripheral hospital with diagnosis of pregnancy with portal hypertension. She had received multiple transfusion for pancytopaenia in the past and had undergone endoscopic sclerotherapy for oesophageal varices. Initially, she was admitted in our hospital at 28 weeks gestation for blood transfusion and was evaluated by multispecialty team of doctors. She was advised splenectomy for transfusion-dependent pancytopaenia secondary to hypersplenism in non-cirrhotic portal hypertension. She was readmitted at 36 weeks gestation. A decision for caesarean was taken owing to failed induction of labour at 38 weeks gestation. She underwent combined caesarean with splenectomy. Mother and child had an uneventful postoperative recovery and were discharged on ninth postoperative day. Preconceptional counselling, treatment of oesophageal varices and multispecialty approach was paramount in the management. Combined caesarean with splenectomy is feasible and cost-effective treatment associated with improved quality of life. Prospective clinical trials are essential to prove safety and efficacy of treatment.

DOI: 10.1136/bcr-2017-220561
PMID: 28918404

Conflict of interest statement: Competing interests: None declared.

98: Prabhakaran D, Roy A, Praveen PA, Ramakrishnan L, Gupta R, Amarchand R, Kondal D, Singh K, Sharma M, Shukla DK, Tandon N, Reddy KS, Krishnan A. 20-Year Trend of CVD Risk Factors: Urban and Rural National Capital Region of India. Glob Heart. 2017 Sep;12(3):209-217. doi: 10.1016/j.gheart.2016.11.004. Epub 2017 Apr 11. PubMed PMID: 28411147.

BACKGROUND: The World Health Organization and the Government of India have set targets to reduce burden of noncommunicable diseases. Information on population level trend of risk factors would provide insights regarding the possibility of achieving them.
OBJECTIVE: This study aimed to determine the population trends of cardiovascular disease risk factors in the National Capital Region of Delhi over 2 decades.
METHODS: Two representative cross-sectional surveys were conducted among men and women ages 35 to 64 years, residing in the urban and rural areas (survey 1 [1991 to 1994] and survey 2 [2010 to 2012]) using similar methodology. The urban sample was collected from the Municipal Corporation of Delhi, and the rural sample was from the Ballabgarh block of the adjoining state of Haryana. A total of 3,048 and 2,052 subjects of urban areas and 2,487 and 1,917 subjects of rural areas were surveyed in surveys 1 and 2, respectively. Behavioral (smoking and alcohol use), physical (overweight, abdominal obesity, and raised blood pressure), and biochemical risk factors (raised fasting blood glucose and raised total cholesterol) were measured using standard tools.
RESULTS: Urban and rural prevalence of overweight, alcohol use, raised blood pressure, and blood glucose increased with increases in age-standardized mean body mass index (urban: 24.4 to 26.0 kg/m2; rural: 20.2 to 23.0 kg/m2), systolic blood pressure (urban: 121.2 to 129.8 mm Hg; rural: 114.9 to 123.1 mm Hg), diastolic blood pressure (urban: 74.3 to 83.9 mm Hg; rural: 73.1 to 82.3 mm Hg), and fasting glucose (urban: 101.2 to 115.3 mg/dl; rural: 83.9 to 103.2 mg/dl). The smoking prevalence increased in the rural male population. Raised total cholesterol declined in urban and increased significantly in rural populations.

CONCLUSIONS: The study indicates an overall worsening of population levels of all cardiovascular disease risk factors in National Capital Region over past 20 years, though some signs of stabilization and reversal are seen in urban Delhi.

DOI: 10.1016/j.gheart.2016.11.004
PMID: 28411147

99: Pramanik R, Agarwala S, Gupta YK, Thulkar S, Vishnubhatla S, Batra A, Dhawan D, Bakhshi S. Metronomic Chemotherapy vs Best Supportive Care in Progressive Pediatric Solid Malignant Tumors: A Randomized Clinical Trial. JAMA Oncol. 2017 Sep 1;3(9):1222-1227. doi: 10.1001/jamaoncol.2017.0324. PubMed PMID: 28384657.

Importance: Although oral metronomic chemotherapy is often used in progressive pediatric solid malignant tumors, a literature review reveals that only small single-arm retrospective or phase 1 and 2 studies have been performed. Skepticism abounds because of the lack of level 1 evidence.
Objectives: To compare the effect of metronomic chemotherapy on progression-free survival (PFS) with that of placebo in pediatric patients with primary extracranial, nonhematopoietic solid malignant tumors that progress after at least 2 lines of chemotherapy.
Design, Setting, and Participants: A double-blinded, placebo-controlled randomized clinical trial was conducted from October 1, 2013, through December 31, 2015, at the cancer center at All India Institute of Medical Sciences in children aged 5 to 18 years with primary extracranial, nonhematopoietic solid malignant tumors that progressed after at least 2 lines of chemotherapy and had no further curative options.
Interventions: One arm received a 4-drug oral metronomic regimen of daily celecoxib and thalidomide with alternating periods of etoposide and cyclophosphamide, whereas the other arm received placebo. Disease status was assessed at baseline, 9 weeks, 18 weeks, and 27 weeks or at clinical progression.
Main Outcomes and Measures: The primary end point was PFS as defined by the proportion of patients without disease progression at 6 months, and PFS duration and overall survival (OS) were secondary end points.
Results: A total of 108 of the 123 patients screened were enrolled, with 52 randomized to the placebo group (median age, 15 years; 40 male [76.9%]) and 56 to the metronomic chemotherapy group (median age, 13 years; 42 male [75.0%]). At a median follow-up of 2.9 months, 100% of the patients had disease progression by 6 months in the placebo group vs 96.4% in the metronomic chemotherapy group (P=.24). Median PFS and OS in the 2 groups was similar (hazard ratio [HR], 0.69; 95% CI, 0.47-1.03 [P=.07] for PFS; and HR, 0.74; 95% CI, 0.50-1.09 [P=.13] for OS). In post hoc subgroup analysis, cohorts receiving more than 3 cycles (HR for PFS, 0.46; 95% CI, 0.23-0.93; P=.03) and those without a bone sarcoma (ie, neither primitive neuroectodermal tumor nor osteosarcoma) (HR for PFS, 0.39; 95% CI, 0.18-0.81; P=.01) appeared to benefit from metronomic chemotherapy.
Conclusions and Relevance: Metronomic chemotherapy does not improve 6-month PFS, compared with placebo, among pediatric patients with extracranial progressive solid malignant tumors . However, patients without bone sarcoma and those able to tolerate therapy for more than 3 cycles (9 weeks) benefit.
Trial Registration: clinicaltrials.gov Identifier: NCT01858571.

DOI: 10.1001/jamaoncol.2017.0324
PMID: 28384657 [Indexed for MEDLINE]

100: Purkait S, Mallick S, Joshi PP, Mallick S, Murugan NV, Sharma MC, Suri V, Mishra B, Mathur SR. Retroperitoneal and mediastinal follicular dendritic cell sarcoma: report of 3 cases with review of literature. Hematol Oncol. 2017 Sep;35(3):374-379. doi: 10.1002/hon.2275. Epub 2015 Dec 7. Review. PubMed PMID: 26639109.

Follicular dendritic cell sarcoma (FDCS) is a rare malignant histiocytic proliferation of antigen presenting follicular dendritic cell. It is an uncommon primary malignancy first described by Monda et al. in 1986. Most commonly reported cases are lymph nodal. Occasional cases occur in extra nodal sites. Here, we describe the clinicopathological features, histomorphology and outcome of three patients with extranodal FDCS along with a concise review of literature on the topic. All three patients were adult females. Two patients were in third decade, and one had age of 50 years. Among the three cases, two cases are presented as retroperitoneal mass and one as mediastinal mass. CT scans revealed heterogeneously enhancing masses. All the cases showed ovoid to spindle neoplastic cells arranged predominantly in whorling, fascicular and storiform patterns with inflammatory infiltrate. Immunohistochemically, the tumor cells are positive for CD21, CD23, CD35 and Clustrin. In view of rarity and variable clinical presentation in FDCS, accurate diagnosis is necessary. Copyright © 2015 John Wiley & Sons, Ltd.

DOI: 10.1002/hon.2275
PMID: 26639109 [Indexed for MEDLINE]

101: Rai AK, Singh A, Saxena A, Seth T, Raina V, Mitra DK. Exonal switch down-regulates the expression of CD5 on blasts of acute T cell leukaemia. Clin Exp Immunol. 2017 Dec;190(3):340-350. doi: 10.1111/cei.13019. Epub 2017 Sep 5. PubMed PMID: 28752543; PubMed Central PMCID: PMC5680060.

To date, CD5 expression and its role in acute T cell lymphoblastic leukaemia (T-ALL) have not been studied closely. We observed a significant reduction in surface expression of CD5 (sCD5) on leukaemic T cells compared to autologous non-leukaemic T cells. In this study, we have shown the molecular mechanism regulating the expression and function of CD5 on leukaemic T cells. A total of 250 patients suffering from leukaemia and lymphoma were immunophenotyped. Final diagnosis was based on their clinical presentation, morphological data and flow cytometry-based immunophenotyping. Thirty-nine patients were found to be of ALL-T origin. Amplification of early region of E1A and E1B transcripts of CD5 was correlated with the levels of surface and intracellular expression of CD5 protein. Functional studies were performed to show the effect of CD5 blocking on interleukin IL-2 production and survival of leukaemic and non-leukaemic cells. Lack of expression of sCD5 on T-ALL blasts was correlated closely with predominant transcription of exon E1B and significant loss of exon E1A of the CD5 gene, which is associated with surface expression of CD5 on lymphocytes. High expression of E1B also correlates with increased expression of cytoplasmic CD5 (cCD5) among leukaemic T cells. Interestingly, we observed a significant increase in the production of IL-2 by non-leukaemic T cells upon CD5 blocking, leading possibly to their increased survival at 48 h. Our study provides understanding of the regulation of CD5 expression on leukaemic T cells, and may help in understanding the molecular mechanism of CD5 down-regulation.

DOI: 10.1111/cei.13019
PMCID: PMC5680060 [Available on 2018-12-01]
PMID: 28752543 [Indexed for MEDLINE]

102: Rai R, Dubey S, Santosh KV, Biswas A, Mehrotra V, Rao DN. Design and synthesis of multiple antigenic peptides and their application for dengue diagnosis. Biologicals. 2017 Sep;49:81-85. doi: 10.1016/j.biologicals.2017.08.005. Epub 2017 Aug 18. PubMed PMID: 28818423.

Major difficulty in development of dengue diagnostics is availability of suitable antigens. To overcome this, we made an attempt to develop a peptide based

diagnosis which offers significant advantage over other methods. With the help of in silico methods, two epitopes were selected from envelope protein and three from NS1 protein of dengue virus. These were synthesized in combination as three multiple antigenic peptides (MAPs). We have tested 157 dengue positive sera confirmed for NS1 antigen. MAP1 showed 96.81% sera positive for IgM and 68.15% positive for IgG. MAP2 detected 94.90% IgM and 59.23% IgG positive sera. MAP3 also detected 96.17% IgM and 59.87% IgG positive sera. To the best of our knowledge this is the first study describing the use of synthetic multiple antigenic peptides for the diagnosis of dengue infection. This study describes MAPs as a promising tool for the use in serodiagnosis of dengue.

DOI: 10.1016/j.biologicals.2017.08.005
PMID: 28818423

103: Rajeshwari M, Xess I, Sharma MC, Jain D. Acid-Fastness of Histoplasma in Surgical Pathology Practice. J Pathol Transl Med. 2017 Sep;51(5):482-487. doi: 10.4132/jptm.2017.07.11. Epub 2017 Sep 14. PubMed PMID: 28934824; PubMed Central PMCID: PMC5611531.

BACKGROUND: Histoplasmosis (HP) is diagnosed by visualizing intracellular microorganisms in biopsy and/or culture. Periodic-acid Schiff (PAS) and Gomori methenamine silver (GMS) staining methods are routinely used for identification. The acid-fast property of Histoplasma was identified decades ago, but acid-fast staining has not been practiced in current surgical pathology. Awareness of the acid-fast property of Histoplasma, which is due to mycolic acid in the cell wall, is important in distinguishing Histoplasma from other infective microorganisms. Here, we examined acid-fastness in previously diagnosed cases of Histoplasma using the Ziehl-Neelsen (ZN) stain and correlated those findings with other known fungal stains.
METHODS: All cases diagnosed as HP were retrieved and reviewed along with ZN staining and other fungal stains. We also stained cases diagnosed with Cryptococcus and Leishmania as controls for comparison.
RESULTS: A total of 54 patients ranging in age from 11 to 69 years were examined. The most common sites of infection were the skin, adrenal tissue, and respiratory tract. Of the total 43 tissue samples, 20 (46.5%) stained positive with the ZN stain. In viable cases, a significant proportion of microorganisms were positive while necrotic cases showed only rare ZN-positive yeasts. In comparison to PAS and GMS stains, there was a low burden of ZN-positive yeasts. Cryptococcus showed characteristic ZN staining and all cases of Leishmania were negative.
CONCLUSIONS: Although the morphology of fungal organisms is the foundation of identification, surgical pathologists should be aware of the acid-fast property of fungi, particularly when there is the potential for confusion with other infective organisms.

DOI: 10.4132/jptm.2017.07.11
PMCID: PMC5611531
PMID: 28934824

104: Ray D, Roy D, Sindhu B, Sharan P, Banerjee A. Neural Substrate of Group Mental Health: Insights from Multi-Brain Reference Frame in Functional Neuroimaging. Front Psychol. 2017 Sep 28;8:1627. doi: 10.3389/fpsyg.2017.01627. eCollection 2017. PubMed PMID: 29033866; PubMed Central PMCID: PMC5625015.

Contemporary mental health practice primarily centers around the neurobiological and psychological processes at the individual level. However, a more careful consideration of interpersonal and other group-level attributes (e.g., interpersonal relationship, mutual trust/hostility, interdependence, and cooperation) and a better grasp of their pathology can add a crucial dimension to our understanding of mental health problems. A few recent studies have delved

into the interpersonal behavioral processes in the context of different psychiatric abnormalities. Neuroimaging can supplement these approaches by providing insight into the neurobiology of interpersonal functioning. Keeping this view in mind, we discuss a recently developed approach in functional neuroimaging that calls for a shift from a focus on neural information contained within brain space to a multi-brain framework exploring degree of similarity/dissimilarity of neural signals between multiple interacting brains. We hypothesize novel applications of quantitative neuroimaging markers like inter-subject correlation that might be able to evaluate the role of interpersonal attributes affecting an individual or a group. Empirical evidences of the usage of these markers in understanding the neurobiology of social interactions are provided to argue for their application in future mental health research.

DOI: 10.3389/fpsyg.2017.01627
PMCID: PMC5625015
PMID: 29033866

105: Reeta KH, Singh D, Gupta YK. Chronic treatment with taurine after intracerebroventricular streptozotocin injection improves cognitive dysfunction in rats by modulating oxidative stress, cholinergic functions and neuroinflammation. Neurochem Int. 2017 Sep;108:146-156. doi: 10.1016/j.neuint.2017.03.006. Epub 2017 Mar 8. PubMed PMID: 28284975.

The present study investigated the neuroprotective effects of taurine, an essential amino acid for growth and development of central nervous system. Intracerebroventricular streptozotocin (ICV-STZ) model of cognitive impairment was used in male Wistar rats (270 ± 20 g). Morris water maze, elevated plus maze and passive avoidance paradigm were used to assess cognitive performance. Taurine (40, 60 and 120 mg/kg) was administered orally for 28 days following STZ administration on day 1. Oxidative stress parameters (malondialdehyde, glutathione, nitric oxide and superoxide dismutase) and cholinesterases (acetylcholinesterase and butyrylcholinesterase) activity were measured at end of the study in the cortex and hippocampus. Levels of TNF-α, IL-1β, expression of rho kinase-II (ROCK-II), glycogen synthase kinase-3β (GSK-3β) and choline acetyltransferase (ChAT) were studied in cortex and hippocampus. STZ caused significant cognitive impairment as compared to normal control. Chronic administration of taurine attenuated STZ-induced cognitive impairment. Increased oxidative stress and increased levels of TNF-α, IL-1β induced by STZ were also significantly attenuated by taurine. Taurine significantly ($p < 0.05$) decreased the STZ-induced increased expression of ROCK-II in cortex and hippocampus. Further, STZ-induced increased activity of cholinesterases was significantly ($p < 0.001$) mitigated by taurine. STZ decreased the expression of ChAT in hippocampus which was significantly ($p < 0.05$) reversed by taurine. However, GSK-3β expression was not altered by either STZ or taurine. The present study indicates that taurine exerts a neuroprotective role against STZ-induced cognitive impairment in rats. This effect is probably mediated by modulating oxidative stress, cholinesterases, inflammatory cytokines and expression of ROCK-II. Thus, this study suggests a potential of chronic taurine administration in cognitive impairment of Alzheimer's type.

DOI: 10.1016/j.neuint.2017.03.006
PMID: 28284975

106: Roy M, Kumar S, Bhatla N, Ray MD, Kumar L, Jain D, Phulware R, Mathur SR. Androgen Receptor Expression in Endometrial Stromal Sarcoma: Correlation With Clinicopathologic Features. Int J Gynecol Pathol. 2017 Sep;36(5):420-427. doi: 10.1097/PGP.0000000000000353. PubMed PMID: 28114189.

Endometrial stromal sarcoma (ESS) is a rare neoplasm comprising only 0.2% to 1%

of all uterine malignancies and occurs in women between 42 and 59 yr of age. ESSs frequently express estrogen receptor (ER) and progesterone receptor (PR). However, the published literature contains scant data on the expression and therapeutic/prognostic role of androgen receptor (AR) in ESSs. We undertook this study to characterize the expression of AR along with ER and PR in ESSs and correlate it with clinicopathologic features. The clinical details, slides, and blocks of 25 tumors from 24 patients (September 2010 to February 2016) were retrieved. The diagnosis and grade of ESS were reviewed and immunohistochemistry performed with anti-ER, PR, and AR antibodies. Ages ranged from 18 to 50 yr, with a mean age of 36 yr. Low-grade ESS (LGESS) and high-grade ESS (HGESS) were diagnosed in 15 and 9 patients, respectively. An 18-yr-old woman who initially had LGESS suffered a pelvic recurrence; that exhibited high-grade morphology. Our patients, especially those with HGESS, were much younger compared with published worldwide data. ER, PR, and AR immunoreactivity was observed in 14 (93.3%), 12 (80%), and 11 (73.3%) LGESSs, respectively. This is in contrast to HGESSs, in which 5 (50%) tumors had a triple-negative hormonal profile. AR, like ER and PR, was more frequently expressed in LGESS as compared with HGESS. Whether AR, in addition to ER and PR receptor status, may help guide adjuvant hormonal therapy needs further elucidation.

DOI: 10.1097/PGP.0000000000000353
PMID: 28114189

107: Saha SK, Panwar R, Kumar A, Pal S, Ahuja V, Dash NR, Makharia G, Sahni P. Early colectomy in steroid-refractory acute severe ulcerative colitis improves operative outcome. Int J Colorectal Dis. 2018 Jan;33(1):79-82. doi: 10.1007/s00384-017-2903-8. Epub 2017 Sep 17. PubMed PMID: 28920181.

PURPOSE: Up to a third of patients with acute severe ulcerative colitis (ASUC) fail to respond to intensive steroid therapy and eventually require a salvage colectomy. We have previously reported that the mortality of emergency colectomy can be decreased by offering it within the first week of intensive medical therapy. We implemented this policy and report the results of our experience.
METHODS: The clinical records of all patients with ASUC who underwent emergency colectomy after failure of medical therapy between January 2005 and July 2015 were extracted from a prospectively maintained database. The data were analysed with regard to duration of intensive medical therapy, timing of surgery, in-hospital mortality and post-operative complications.
RESULTS: Eighty-eight patients underwent emergency surgery for ASUC after failed medical therapy. Of these, 75 (85.2%) were operated within 7 days of initiation of intensive medical therapy [n = 51 (58%) were operated < 5 days]. One patient who was operated on day 8 following steroid therapy died postoperatively. The current post-operative mortality of 1.1% (1/88) was significantly lower than the mortality noted in the previously recorded retrospective case series [8/51 (15.6%); p = 0.001]. In addition, the incidence of overall (9/13 vs. 23/75; p = 0.012) and clinically significant (12/75 vs. 6/13; p = 0.022) complications was significantly higher in patients operated after 7 days as compared to those operated within 7 days.
CONCLUSION: The policy of early colectomy, within 7 days, in patients with ASUC who fail to respond to intensive steroid-based therapy improves perioperative outcomes with significantly low in-hospital mortality and morbidity.

DOI: 10.1007/s00384-017-2903-8
PMID: 28920181

108: Sarangi SC, Joshi D, Kumar R, Kaleekal T, Gupta YK. Pharmacokinetic and pharmacodynamic interaction of hydroalcoholic extract of Ocimum sanctum with valproate. Epilepsy Behav. 2017 Oct;75:203-209. doi: 10.1016/j.yebeh.2017.08.018. Epub 2017 Sep 1. PubMed PMID: 28867572.

For effective control of seizures, antiepileptic drugs (AEDs) are administered at higher dose which is associated with several adverse effects. This study

envisaged antiepileptic and neuroprotective potential of Tulsi, a commonly used herb for its immunomodulatory property. The optimal dose of Ocimum sanctum hydroalcoholic extract (OSHE) was determined using maximal electroshock seizure (MES)- and pentylenetetrazol (PTZ)-induced seizure models in Wistar rats (200-250g) after administering OSHE (200-1000mg/kg) orally for 14days. For interaction study, OSHE optimal dose in combination with maximum and submaximal therapeutic doses of valproate was administered for 14days. Serum levels of valproate were estimated using HPLC for pharmacokinetic study. For pharmacodynamic interaction, antiepileptic effect on above seizure models, neurobehavioral effect using Morris water maze, passive avoidance and elevated plus maze tests, and antioxidant capacity were assessed. Ocimum sanctum hydroalcoholic extract 1000mg/kg was found to be optimal providing 50% protection against both MES- and PTZ-induced seizures. Combination of OSHE with valproate did not alter antiepileptic efficacy of valproate significantly. However, the combination showed better memory retention potential in neurobehavioral tests and protection against oxidative stress compared with valproate-alone-treated groups. Pharmacokinetic parameters did not reveal any significant change in combination group compared with valproate alone. Ocimum, although having per se antiepileptic action, did not affect antiepileptic action of valproate in combination. However, combination treatment has an edge over valproate alone-better neurobehavioral function and reduced oxidative stress-predicting adjuvant potential of Ocimum in epilepsy treatment.

DOI: 10.1016/j.yebeh.2017.08.018
PMID: 28867572

109: Sarkar S, Lal R, Varshney M, Balhara YPS. Tramadol for maintenance in opioid dependence: A retrospective chart review. J Opioid Manag. 2017 Sep/Oct;13(5):329-334. doi: 10.5055/jom.2017.0401. PubMed PMID: 29199398.

BACKGROUND AND AIMS: Tramadol is an opioid agonist which can be potentially used for maintenance treatment of patients with opioid use disorders. This chart review presents the characteristics of individuals with an ICD 10 diagnosis of opioid dependence who were maintained on tramadol for a period of at least 6 months.
METHODS: Records of patients seeking treatment for opioid dependence from the outpatient clinic of the National Drug Dependence Treatment Centre, Ghaziabad, India were screened. One hundred consecutive patients who received tramadol for more than 6 months were included.
RESULTS: The sample comprised exclusively of males and had a mean age of 40.9 years. The median dose of tramadol at initiation and continuation was 300 mg/day. Sixty-two patients achieved complete abstinence during the course of treatment. Greater age, longer duration of opioid use, and better follow-up adherence were associated with abstinent status. The rates of abstinence were higher among those presenting with natural opioid use as compared to others (prescription opioid use or heroin use).
CONCLUSION: Tramadol can be an alternative medication for harm reduction in select group of patients with opioid dependence. Further research is required to strengthen the evidence base of rational use of tramadol for maintenance treatment of patients with opioid dependence.

DOI: 10.5055/jom.2017.0401
PMID: 29199398

110: Sarkar S, Balhara YPS, Kumar S, Saini V, Kamran A, Patil V, Singh S, Gyawali S. Internalized stigma among patients with substance use disorders at a tertiary care center in India. J Ethn Subst Abuse. 2017 Sep 12:1-14. doi: 10.1080/15332640.2017.1357158. [Epub ahead of print] PubMed PMID: 28898165.

Internalized stigma among individuals with substance use disorders is a major barrier for accessing mental health services. This study aimed to assess internalized stigma among individuals with substance use disorders and to assess the relationship of internalized stigma with the quality of life. This cross-sectional study recruited 201 patients with a clinical diagnosis of at least opioid or alcohol use disorder according to Diagnostic and Statistical Manual 5 at a public-funded tertiary care center in India. The study participants were interviewed using a sociodemographic questionnaire, the Internalized Stigma of Mental Illness Scale (ISMIS), and the World Health Organization's Quality of Life (WHOQOL-Bref) questionnaire. Seven participants (3.5% of the sample) had mild stigma according to ISMI scores, 62 (30.8%) had moderate stigma, and 132 (65.7%) had severe stigma. The various quality-of-life domains generally had a negative correlation with the internalized stigma scores. Participants using opioids as the primary substance of use were more likely to have severe internalized stigma. The experience of internalized stigma and dissatisfaction with quality of life is quite high among people suffering with substance use disorders in India. These results emphasize the need for interventions to reduce internal perception of stigma and improve the quality of life of individuals with substance use disorders.

DOI: 10.1080/15332640.2017.1357158
PMID: 28898165

111: Saunders JB, Hao W, Long J, King DL, Mann K, Fauth-BÃ¼hler M, Rumpf HJ, Bowden-Jones H, Rahimi-Movaghar A, Chung T, Chan E, Bahar N, Achab S, Lee HK, Potenza M, Petry N, Spritzer D, Ambekar A, Derevensky J, Griffiths MD, Pontes HM, Kuss D, Higuchi S, Mihara S, Assangangkornchai S, Sharma M, Kashef AE, Ip P, Farrell M, Scafato E, Carragher N, Poznyak V. Gaming disorder: Its delineation as an important condition for diagnosis, management, and prevention. J Behav Addict. 2017 Sep 1;6(3):271-279. doi: 10.1556/2006.6.2017.039. Epub 2017 Aug 17. PubMed PMID: 28816494; PubMed Central PMCID: PMC5700714.

Online gaming has greatly increased in popularity in recent years, and with this has come a multiplicity of problems due to excessive involvement in gaming. Gaming disorder, both online and offline, has been defined for the first time in the draft of 11th revision of the International Classification of Diseases (ICD-11). National surveys have shown prevalence rates of gaming disorder/addiction of 10%-15% among young people in several Asian countries and of 1%-10% in their counterparts in some Western countries. Several diseases related to excessive gaming are now recognized, and clinics are being established to respond to individual, family, and community concerns, but many cases remain hidden. Gaming disorder shares many features with addictions due to psychoactive substances and with gambling disorder, and functional neuroimaging shows that similar areas of the brain are activated. Governments and health agencies worldwide are seeking for the effects of online gaming to be addressed, and for preventive approaches to be developed. Central to this effort is a need to delineate the nature of the problem, which is the purpose of the definitions in the draft of ICD-11.

DOI: 10.1556/2006.6.2017.039
PMCID: PMC5700714
PMID: 28816494

112: Sawarkar DP, Janmatti S, Kumar R, Singh PK, Gurjar HK, Kale SS, Sharma BS, Mahapatra AK. Cavernous malformations of central nervous system in pediatric patients: our single-centered experience in 50 patients and review of literature. Childs Nerv Syst. 2017 Sep;33(9):1525-1538. doi: 10.1007/s00381-017-3429-7. Epub 2017 Jun 20. PubMed PMID: 28634821.

PURPOSE: Cavernous malformations (CMs) are rare developmental cerebrovascular malformations of the central nervous system with a childhood prevalence of 0.3 to 0.53%. Our purpose was to assess the clinical features and microsurgical outcome

in pediatric central nervous system (CNS) CMs.
MATERIAL AND METHODS: We retrospectively enrolled all the CM patients admitted to our institute from 1 January 2001 to 31 December 2014. Data was analyzed for their clinical features and surgical outcome.
RESULTS: A total of 50 patients with CMs (30 supratentorial, 14 infratentorial, and 6 spinal) with a mean age of 14 years (3-18 years, SD ±4.64) were enrolled into the study. Most of these patients (78%) were male. Size varied from 1.2 to 6 cm. Three patients had multiple CMs. Symptoms of CMs were site specific. Seizure was the most common symptom (63.3%) of CMs at supratentorial location followed by headache (46%) and neurodeficiency (26%), while all brainstem and spinal CMs presented with neurodeficiencies. History of clinically significant acute hemorrhage was present in 19.2% of supratentorial (ST) superficial CMs, 50% of ST deep CMs, 25% of cerebellar CMs, 44.4% of brainstem CMs, and 50% of spinal CMs. Forty-five CMs in 44 patients were surgically excised. Their follow-up ranged from 6 to 162 months (mean 47.2 months, SD ±53). All supratentorial CM patients showed improvement in their symptoms. Patients with preoperative seizure showed good seizure control with Engel scale I in 16 (94.1%) and Engel scale II in 1 (5.9%). In infratentorial (IT) and spinal CM patients, 92.3 and 66.7% had improvement in their neurodeficiencies, respectively. There was no mortality in our series.
CONCLUSION: Microsurgical excision of CNS CM results in excellent neurological outcome in pediatric patients. Early intervention is necessary in spinal CMs for better outcome.

DOI: 10.1007/s00381-017-3429-7
PMID: 28634821

113: Saxena A, Desai A, Narvencar K, Ramakrishnan S, Thangjam RS, Kulkarni S, Jacques' E Costa AK, Mani K, Dias A, Sukharamwala R. Echocardiographic prevalence of rheumatic heart disease in Indian school children using World Heart Federation criteria - A multi site extension of RHEUMATIC study (the e-RHEUMATIC study). Int J Cardiol. 2017 Dec 15;249:438-442. doi: 10.1016/j.ijcard.2017.09.184. Epub 2017 Sep 24. PubMed PMID: 28966041.

OBJECTIVES: Rheumatic heart disease (RHD) continues to be major public health burden in developing world. Echocardiographic screening in school children has shown that subclinical RHD cases are several times more than clinical cases. Recent reports have used World Heart Federation (WHF) criteria. Objective of present study was to determine RHD prevalence using WHF criteria in Indian children.
METHODS: Children (5-15years) from randomly selected schools across four sites were included. After focused clinical evaluation, echocardiography was performed using WHF criteria in all children. Images/loops of abnormal cases were analyzed independently by an additional experienced cardiologist. Children with murmur and confirmatory echocardiography were categorized 'clinical RHD'; those with abnormal echocardiography alone were labeled 'subclinical RHD'.
RESULTS: Among 16,294 children included, mean age was 10.8 ± 2.9years; 55.1% were males; 11,405 (70%) were from rural areas and 3978 (24.4%) were from government schools. We detected RHD by echocardiography in 125 children [prevalence: 7.7/1000 (95% CI 6.3, 9.0)]. Borderline RHD was present in 93 children (5.7/1000, 95% CI 4.6, 6.9), definite RHD in 32 (2/1000, 95% CI 1.2, 2.6), and clinical RHD in six [0.36/1000, 95% CI: 0.1-0.7]. On univariate analysis, older age, female gender, and higher waist circumference were associated while on multivariate analysis, older age (OR 1.18, 95% CI: 1.09, 1.26) and female gender (OR 1.61, 95% CI: 1.13, 2.3) were associated with RHD.
CONCLUSION: RHD prevalence varies in different parts of India. Echocardiographic prevalence is several times higher than clinical and underscores importance of echocardiographic screening in community.

DOI: 10.1016/j.ijcard.2017.09.184

PMID: 28966041

114: Shalimar, Kedia S, Mahapatra SJ, Nayak B, Gunjan D, Thakur B, Acharya SK. Severity and Outcome of Acute-on-Chronic Liver Failure is Dependent on the Etiology of Acute Hepatic Insults: Analysis of 368 Patients. J Clin Gastroenterol. 2017 Sep;51(8):734-741. doi: 10.1097/MCG.0000000000000823. PubMed PMID: 28296656.

BACKGROUND: Acute-on-chronic liver failure (ACLF) may be precipitated by various hepatic insults. The present study evaluated the outcomes of ACLF with different acute insults.
PATIENTS AND METHODS: A total of 368 ACLF patients were included. Data collected included etiologies of acute hepatic insult and underlying chronic liver disease, and organ failure. Model for end-stage liver disease (MELD), chronic liver failure consortium (CLIF)-C ACLF, and acute physiology and chronic health evaluation (APACHE) II scores were calculated. Predictors of survival were assessed by the Cox proportional hazard model.
RESULTS: The most frequent acute insult was active alcohol consumption [150 (40.8%) patients], followed by hepatitis B virus (HBV) [71 (19.3%) patients], hepatitis E virus (HEV) superinfection [45 (12.2%) patients], autoimmune hepatitis flare [17 (4.6%) patients], antituberculosis drugs [16 (4.3%) patients], and hepatitis A virus superinfection [2 (0.5%) patients]; 67 (18.2%) cases were cryptogenic. Alcohol-ACLF and cryptogenic-ACLF were more severe. Median CLIF-C, MELD, and APACHE II scores in alcohol-ACLF and cryptogenic-ACLF were significantly higher than those in HBV-ACLF and HEV-ACLF (CLIF-C: 47.1, 47.4 vs. 42.9, 42.0, P=0.002; MELD: 29, 29.9 vs. 28.9, 25.2, P=0.02; APACHE II: 16.5, 18.0 vs. 12, 14, P<0.001, respectively). Frequencies of kidney and brain failures were also higher in alcohol/cryptogenic-ACLF than in HBV/HEV-ACLF (kidney failure: 35.3%/34.3% vs. 23.9%/11.1%, P=0.009; brain failure: 26.0%/22.4% vs. 15.5%/4.4%, P=0.01, respectively). Mortality in the alcohol-ACLF group was the highest (64.0%), followed by that in the cryptogenic-ACLF (62.7%), HBV-ACLF (45.1%), and HEV-ACLF (17.8%) groups (P<0.001). In multivariable analysis, alcohol-ACLF had significantly higher mortality compared with HEV-ACLF (hazard ratio, 3.06; 95% confidence interval, 1.10-8.49, P=0.03).
CONCLUSIONS: Alcohol/cryptogenic-ACLF had more severe phenotypic presentation, more incidence of organ failures, and higher mortality compared with HEV/HBV-ACLF. Alcohol-ACLF had the highest mortality, whereas HEV-ACLF had the best survival.

DOI: 10.1097/MCG.0000000000000823
PMID: 28296656

115: Shalimar, Kedia S, Sharma H, Vasudevan S, Sonika U, Upadhyaya AD, Acharya SK. Predictors of infection in viral-hepatitis related acute liver failure. Scand J Gastroenterol. 2017 Dec;52(12):1413-1419. doi: 10.1080/00365521.2017.1374449. Epub 2017 Sep 6. PubMed PMID: 28875762.

OBJECTIVE: Infections are common and associated with complications and mortality in acute liver failure (ALF). The temporal relationship between ammonia and infection in ALF patients is unclear. We aimed to evaluate the predictors of infection and its relationship with arterial ammonia levels.
MATERIALS AND METHODS: Consecutive ALF patients hospitalized between January 2004 and December 2015, without signs of infection at/within 48 h of admission, were included. Occurrence of infection after 48 h was documented and ammonia levels were estimated for five consecutive days. Multivariate logistic regression analysis was used to assess factors associated with development of infection. Generalized estimating equations (GEE) were used to evaluate five-day time trend of ammonia in patients with and without infection.
RESULTS: Of 540 consecutive patients, 120 were infected at admission/within 48 h and were excluded. Of the rest 420 patients, 144 (34.3%) developed infection after 48 h and 276 (65.7%) remained non-infected. Infected patients had higher mortality than non-infected patients (61.8% vs 40.0%, p < .001). On multivariate

analysis, presence of cerebral edema(HR 2.049; 95%CI, 1.30-3.23), ammonia level on day 3 of admission (HR 1.006; 95%CI, 1.003-1.008), and model for end stage liver disease (MELD) score (HR 1.051; 95%CI, 1.026-1.078) were associated with development of infection. GEE showed group difference in serial ammonia values between infected and non-infected patients indicating lack of ammonia decline in infected patients.
CONCLUSIONS: Cerebral edema, elevated ammonia on day 3, and higher MELD score predict the development of infection in ALF. Ammonia persists at high levels in infected patients, and elevated ammonia on day 3 is associated with complications and death.

DOI: 10.1080/00365521.2017.1374449
PMID: 28875762

116: Shameer A, Pushker N, Lokdarshi G, Basheer S, Bajaj MS. Emergency Decompression of Orbital Emphysema with Elevated Intraorbital Pressure. J Emerg Med. 2017 Sep;53(3):405-407. doi: 10.1016/j.jemermed.2016.10.021. PubMed PMID: 28992871.

BACKGROUND: A case of orbital emphysema associated with elevated intraorbital pressure, presenting as a complication of a paranasal sinus "blow-out" fracture after trauma to the orbit and globe is presented.
CASE REPORT: A 45-year-old man developed left globe rupture with orbital emphysema after blunt trauma. A large air pocket in the superior orbit with medial wall fracture and globe tenting was identified on noncontrast computed tomography. Direct needle drainage was performed using a 23-gauge needle attached to a saline-filled syringe with the plunger removed. Rapid release of air bubbles with prompt alleviation of pressure symptoms was observed. WHY SHOULD AN EMERGENCY PHYSICIAN BE AWARE OF THIS?: Early diagnosis and management of orbital emphysema can salvage useful function of the globe. The knowledge of this clinical entity and its management can prevent delay and unnecessary referral.

DOI: 10.1016/j.jemermed.2016.10.021
PMID: 28992871 [Indexed for MEDLINE]

117: Sharawat IK, Dawman L. Localized Lipodystrophy following Single Dose Intramuscular Gentamycin Injection. Indian Dermatol Online J. 2017 Sep-Oct;8(5):373-374. doi: 10.4103/idoj.IDOJ_390_16. PubMed PMID: 28979879; PubMed Central PMCID: PMC5621206.

118: Sharma A, Bhakuni T, Biswas A, Ranjan R, Kumar R, Kishore K, Mahapatra M, Jairajpuri MA, Saxena R. Prevalence of Factor V Genetic Variants Associated With Indian APCR Contributing to Thrombotic Risk. Clin Appl Thromb Hemost. 2017 Sep;23(6):596-600. doi: 10.1177/1076029615623376. Epub 2015 Dec 23. PubMed PMID: 26699866.

Phenotypic resistance to activated protein C (APC) is a complex mechanism associated with increased thrombosis risk. Activated protein C resistance (APCR) is mainly influenced by FVLeiden mutation, and various other single nucleotide polymorphisms (SNPs) in FV gene are known to be associated with APCR. The aim of present study was to investigate the incidence and assess possible mechanisms of APCR in Indian patients with deep vein thrombosis (DVT). Three hundred and ten Doppler-proven patients with DVT were screened for APCR, and 50 APCR positive patients and 50 controls were typed for FVLeiden, Hong Kong, Cambridge, HR2 haplotype, Glu666Asp, Ala485Lys, and Liverpool using either polymerase chain reaction (PCR)-restriction fragment length polymorphism or allele specific PCR. FVLeiden was commonest cause of APCR (50%) in Indian patients with DVT being statistically significant (P = .001) compared to controls. FV Liverpool, FV Glu666Asp and FV Ala485Lys were studied for the first time in Indian population.

FV Liverpool, FV Glu666Asp, Hong Kong, and Cambridge were found to be absent. High frequency of Ala485Lys in patients shows that it might be a risk factor contributing to APCR in Indian patients with DVT. HR2 haplotype was not associated with APCR; however, presence of homozygous HR2 haplotype in patients only indicates the role it might play in Indian APCR population. In conclusion, contribution of FVLeiden causing APCR in Indian population is not as strong as previously reported in Western countries. The presence of other SNPs observed in the present study requires such studies on larger sample size to understand the molecular basis of defect.

DOI: 10.1177/1076029615623376
PMID: 26699866

119: Sharma P, Gaur N. Plication: How apt in application? Indian J Ophthalmol. 2017 Sep;65(9):785-786. doi: 10.4103/ijo.IJO_702_17. PubMed PMID: 28905819; PubMed Central PMCID: PMC5621258.

120: Sharma P, Nakra T, Khanna G, Yadav R, Panwar R, Ks M, Khetan K, Dash NR, Pal S, Sahni P, Datta Gupta S, Das P. Pancreatic heterotropia in wall of extra-hepatic choledochal cysts: A retrospective analysis of thirteen of such cases from north India. Pathol Res Pract. 2017 Sep;213(9):1109-1111. doi: 10.1016/j.prp.2017.07.018. Epub 2017 Jul 25. PubMed PMID: 28844549.

INTRODUCTION: Heterotopic pancreas (HP) has rarely been identified in the wall of choledochal cyst (CC).
METHODS: Retrospectively we screened 200 excised specimens of CC received at our Institute over a period of last eight years and looked for presence of HP rests in them. All the specimens were processed in their entirety.
RESULT: HP was identified in the wall of 13 (6.5%) CCs, out of which 11 were Heinrich Type 2, and two were Heinrich Type 1. In half of the cases peribiliary mucous glands were observed intermingled with the HP rests. Features of chronic fibrosing pancreatitis were identified in these rests, with ulceration of overlying cyst lining.
CONCLUSIONS: HP rests in the wall of CC though rare; their coexistence with peribiliary glands may possibly indicate their common embryonic origin. As a common site of inflammation, HP rest may be one of the common causes of CC.

DOI: 10.1016/j.prp.2017.07.018
PMID: 28844549

121: Sharma R, Borkar SA, Phalak M, Sinha S, Mahapatra AK. Letter to the Editor. Postcranioplasty changes in cerebral blood perfusion and its impact on neurological and clinical outcomes. J Neurosurg. 2018 Jan;128(1):323-324. doi: 10.3171/2017.4.JNS17748. Epub 2017 Sep 29. PubMed PMID: 28960152.

122: Sharma R, Phalak M, Kale SS. Letter to the Editor. Endovascular and surgical management of spinal dural arteriovenous fistulas. J Neurosurg Spine. 2017 Sep;27(3):346-347. doi: 10.3171/2017.3.SPINE17237. Epub 2017 Jun 9. PubMed PMID: 28598296.

123: Sharma VK, Bhatia R. Vitiligo and the psyche. Br J Dermatol. 2017 Sep;177(3):612-613. doi: 10.1111/bjd.15732. PubMed PMID: 28940279.

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

Treat. 2017 Sep;28(6):539-543. doi: 10.1080/09546634.2016.1246705. Epub 2017 Apr 25. PubMed PMID: 27779432.

OBJECTIVE: The EAACI/GA2LEN/EDF/WAO recommendation of increasing antihistamines' dose up to four times in urticaria not adequately controlled with the standard dose is largely based on expert opinion. The objective of this study is to test the current urticaria guidelines of up-dosing antihistamines as second-line treatment.
METHODS: This was an open-label study conducted prospectively on 113 patients with chronic spontaneous urticaria. All patients were treated with sequentially increasing doses of levocetrizine (5 mg, 10 mg, 15 mg and 20 mg/day) every week till the patients became completely asymptomatic or dose of 20 mg/day reached. Urticaria Activity Score (UAS)-7, urticaria-related quality-of-life (CU-Q2oL) and patients' global assessment were used to assess treatment response.
RESULTS: Twenty-one (18.58%) patients became asymptomatic with levocetirizine 5 mg/day, while 50 required higher doses of levocetirizine for complete control: 29/92 (31.52%), 6/63 (9.52%) and 15/57 (26.31%) with 10 mg, 15 mg and 20 mg/day, respectively. The percentage of patients experiencing >75% improvement increased with increasing doses of levocetirizine: 26.54%, 53.98%, 60.17% and 69.91% with 5 mg, 10 mg, 15 mg and 20 mg/day, respectively. Sequential up-dosing of levocetirizine produced a progressive improvement in both urticaria control (UAS-7) and quality-of-life (CU-Q2oL) without significantly increasing somnolence.
CONCLUSIONS: Our results support the current recommendations of increasing antihistamines up to four times the standard dose in patients who fail the first-line treatment.

DOI: 10.1080/09546634.2016.1246705
PMID: 27779432 [Indexed for MEDLINE]

125: Shi T, McAllister DA, O'Brien KL, Simoes EAF, Madhi SA, Gessner BD, Polack FP, Balsells E, Acacio S, Aguayo C, Alassani I, Ali A, Antonio M, Awasthi S, Awori JO, Azziz-Baumgartner E, Baggett HC, Baillie VL, Balmaseda A, Barahona A, Basnet S, Bassat Q, Basualdo W, Bigogo G, Bont L, Breiman RF, Brooks WA, Broor S, Bruce N, Bruden D, Buchy P, Campbell S, Carosone-Link P, Chadha M, Chipeta J, Chou M, Clara W, Cohen C, de Cuellar E, Dang DA, Dash-Yandag B, Deloria-Knoll M, Dherani M, Eap T, Ebruke BE, Echavarria M, de Freitas LÃ¡zaro Emediato CC, Fasce RA, Feikin DR, Feng L, Gentile A, Gordon A, Goswami D, Goyet S, Groome M, Halasa N, Hirve S, Homaira N, Howie SRC, Jara J, Jroundi I, Kartasasmita CB, Khuri-Bulos N, Kotloff KL, Krishnan A, Libster R, Lopez O, Lucero MG, Lucion F, Lupisan SP, Marcone DN, McCracken JP, Mejia M, Moisi JC, Montgomery JM, Moore DP, Moraleda C, Moyes J, Munywoki P, Mutyara K, Nicol MP, Nokes DJ, Nymadawa P, da Costa Oliveira MT, Oshitani H, Pandey N, Paranhos-BaccalÃ G, Phillips LN, Picot VS, Rahman M, Rakoto-Andrianarivelo M, Rasmussen ZA, Rath BA, Robinson A, Romero C, Russomando G, Salimi V, Sawatwong P, Scheltema N, Schweiger B, Scott JAG, Seidenberg P, Shen K, Singleton R, Sotomayor V, Strand TA, Sutanto A, Sylla M, Tapia MD, Thamthitiwat S, Thomas ED, Tokarz R, Turner C, Venter M, Waicharoen S, Wang J, Watthanaworawit W, Yoshida LM, Yu H, Zar HJ, Campbell H, Nair H; RSV Global Epidemiology Network. Global, regional, and national disease burden estimates of acute lower respiratory infections due to respiratory syncytial virus in young children in 2015: a systematic review and modelling study. Lancet. 2017 Sep 2;390(10098):946-958. doi: 10.1016/S0140-6736(17)30938-8. Epub 2017 Jul 7. PubMed PMID: 28689664; PubMed Central PMCID: PMC5592248.

BACKGROUND: We have previously estimated that respiratory syncytial virus (RSV) was associated with 22% of all episodes of (severe) acute lower respiratory infection (ALRI) resulting in 55 000 to 199 000 deaths in children younger than 5 years in 2005. In the past 5 years, major research activity on RSV has yielded substantial new data from developing countries. With a considerably expanded dataset from a large international collaboration, we aimed to estimate the global incidence, hospital admission rate, and mortality from RSV-ALRI episodes in young

children in 2015.
METHODS: We estimated the incidence and hospital admission rate of RSV-associated ALRI (RSV-ALRI) in children younger than 5 years stratified by age and World Bank income regions from a systematic review of studies published between Jan 1, 1995, and Dec 31, 2016, and unpublished data from 76 high quality population-based studies. We estimated the RSV-ALRI incidence for 132 developing countries using a risk factor-based model and 2015 population estimates. We estimated the in-hospital RSV-ALRI mortality by combining in-hospital case fatality ratios with hospital admission estimates from hospital-based (published and unpublished) studies. We also estimated overall RSV-ALRI mortality by identifying studies reporting monthly data for ALRI mortality in the community and RSV activity.
FINDINGS: We estimated that globally in 2015, 33·1 million (uncertainty range [UR] 21·6-50·3) episodes of RSV-ALRI, resulted in about 3·2 million (2·7-3·8) hospital admissions, and 59 600 (48 000-74 500) in-hospital deaths in children younger than 5 years. In children younger than 6 months, 1·4 million (UR 1·2-1·7) hospital admissions, and 27 300 (UR 20 700-36 200) in-hospital deaths were due to RSV-ALRI. We also estimated that the overall RSV-ALRI mortality could be as high as 118 200 (UR 94 600-149 400). Incidence and mortality varied substantially from year to year in any given population.
INTERPRETATION: Globally, RSV is a common cause of childhood ALRI and a major cause of hospital admissions in young children, resulting in a substantial burden on health-care services. About 45% of hospital admissions and in-hospital deaths due to RSV-ALRI occur in children younger than 6 months. An effective maternal RSV vaccine or monoclonal antibody could have a substantial effect on disease burden in this age group.
FUNDING: The Bill & Melinda Gates Foundation.

DOI: 10.1016/S0140-6736(17)30938-8
PMCID: PMC5592248
PMID: 28689664

126: Shivashankar R, Kondal D, Ali MK, Gupta R, Pradeepa R, Mohan V, Kadir MM, Narayan KMV, Tandon N, Prabhakaran D, Peasey A. Associations of Sleep Duration and Disturbances With Hypertension in Metropolitan Cities of Delhi, Chennai, and Karachi in South Asia: Cross-Sectional Analysis of the CARRS Study. Sleep. 2017 Sep 1;40(9). doi: 10.1093/sleep/zsx119. PubMed PMID: 28934524.

Objectives: Sleep duration and disturbances may be risk factors for hypertension. Despite the high burden of hypertension in South Asia, little is known about this relationship in this region.
Methods: We analyzed population-level cross-sectional data from the Centre for Cardiometabolic Risk Reduction in South Asia (CARRS) study that recruited representative samples of adults ≥ 20 years from three cities-Delhi, Chennai (India), and Karachi (Pakistan) during 2010-2011. We defined hypertension as self-reported treatment or measured blood pressure (BP) ≥140/90 mm Hg. Data on usual duration of sleep, insomnia, and snoring were collected using "The Sleep Habits Questionnaire" and excessive daytime sleepiness (EDS) using Epworth Sleepiness Score. Logistic and linear regression were done with hypertension and BP as outcome variables, respectively. Age, gender, education, wealth index, family history, and body mass index (BMI) were included as covariates. We used multiple imputation to account for missing variables.
Results: Prevalence of hypertension was 30.1%. The mean (SD) sleep duration was 7.3 (1.2) hours. Insomnia, snoring, and EDS were present in 13.6%, 28.7%, and 4.6%, respectively. Moderate and habitual snoring were associated with increased odds of hypertension (odds ratio [OR] = 1.18, 95% confidence interval [CI] [1.04 to 1.33] and 1.47 [1.29 to 1.67], respectively), after adjusting for covariates. Rare, occasional, and frequent insomnia were associated with increased

hypertension (OR 1.41 [1.12 to 1.77], 1.39 [1.16 to 1.67], and 1.34 [1.09 to 1.65], respectively). Sleep duration and EDS were not associated with hypertension.
Conclusion: Self-reported snoring and insomnia were associated with hypertension in South Asia. This relationship needs further exploration through robust longitudinal studies in this region.

DOI: 10.1093/sleep/zsx119
PMID: 28934524

127: Shrestha GS, Kwizera A, Lundeg G, Baelani JI, Azevedo LCP, Pattnaik R, Haniffa R, Gavrilovic S, Mai NTH, Kissoon N, Lodha R, Misango D, Neto AS, Schultz MJ, Dondorp AM, Thevanayagam J, DÃ¼nser MW, Alam AKMS, Mukhtar AM, Hashmi M, Ranjit S, Otu A, Gomersall C, Amito J, Vaeza NN, Nakibuuka J, Mujyarugamba P, Estenssoro E, Ospina-TascÃ³n GA, Mohanty S, Mer M. International Surviving Sepsis Campaign guidelines 2016: the perspective from low-income and middle-income countries. Lancet Infect Dis. 2017 Sep;17(9):893-895. doi: 10.1016/S1473-3099(17)30453-X. PubMed PMID: 28845789.

128: Sihota R, Agarwal E, James M, Verma M, Kumar L, Dada T, Gupta V, Kapoor KS. Long-Term Evaluation of Specular Microscopic Changes Following Nd: YAG Iridotomy in Chronic Primary Angle-Closure Glaucoma Eyes. J Glaucoma. 2017 Sep;26(9):762-766. doi: 10.1097/IJG.0000000000000704. PubMed PMID: 28731934.

AIM: The aim of this study was to evaluate specular microscopy of chronic primary angle-closure glaucoma (CPACG) eyes at least 1 year after Nd:YAG iridotomy, and compare them with CPACG eyes without an iridotomy and age-matched, normal eyes.
PATIENTS AND METHOD: Consecutive patients of CPACG at the Glaucoma service were screened. All patients underwent slit-lamp biomicroscopy, +90 D examination, and applanation tonometry. A total of 100 eyes of 100 consecutive patients of CPACG with an Nd:YAG iridotomy performed ≥1 year before, who met all inclusion/exclusion criteria, 60 consecutive CPACG eyes without an iridotomy, and 60 age and refraction-matched control eyes were enrolled. A specular microscopy was performed in one eye of each patient by an observer masked to diagnosis.
RESULTS: CPACG patients had a mean age of 62±8 years, a mean intraocular pressure of 18±5.3 mm Hg, a mean specular count of 2536±224 cells/mm, and mean duration after iridotomy of 3.2±2 years. There was a significant correlation of specular endothelial counts with age (r=-0.39; P<0.001) and interval after iridotomy (r=-0.25; P=0.01). CPACG eyes without an iridotomy had a mean age of 62±5 years and a mean specular count of 2469±199 cells/mm. Normal control eyes with a mean age of 61±6 years had a mean specular count of 2729±299 cells/mm. There was no significant difference in specular count between CPACG eyes with or without an iridotomy (P=0.19); however, both CPACG groups had a specular count significantly lower than controls (P=0.01 and 0.02, respectively). There was no statistically significant difference seen in polymegathism (coefficient of variation) and pleomorphism (% of hexagonal cells) in endothelial cells among the 3 groups.
CONCLUSIONS: An Nd:YAG iridotomy in CPACG eyes did not lead to any significant changes in central corneal specular microscopy in the long term as compared with patients who did not undergo iridotomy. Eyes with CPACG, without and after an iridotomy, had a lower specular count compared with age-matched controls.

DOI: 10.1097/IJG.0000000000000704
PMID: 28731934 [Indexed for MEDLINE]

129: Sikka K, Kairo A, Singh CA, Roy TS, Lalwani S, Kumar R, Thakar A, Sharma SC. An Evaluation of the Surgical Trauma to Intracochlear Structures After Insertion of Cochlear Implant Electrode Arrays: A Comparison by Round Window and Antero-Inferior Cochleostomy Techniques. Indian J Otolaryngol Head Neck Surg. 2017 Sep;69(3):375-379. doi: 10.1007/s12070-017-1143-0. Epub 2017 May 5. PubMed PMID: 28929071; PubMed Central PMCID: PMC5581770.

To evaluate the extent of intracochlear damage by histologic assessment of cadaveric temporal bones after insertion of cochlear implants by: round window approach and cochleostomy approach. Cochlear implantation was performed by transmastoid facial recess approach in 10 human cadaveric temporal bones. In 5 temporal bones, electrode insertion was acheieved by round window approach and in the remaining 5 bones, by cochleostomy approach. The bones were fixed, decalcified, sectioned and studied histologically. Grading of insertion trauma was assessed. In the round window insertion group, 2 bones had to be excluded from the study: one was damaged during handling with electrode extrusion and another bone did not show any demonstrable identifiable cochlear structure. Out of the 3 temporal bones, a total of 35 sections were examined: 24 demonstrated normal cochlea, 4 had basilar membrane bulging and 7 had fracture of bony spiral lamina. In the cochleostomy group, histology of 2 bones had to be discarded due to lack of any identifiable inner ear structures. Out of the 3 bones studied, 18 sections were examined: only 3 were normal, 4 sections had some bulge in spiral lamina and 11 had fracture of bony spiral lamina. The fracture of spiral lamina and bulge of basement membrane proportion is relatively higher if we perform cochleostomy as compared to round window approach. Therefore, round window insertion is relatively less traumatic as compared to cochleostomy. However, our sample size was very small and a study with a larger sample is required to further validate these findings.

DOI: 10.1007/s12070-017-1143-0
PMCID: PMC5581770 [Available on 2018-09-01]
PMID: 28929071

130: Singh AD, Jain S, Mian A, Vyas S, Nischal N, Jorwal P. An Interesting Case of Recurrent Pyelonephritis. J Assoc Physicians India. 2017 Sep;65(9):88-91. PubMed PMID: 29313584.

A 35-year-old male presented with repeated episodes of fever and abdominal pain of 3-month duration. He had been hospitalized twice with similar complaints in the past 3-month. He was diagnosed as pyelonephritis and managed with intravenous antibiotics. However, fever recurred after ten days of discharge from the hospital. With these complaints, he was referred to the Department of Medicine, AIIMS, New Delhi. After evaluation, he was diagnosed as pyelonephritis with right sided consolidation and was started on broad spectrum antibiotics. After a transient initial improvement, his dyspnea worsened, fever recurred and he developed a tender submandibular abscess. Further evaluation for the actual focus of infection, revealed a small mass attached to the right coronary aortic cusp on transthoracic ECHO. Diagnosis of native Aortic valve endocarditis was made and suitably treated. The patient became afebrile on the 8th day of therapy and was discharged after 20-day. He is doing well on subsequent follow-up.

PMID: 29313584

131: Singh G, Bhardwaj S, Singh L, Sinha A, Bagga A, Dinda AK. Proliferative glomerulonephritis with monotypic IgA-kappa deposits in a 10-year-old. Kidney Int. 2017 Sep;92(3):765-766. doi: 10.1016/j.kint.2017.04.045. PubMed PMID: 28807265.

132: Singh M, Kakkar A, Sharma R, Kharbanda OP, Monga N, Kumar M, Chowdhary S, Airan B, Mohanty S. Synergistic Effect of BDNF and FGF2 in Efficient Generation of Functional Dopaminergic Neurons from human Mesenchymal Stem Cells. Sci Rep. 2017 Sep 4;7(1):10378. doi: 10.1038/s41598-017-11028-z. PubMed PMID: 28871128; PubMed Central PMCID: PMC5583182.

To understand the process of neurogenesis, generation of functional dopaminergic

(DAergic) neurons from human mesenchymal stem cells (hMSCs) is important. BDNF has been reported to be responsible for inducing neuronal maturation and functionality. Previously, we have reported the efficient generation of neurons from human bone marrow derived MSCs using FGF2 alone. We hypothesize that hMSCs from various tissues [(bone marrow (BM), adipose tissue (AD) and dental pulp (DP)], if treated with BDNF on 9th day of induction, alongwith FGF2 will generate functional DAergic neurons. Hence, cells were characterized at morphometric, transcription and translational levels for various markers like MAP2, TH, NGN2, PITX3, DAT, synaptophysin, Kv4.2 and SCN5A. Functionality of in vitro generated neurons was studied by calcium ion imaging. Result analysis depicted that BDNF has effect on expression of dopaminergic neuronal markers at gene and protein levels and functionality of neurons. Among these hMSCs, DP-MSC showed significantly better neuronal characteristics in terms of morphology, expression of neuronal markers and foremost, functionality of neurons. From the present study, therefore, we concluded that i) BDNF has additive effect on neuronal characteristics and functionality ii) DP-MSC are better MSC candidate to study DAergic neurogenesis and perform future studies.

DOI: 10.1038/s41598-017-11028-z
PMCID: PMC5583182
PMID: 28871128

133: Singh N, Gupta S, Pandey RM, Sahni P, Chauhan SS, Saraya A. Prognostic significance of plasma matrix metalloprotease-2 in pancreatic cancer patients. Indian J Med Res. 2017 Sep;146(3):334-340. doi: 10.4103/ijmr.IJMR_1348_15. PubMed PMID: 29355139.

BACKGROUND & OBJECTIVES: Pancreatic cancer has a propensity for wide stromal invasion. Matrix metalloprotease-2 (MMP-2) is a protease that degrades the peri-tumoural tissue and helps in tumour dissemination. Thus, this study was aimed to assess any association of plasma MMP-2 levels with clinicopathological parameters and survival of patients with pancreatic cancer.
METHODS: Plasma samples from 127 pancreatic cancer patients were analyzed for MMP-2 levels by ELISA. Survival and other clinicopathological parameters of patients were analyzed for any correlation with plasma MMP-2 levels.
RESULTS: The mean MMP-2 levels in pancreatic cancer patients were 560.3±222.0 ng/ml which were significantly elevated compared to chronic pancreatitis patients ($P<0.001$) and healthy individuals ($P<0.05$). The plasma levels of MMP-2 significantly correlated with tissue expression of this protease ($P=0.004$). However, MMP-2 levels did not exhibit any association either with clinicopathological parameters or with survival.
INTERPRETATION & CONCLUSIONS: Elevated MMP-2 levels were observed in blood of pancreatic cancer patients which correlated with its tissue expression. However, these levels did not associate with survival or any clinicopathological parameters of patients. Further studies need to be done to confirm the prognostic/ clinical significance of MMP-2 in cancer patients before and after surgery.

DOI: 10.4103/ijmr.IJMR_1348_15
PMID: 29355139

134: Singh P, Kumar A, Yadav S, Prakash L, Nayak B, Kumar R, Kapil A, Dogra PN. "Targeted" prophylaxis: Impact of rectal swab culture-directed prophylaxis on infectious complications after transrectal ultrasound-guided prostate biopsy. Investig Clin Urol. 2017 Sep;58(5):365-370. doi: 10.4111/icu.2017.58.5.365. Epub 2017 Aug 8. PubMed PMID: 28868509; PubMed Central PMCID: PMC5577334.

PURPOSE: To assess the prevalence of fluoroquinolone resistance among patients undergoing transrectal ultrasound (TRUS)-guided prostate biopsy and the impact of rectal swab culture-directed antibiotic prophylaxis on postbiopsy infectious complications.
MATERIALS AND METHODS: We prospectively analyzed all patients undergoing

TRUS-guided prostate biopsy from April 2013 to February 2015. Antibiotic prophylaxis was tailored to the results of rectal swab cultures. If the organism was fluoroquinolone-sensitive, oral ciprofloxacin 500 mg with tinidazole 600 mg was prescribed. If the organism was fluoroquinolone-resistant, then a culture-directed antibiotic was prescribed. In both cases the antibiotic was continued for 3 days. All patients were followed for 14 days after biopsy to record infectious complications.
RESULTS: A total of 247 patients were included, and Escherichia coli was isolated on rectal swab cultures in 99.5% of the patients. Of these, 41.7% harbored fluoroquinolone-resistant E. coli. Piperacillin/tazobactam was the most common culture-directed antibiotic prescribed (59.3%), with amoxicillin/clavulanic being the second most common (25.5%) for the fluoroquinolone-resistant group. Only 2 patients (0.9%) developed postbiopsy fever and none had sepsis.
CONCLUSIONS: Colonization of rectal flora with fluoroquinolone-resistant E. coli was seen in 40% of men undergoing prostate biopsy. Targeted prophylaxis, which uses the results of prebiopsy rectal swab culture to direct antibiotic prophylaxis, results in low rates of postbiopsy infections.

DOI: 10.4111/icu.2017.58.5.365
PMCID: PMC5577334
PMID: 28868509

Conflict of interest statement: CONFLICTS OF INTEREST: The authors have nothing to disclose.

135: 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

136: Singh PM, Borle A. Response to Letter to the Editor on "Role of Periarticular Liposomal Bupivacaine Infiltration in Patients Undergoing Total Knee Arthroplasty: A Meta-Analysis of Comparative Trials". J Arthroplasty. 2017 Sep;32(9):2929. doi: 10.1016/j.arth.2017.04.023. Epub 2017 May 18. PubMed PMID: 28601244.

137: Singh R, Mukherjee A, Singla M, Das BK, Kabra SK, Lodha R. Immunological and Virological Responses to Highly Active Antiretroviral Therapy in HIV-1 Infected Children. Indian J Pediatr. 2017 Dec;84(12):893-896. doi: 10.1007/s12098-017-2441-y. Epub 2017 Sep 6. PubMed PMID: 28875475.

OBJECTIVE: To evaluate immunological and virological outcomes in human immunodeficiency virus (HIV) infected children at six months of highly active antiretroviral therapy (HAART).
METHODS: Records of HIV infected children <15-y-old were reviewed to identify those who were initiated highly active antiretroviral therapy between 2010 and 2014 and had CD4+ T cell percentage and HIV-1 viral load report at baseline visit and after 6 mo of initiation of the treatment.
RESULTS: Seventy-four HIV infected children [26% girls, median age IQR 36 (24-108) mo] were included in the study. At the end of six months of HAART, median increase of 11% (6-15%) in CD4+ T cell percentage from the baseline levels was observed; nineteen (26%) children showed an increase in CD4+ T cell percentage of 15% or more at 6 mo. Viral load was undetectable (<47 copies/ml) in 27 (36.4%) children; 21 (28.3%) children had 47- < 500 copies/ml; 16 (21.6%) children had 500- < 10,000 copies/ml and 10 (13.5%) children had ≥10,000 copies/ml. At six months, only 15 (20.2%) children exhibited positive immuno-virological response to HAART (≥ 15% increase in CD4% and <47 HIV-1 RNA copies/ml).
CONCLUSIONS: While HAART was effective in improving the immunological and virological parameters in the index cohort of children, virological responses were less robust.

DOI: 10.1007/s12098-017-2441-y
PMID: 28875475

138: Singh S, Sondhi P, Yadav D, Yadav S. Multiple Familial Trichoepitheliomas Presenting as Leonine Facies. Indian Dermatol Online J. 2017 Sep-Oct;8(5):358-360. doi: 10.4103/idoj.IDOJ_67_17. PubMed PMID: 28979872; PubMed Central PMCID: PMC5621199.

Trichoepithelioma is a benign tumor of follicular unit. It has been rarely described as the cause of leonine facies. We are presenting a classical case of multiple familial trichoepitheliomas (MFTs) with characteristic histopathological features leading to leonine facies.

DOI: 10.4103/idoj.IDOJ_67_17
PMCID: PMC5621199
PMID: 28979872

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

139: Singh Y, Mirdha BR, Guleria R, Khalil S, Panda A, Chaudhry R, Mohan A, Kabra SK, Kumar L, Agarwal SK. Circulating genotypes of Pneumocystis jirovecii and its clinical correlation in patients from a single tertiary center in India. Eur J Clin Microbiol Infect Dis. 2017 Sep;36(9):1635-1641. doi: 10.1007/s10096-017-2977-9. Epub 2017 Apr 11. PubMed PMID: 28401321.

The present study was carried out with the objectives of genotyping Pneumocystis jirovecii at three distinct loci, to identify the single nucleotide polymorphisms (SNPs), and to study its clinical implications in patients with Pneumocystis pneumonia (PCP). Analysis of genetic diversity in P. jirovecii from

immunocompromised patients was carried out by genotyping at three distinct loci encoding mitochondrial large subunit rRNA (mtLSU rRNA), cytochrome b (CYB), and superoxide dismutase (SOD) using polymerase chain reaction (PCR) assays followed by direct DNA sequencing. Of the 300 patients enrolled in the present study, 31 (10.33%) were positive for PCP by a specific mtLSU rRNA nested PCR assay, whereas only 15 P. jirovecii could be amplified at the other two loci (SOD and CYB). These positives were further subjected to sequence typing. Important genotypic combinations between four SNPs (mt85, SOD110, SOD215, and CYB838) and clinical outcomes could be observed in the present study, and mt85A, mt85T, and SOD110C/SOD215T were frequently associated with "negative follow-up". These SNPs were also noted to be relatively more prevalent amongst circulating genotypes in our study population. The present study is the first of its kind from the Indian subcontinent and demonstrated that potential SNPs of P. jirovecii may possibly be attributed to the clinical outcome of PCP episodes in terms of severity or fatality in different susceptible populations likely to develop PCP during their course of illness.

DOI: 10.1007/s10096-017-2977-9
PMID: 28401321

140: Sinha A, Bagga A. Spectrum of ANCA-Associated Vasculitis. Indian J Pediatr. 2017 Oct;84(10):737-738. doi: 10.1007/s12098-017-2450-x. Epub 2017 Sep 4. PubMed PMID: 28868585.

141: Sinha B, Chowdhury R, Upadhyay RP, Taneja S, Martines J, Bahl R, Sankar MJ. Integrated Interventions Delivered in Health Systems, Home, and Community Have the Highest Impact on Breastfeeding Outcomes in Low- and Middle-Income Countries. J Nutr. 2017 Nov;147(11):2179S-2187S. doi: 10.3945/jn.116.242321. Epub 2017 Sep 13. Review. PubMed PMID: 28904116.

Background: Improving breastfeeding rates is critical. In low- and middle-income countries (LMICs), only subtle improvements in breastfeeding rates have been observed over the past decade, which highlights the need for accelerating breastfeeding promotion interventions.Objective: The objective of this article is to update evidence on the effect of interventions on early initiation of and exclusive (<1 and 1-5 mo) and continued (6-23 mo) breastfeeding rates in LMICs when delivered in health systems, in the home or in community environments, or in a combination of settings.Methods: A systematic literature search was conducted in PubMed, Cochrane, and CABI databases to identify new articles relevant to our current review, which were published after the search date of our earlier meta-analysis (October 2014). Nine new articles were found to be relevant and were included, in addition to the other 52 studies that were identified in our earlier meta-analysis. We reported the pooled ORs and corresponding 95% CIs as our outcome estimates. In cases of high heterogeneity, random-effects models were used and causes were explored by subgroup analysis and meta-regression.Results: Early initiation of and exclusive (<1 and 1-5 mo) and continued (6-23 mo) breastfeeding rates in LMICs improved significantly as a result of interventions delivered in health systems, in the home or community, or a combination of these. Interventions delivered concurrently in a combination of settings were found to show the largest improvements in desired breastfeeding outcomes. Counseling provided in any setting and baby-friendly support in health systems appear to be the most effective interventions to improve breastfeeding.Conclusions: Improvements in breastfeeding practices are possible in LMICs with judicious use of tested interventions, particularly when delivered in a combination of settings concurrently. The findings can be considered for inclusion in the Lives Saved Tool model.

DOI: 10.3945/jn.116.242321
PMID: 28904116 [Indexed for MEDLINE]

Conflict of interest statement: Author disclosures: BS, RC, RPU, ST, JM, RB, and MJS, no conflicts of interest.

142: Sodhi KS, Bhalla AS, Mahomed N, Laya BF. Imaging of thoracic tuberculosis in children: current and future directions. Pediatr Radiol. 2017 Sep;47(10):1260-1268. doi: 10.1007/s00247-017-3866-1. Epub 2017 Aug 29. Review. PubMed PMID: 29052772.

Tuberculosis continues to be an important cause of morbidity and mortality worldwide. It is the leading cause of infection-related deaths worldwide. Children are amongst the high-risk groups for developing tuberculosis and often pose a challenge to the clinicians in making a definitive diagnosis. The newly released global tuberculosis report from World Health Organization reveals a 50% increase in fatality from tuberculosis in children. Significantly, diagnostic and treatment algorithms of tuberculosis for children differ from those of adults. Bacteriologic confirmation of the disease is often difficult in children; hence radiologists have an important role to play in early diagnosis of this disease. Despite advancing technology, the key diagnostic imaging modalities for primary care and emergency services, especially in rural and low-resource areas, are chest radiography and ultrasonography. In this article, we discuss various diagnostic imaging modalities used in diagnosis and treatment of tuberculosis and their indications. We highlight the use of US as point-of-care service along with mediastinal US and rapid MRI protocols, especially in mediastinal lymphadenopathy and thoracic complications. MRI is the ideal modality in high-resource areas when adequate infrastructure is available. Because the prevalence of tuberculosis is highest in lower-resource countries, we also discuss global initiatives in low-resource settings.

DOI: 10.1007/s00247-017-3866-1
PMID: 29052772

143: Sofi NY, Jain M, Kapil U, Seenu V, Ramakrishnan L, Yadav CP, Pandey RM. Status of Serum Vitamin D and Calcium Levels in Women of Reproductive Age in National Capital Territory of India. Indian J Endocrinol Metab. 2017 Sep-Oct;21(5):731-733. doi: 10.4103/ijem.IJEM_134_17. PubMed PMID: 28989883; PubMed Central PMCID: PMC5628545.

CONTEXT: In India, Vitamin D deficiency is a major public health problem, associated with lack of sunlight exposure in spite of abundant sunshine usually accompanied by reduced dietary intake. In women of reproductive age, Vitamin D deficiency in pregnancy has been associated with an increased risk of gestational diabetes mellitus, preeclampsia, maternal and perinatal morbidity and mortality.
AIMS: The aim of the present cross-sectional study was to evaluate the levels of serum Vitamin D 25(OH) D and calcium in women of reproductive age from India.
SETTINGS AND DESIGN: A cross-sectional study was carried on a total of 224 healthy nonpregnant and nonlactating women in the reproductive age group of 20-49 years.
MATERIALS AND METHODS: Demographic, socioeconomic class, and biochemical parameters for the estimation of serum 25(OH)D and calcium levels in women of reproductive age were studied.
STATISTICAL ANALYSIS: Statistical Package for Social Sciences version 20.0 was utilized for conducting the statistical analysis of the data.
RESULTS: Vitamin D deficiency (<20 ng/ml) was present in 88% of women. Women from middle socioeconomic class had the lowest mean serum 25(OH) D levels (9.6 ± 6 ng/ml) as compared to women from upper middle (11.4 ± 8 ng/ml), lower (11.2 ± 8 ng/ml), and upper (10 ± 8.6 ng/ml) socioeconomic class. Serum calcium levels were found in the normal range of 8.5-10.5 mg/dl for all the study subjects.
CONCLUSIONS: There is a high prevalence of hypovitaminosis D among women of reproductive age. These women may possibly have a higher risk of development of osteoporosis and pregnancy-related complications in future life.

DOI: 10.4103/ijem.IJEM_134_17
PMCID: PMC5628545
PMID: 28989883

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

144: Srujana D, Singh R, Tripathy K. Comment on "Surgical management of fungal endophthalmitis resulting from fungal keratitis". Int J Ophthalmol. 2017 Sep 18;10(9):1479-1480. doi: 10.18240/ijo.2017.09.24. eCollection 2017. PubMed PMID: 28944212; PubMed Central PMCID: PMC5596238.

145: Subhadarshani S, Singh A, Ramateke PP, Verma KK. Idiopathic Eruptive Macular Pigmentation in an Indian Male. Indian Dermatol Online J. 2017 Sep-Oct;8(5):367-370. doi: 10.4103/idoj.IDOJ_274_16. PubMed PMID: 28979876; PubMed Central PMCID: PMC5621203.

146: Subramanian VS, Subramani V, Chilukuri S, Kathirvel M, Arun G, Swamy ST, Subramanian K, Fogliata A, Cozzi L. Multi-isocentric 4ÏЄ volumetric-modulated arc therapy approach for head and neck cancer. J Appl Clin Med Phys. 2017 Sep;18(5):293-300. doi: 10.1002/acm2.12164. Epub 2017 Aug 20. PubMed PMID: 28834021.

OBJECTIVES: To explore the feasibility of multi-isocentric 4π volumetric-modulated arc therapy (MI4π-VMAT) for the complex targets of head and neck cancers.
METHODS: Twenty-five previously treated patients of HNC underwent re-planning to improve the dose distributions with either coplanar VMAT technique (CP-VMAT) or noncoplanar MI4π-VMAT plans. The latter, involving 3-6 noncoplanar arcs and 2-3 isocenters were re-optimized using the same priorities and objectives. Dosimetric comparison on standard metrics from dose-volume histograms was performed to appraise relative merits of the two techniques. Pretreatment quality assurance was performed with IMRT phantoms to assess deliverability and accuracy of the MI4π-VMAT plans. The gamma agreement index (GAI) analysis with criteria of 3 mm distance to agreement (DTA) and 3% dose difference (DD) was applied.
RESULTS: CP-VMAT and MI4π-VMAT plans achieved the same degree of coverage for all target volumes related to near-to-minimum and near-to-maximum doses. MI4π-VMAT plans resulted in an improved sparing of organs at risk. The average mean dose reduction to the parotids, larynx, oral cavity, and pharyngeal muscles were 3 Gy, 4 Gy, 5 Gy, and 4.3 Gy, respectively. The average maximum dose reduction to the brain stem, spinal cord, and oral cavity was 6.0 Gy, 3.8 Gy, and 2.4 Gy. Pretreatment QA results showed that plans can be reliably delivered with mean gamma agreement index of 97.0 ± 1.1%.
CONCLUSIONS: MI4π-VMAT plans allowed to decrease the dose-volume-metrics for relevant OAR and results are reliable from a dosimetric standpoint. Early clinical experience has begun and future studies will report treatment outcome.

DOI: 10.1002/acm2.12164
PMID: 28834021

147: Swaminathan S, Prasad J, Dhariwal AC, Guleria R, Misra MC, Malhotra R, Mathur P, Walia K, Gupta S, Sharma A, Ohri V, Jain S, Gupta N, Laserson K, Malpiedi P, Velayudhan A, Park B, Srikantiah P. Strengthening infection prevention and control and systematic surveillance of healthcare associated infections in India. BMJ. 2017 Sep 5;358:j3768. doi: 10.1136/bmj.j3768. PubMed PMID: 28874366; PubMed Central PMCID: PMC5598296.

148: Takkar B, Agarwal D, Joshi HK, Venkatesh P. Ultrawide field imaging and sonography of a radial buckle. BMJ Case Rep. 2017 Sep 13;2017. pii: bcr-2017-221761. doi: 10.1136/bcr-2017-221761. PubMed PMID: 28903974.

149: Talwar S, Selvam MS, Makhija N, Lakshmy R, Choudhary SK, Sreenivas V, Airan B. Effect of administration of allopurinol on postoperative outcomes in patients undergoing intracardiac repair of tetralogy of Fallot. J Thorac Cardiovasc Surg. 2018 Jan;155(1):335-343. doi: 10.1016/j.jtcvs.2017.08.115. Epub 2017 Sep 12. PubMed PMID: 29245201.

OBJECTIVE: To determine effects of allopurinol administration on outcomes following intracardiac repair of tetralogy of Fallot (TOF).
MATERIALS AND METHODS: Fifty patients undergoing TOF repair were randomized to 2 groups of 25 each: the allopurinol group (n = 25) and the placebo group (n = 25). Postoperatively, inotropic score, rhythm, duration of mechanical ventilation, cardiac output, intensive care unit (ICU) stay, and hospital stay were assessed. Plasma troponin-I, superoxide dismutase (SOD), interleukin (IL) 1-ß, IL-6, and malondialdehyde were measured serially.
RESULTS: Inotropic score was lower in the allopurinol compared with placebo group (11.04 ± 5.70 vs 17.50 ± 7.83; P = .02). Duration of ICU and hospital stay was lower in the allopurinol group. Plasma levels of SOD preoperative were (2.87 ± 1.21 U/mL vs 4.5 ± 2.08 U/mL; P = .012), immediately following release of crossclamp (2.32 ± 0.98 U/mL vs 5.32 ± 2.81 U/mL; P < .001), and after termination of CPB (2.18 ± 1.0.78 U/mL vs 3.44 ± 1.99 U/mL; P = .003) between the placebo versus allopurinol group, respectively. Postoperative levels of IL1-ß and IL-6 were lower in the allopurinol group. Malondialdehyde levels following CPB were lower in the allopurinol group (11.80 ± 2.94 pg/mL in the placebo vs 9.16 ± 3.02 g/mL in the allopurinol group; P < .001).
CONCLUSIONS: Allopurinol administration in patients undergoing intracardiac repair of TOF is associated with reduced inotropic scores, duration of mechanical ventilation, ICU stay, and hospital stay and favorable biochemical markers of inflammation. Further studies in multiple setups are needed before recommending it as a routine practice.

DOI: 10.1016/j.jtcvs.2017.08.115
PMID: 29245201

150: Talwar S, Arora Y, Singh S, Airan B. An alternative technique of atrial septectomy during bidirectional superior cavopulmonary anastomosis. J Card Surg. 2017 Oct;32(10):659-661. doi: 10.1111/jocs.13205. Epub 2017 Sep 11. PubMed PMID: 28895188.

An atrial septectomy is often required to create or enlarge a pre-existing restrictive atrial septal defect in patients with univentricular hearts undergoing the bidirectional superior cavopulmonary anastomosis. We describe an alternative surgical technique through the transected cardiac end of the superior vena cava without a right atriotomy successfully performed in 26 patients.

DOI: 10.1111/jocs.13205
PMID: 28895188

151: Talwar S, Bhoje A, Sreenivas V, Makhija N, Aarav S, Choudhary SK, Airan B. Comparison of del Nido and St Thomas Cardioplegia Solutions in Pediatric Patients: A Prospective Randomized Clinical Trial. Semin Thorac Cardiovasc Surg. 2017 Autumn;29(3):366-374. doi: 10.1053/j.semtcvs.2017.08.017. Epub 2017 Sep 1.

PubMed PMID: 29055711.

We conducted a prospective randomized trial to compare del Nido (DN) cardioplegia with conventional cold blood cardioplegia (St Thomas [STH]) in pediatric patients. We randomized 100 pediatric patients aged ≤12 years undergoing elective repair of ventricular septal defects and tetralogy of Fallot to the DN and the STH groups. In the DN group, a 20 mL/kg single dose was administered. In the STH group, a 30 mL/kg dose was administered, followed by repeated doses at 25- to 30-minute intervals. The primary outcome was cardiac index that was measured 4 times intra- and postoperatively. Troponin-I, interleukin-6, and tissue necrosis factor-alpha were measured. Myocardial biopsy was obtained to assess electron-microscopic ultrastructural changes. Cardiac indices were significantly higher in the DN group than in the STH group 2 hours after termination of cardiopulmonary bypass (P = 0.0006), after 6 hours (P = 0.0006), and after 24 hours (P ≤ 0.0001). On repeated measure regression analysis, the cardiac index was on an average 0.50 L/min/m2 higher in the DN group than in the STH group at any time point (P = 0.002). Duration of mechanical ventilation (P = 0.01), intensive care unit stay (P = 0.01), and hospital stay (P = 0.0007) was significantly lower in the DN group. Patients in the DN group exhibited lower troponin-I release 24 hours following cardiopulmonary bypass (P = 0.021). Electron microscopic studies showed more myofibrillar disarray in the STH group (P = 0.02). Use of long-acting DN cardioplegia solution was associated with better preservation of cardiac index, lesser troponin-I release, and decreased morbidity. Ultrastructural changes showed better preservation of myofibrillar architecture.

DOI: 10.1053/j.semtcvs.2017.08.017
PMID: 29055711 [Indexed for MEDLINE]

152: Thergaonkar RW, Narang A, Gurjar BS, Tiwari P, Puraswani M, Saini H, Sinha A, Varma B, Mukerji M, Hari P, Bagga A. Targeted exome sequencing in anti-factor H antibody negative HUS reveals multiple variations. Clin Exp Nephrol. 2017 Sep 22. doi: 10.1007/s10157-017-1478-6. [Epub ahead of print] PubMed PMID: 28939980.

BACKGROUND: Genetic susceptibility to atypical hemolytic uremic syndrome (aHUS) may lie within genes regulating or activating the alternate complement and related pathways converging on endothelial cell activation.
METHODS: We tested 32 Indian patients of aHUS negative for antibodies to complement factor H for genetic variations in a panel of 15 genes, i.e., CFH, CFHR1-5, CFI, CFB, C3, CD46, MASP2, DGKE, ADAMTS13, THBD and PLG using next-generation DNA sequencing and for copy number variation in CFHR1-3.
RESULTS: Despite absence of a public database of exome variations in the Indian population and limited functional studies, we could establish a genetic diagnosis in 6 (18.8%) patients using a stringent scheme of prioritization. One patient carried a likely pathogenic variation. The number of patients carrying possibly pathogenic variation was as follows: 1 variation: 5 patients, 2 variations: 9 patients, 3 variations: 5 patients, 4 variations: 9 patients, 5 variations: 2 patients and 6 variations: 2 patients. Homozygous deletion of CFHR1-3 was present in five patients; none of these carried a diagnostic genetic variation. Patients with or without diagnostic variation did not differ significantly in terms of enrichment of genetic variations that were rare/novel or predicted deleterious, or for possible environmental triggers.
CONCLUSION: We conclude that genetic testing for multiple genes in patients with aHUS negative for anti-FH antibodies reveals multiple candidate variations that require prioritization. Population data on variation frequency of the Indian population and supportive functional studies are likely to improve diagnostic yield.

DOI: 10.1007/s10157-017-1478-6

PMID: 28939980

153: Tiwari V, Poudel RR, Khan SA, Mehra S, Chauhan SS, Raje A. Is VEGF under-expressed in Indian children with Perthes disease? Musculoskelet Surg. 2017 Sep 27. doi: 10.1007/s12306-017-0502-z. [Epub ahead of print] PubMed PMID: 28956304.

BACKGROUND: The role of vascular endothelial growth factor (VEGF) after ischaemic necrosis of the femoral head in Legg-Calve-Perthes disease (LCPD) has not been adequately studied in humans, especially in Indian population. Therefore, we aimed to evaluate the serum levels of VEGF-A in Indian children with various stages of LCPD and compare them with those of an age- and sex-matched control group of healthy children.
METHODS: In this case-control study, we enrolled 42 children (below 14 years age) suffering from LCPD and 21 age- and sex-matched healthy controls. Patients were classified radiographically according to Waldenstrom's classification. Serum VEGF-A was estimated by sandwich enzyme-linked immunosorbent assay technique. The serum values were compared between the patient group and the control group, as well as between the Waldenstrom subgroups. Results were expressed as means with ranges or median with interquartile range.
RESULTS: The mean age in the patient as well as the control group was 9 years (range 4-13 years). The median value (interquartile range) of serum VEGF-A was 162.5 pg/ml (673.75 pg/ml) in the patient group and 652 pg/ml (190.5 pg/ml) in the control group ($p = 0.013$). When compared between lower Waldenstrom stages (initial stage + stage of fragmentation) and higher Waldenstrom stages (re-ossification stage + stage of healing), the mean values of serum VEGF-A were 464.7 pg/ml (range 0-2211 pg/ml) and 301.1 pg/ml (range 0-1910 pg/ml), respectively ($p = 0.305$).
CONCLUSIONS: VEGF is under-expressed in Indian children suffering from LCPD. As VEGF acts as a key regulator of endochondral ossification, our finding may open new therapeutic approaches to the disease. Also, serum VEGF may act as a valuable marker for the follow-up of the disease. Our study also provides baseline data about serum VEGF-A levels in Indian cohort of LCPD patients. Future multi-centre studies are warranted with a larger sample size to fully appreciate the patho-physiological changes in VEGF occurring in LCPD.

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

154: Tolahunase M, Sagar R, Dada R. Erratum to "Impact of Yoga and Meditation on Cellular Aging in Apparently Healthy Individuals: A Prospective, Open-Label Single-Arm Exploratory Study". Oxid Med Cell Longev. 2017;2017:2784153. doi: 10.1155/2017/2784153. Epub 2017 Sep 24. PubMed PMID: 29147459; PubMed Central PMCID: PMC5632896.

155: Trikha V, Agrawal P, Das S, Gaba S, Kumar A. Functional outcome of extra-articular distal humerus fracture fixation using a single locking plate: A retrospective study. J Orthop Surg (Hong Kong). 2017 Sep-Dec;25(3):2309499017727948. doi: 10.1177/2309499017727948. PubMed PMID: 28844197.

PURPOSE: The optimal method for fixation of extra-articular distal humerus factures poses a management dilemma. Although various plate configurations have been proposed, anatomic shaped extra-articular distal humerus locking plates have emerged as a viable solution for these complex injuries. We assessed clinico-radiologic outcome in our retrospective case series of extra-articular distal humerus fractures managed with these plates.
METHODS: Forty-five patients of extra-articular distal humerus fractures, who were operated at our level 1 trauma centre between January, 2012 and December, 2016, were identified. After exclusion, 36 patients were available for the final assessment. All patients were operated with the triceps-reflecting modified

posterior approach. Regular clinico-radiologic follow-up was done evaluating elbow functionality, fracture union, secondary displacement, non-union, implant failure and any complications; Mayo Elbow Performance score (MEPS) was used for the final functional assessment.
RESULTS: Twenty-four (66.7%) male and 12 (33.3%) female patients constituted the study group, who had an average follow-up of 15 months. Preoperatively three patients and post-operatively one patient had radial nerve palsy; all had neurapraxia and recovered completely. Overall, 34 (94.4%) patients were adjudged to have complete radiological union within 3 months; 2 (5.5%) patients developed non-union. Mean flexion achieved was 122.9° ± 23°, and mean extension was -4.03° ± 6.5°; 1 patient with head injury developed flexion deformity of 45°. Average MEPS at the final follow-up was 90.8° ± 9.9°.
CONCLUSION: Stable reconstruction and early initiation of physiotherapy are utilitarian to envision optimal outcome; the use of precontoured extra-articular distal humerus locking plates has yielded satisfactory results with minimal complications in our hands.

DOI: 10.1177/2309499017727948
PMID: 28844197

156: Tripathi M, Bansal A, Baghel V, Kumar P, Bal C. F-18 FDG and F-18 Tau PET in posterior cortical atrophy. Eur J Nucl Med Mol Imaging. 2017 Sep;44(10):1779-1780. doi: 10.1007/s00259-017-3738-9. Epub 2017 Jun 6. PubMed PMID: 28584971.

157: Tripathy K, Mittal K, Venkatesh P, Bakhshi S, Chawla R. Treatment of unilateral zone I cytomegalovirus retinitis in acute lymphoblastic leukemia with oral valganciclovir and intravitreal ganciclovir. Oman J Ophthalmol. 2017 Sep-Dec;10(3):250-252. doi: 10.4103/ojo.OJO_190_2016. PubMed PMID: 29118508; PubMed Central PMCID: PMC5657175.

Cytomegalovirus retinitis (CMVR) is an opportunistic infection seen in immunocompromised patients, especially suffering from acquired immune deficiency syndrome. It is uncommonly seen in hematological malignancies and in patients on immunosuppressants. The authors present a 12-year-old girl with unilateral CMVR who was on maintenance phase therapy for mixed phenotype (B/myeloid) leukemia. Serology for human immunodeficiency virus was negative. The child was successfully treated with oral valganciclovir and repeated intravitreal ganciclovir injections. CMVR in pediatric population with leukemia can be successfully treated with oral valganciclovir and intravitreal ganciclovir injections.

DOI: 10.4103/ojo.OJO_190_2016
PMCID: PMC5657175
PMID: 29118508

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

158: Tripathy K, Chawla R, Betala D. Seizures and chorioretinal lacunae in an infant. J Paediatr Child Health. 2017 Sep;53(9):919. doi: 10.1111/jpc.1_13465. PubMed PMID: 28868778.

Pleural tuberculosis (pTB) is a grave form of extrapulmonary tuberculosis. Microbiological tests are usually found to be inadequate for pTB diagnosis. The absence of a uniform 'composite reference standard' is challenging; therefore, diagnosis is usually performed using a combination of diversified criteria. Nucleic acid tests vary in diagnostic accuracy and have not yet been integrated into clinical decision making. This review assesses the varied criteria used for pTB classification and the challenges afflicting pleural fluid-based DNA diagnostic tests, namely, PCR and Xpert® MTB/RIF. In the 58 studies (PCR: n = 33; Xpert: n = 25) analyzed, reference standards were heterogeneous and PCR/Xpert

pooled sensitivity values (range: 0-100%) were inadequate. However, the consistent high specificity of Xpert (range: 90-100%) indicated its utility as a 'rule-in' test. There is an urgent need to evaluate existing and new molecular tests in well-designed studies to accurately assess their utility for pTB diagnosis. To conclude, rapid and accurate tests are warranted for pTB diagnosis.

DOI: 10.2217/fmb-2017-0028
PMID: 28972418

159: Tyagi S, Sharma N, Tyagi JS, Haldar S. Challenges in pleural tuberculosis diagnosis: existing reference standards and nucleic acid tests. Future Microbiol. 2017 Oct;12:1201-1218. doi: 10.2217/fmb-2017-0028. Epub 2017 Sep 15. PubMed PMID: 28972418.

Pleural tuberculosis (pTB) is a grave form of extrapulmonary tuberculosis. Microbiological tests are usually found to be inadequate for pTB diagnosis. The absence of a uniform 'composite reference standard' is challenging; therefore, diagnosis is usually performed using a combination of diversified criteria. Nucleic acid tests vary in diagnostic accuracy and have not yet been integrated into clinical decision making. This review assesses the varied criteria used for pTB classification and the challenges afflicting pleural fluid-based DNA diagnostic tests, namely, PCR and Xpert® MTB/RIF. In the 58 studies (PCR: n = 33; Xpert: n = 25) analyzed, reference standards were heterogeneous and PCR/Xpert pooled sensitivity values (range: 0-100%) were inadequate. However, the consistent high specificity of Xpert (range: 90-100%) indicated its utility as a 'rule-in' test. There is an urgent need to evaluate existing and new molecular tests in well-designed studies to accurately assess their utility for pTB diagnosis. To conclude, rapid and accurate tests are warranted for pTB diagnosis.

DOI: 10.2217/fmb-2017-0028
PMID: 28972418

160: Valavane A, Chaudhry R, Malhotra P. Multiplex polymerase chain reaction of genetic markers for detection of potentially pathogenic environmental Legionella pneumophila isolates. Indian J Med Res. 2017 Sep;146(3):392-400. doi: 10.4103/ijmr.IJMR_623_16. PubMed PMID: 29355148.

BACKGROUND & OBJECTIVES: Genomic constitution of the bacterium Legionella pneumophila plays an important role in providing them a pathogenic potential. Here, we report the standardization and application of multiplex polymerase chain reaction (PCR) for the detection of molecular markers of pathogenic potential in L. pneumophila in hospital environment.
METHODS: Culture of the standard strains of L. pneumophila was performed in buffered charcoal-yeast extract agar with L-cysteine at p H 6.9. Primers were designed for multiplex PCR, and standardization for the detection of five markers annotated to L. pneumophila plasmid pLPP (11A2), lipopolysaccharide synthesis (19H4), CMP-N-acetylneuraminic acid synthetase (10B12), conjugative coupling factor (24B1) and hypothetical protein (8D6) was done. A total of 195 water samples and 200 swabs were collected from the hospital environment. The bacterium was isolated from the hospital environment by culture and confirmed by 16S rRNA gene PCR and restriction enzyme analysis. A total of 45 L. pneumophila isolates were studied using the standardized multiplex PCR.
RESULTS: The PCR was sensitive to detect 0.1 ng/µl DNA and specific for the two standard strains used in the study. Of the 45 hospital isolates tested, 11 isolates had four markers, 12 isolates had three markers, 10 isolates had two markers, nine isolates had one marker and three isolates had none of the markers. None of the isolates had all the five markers.
INTERPRETATION & CONCLUSIONS: The findings of this study showed the presence of gene markers of pathogenic potential of the bacterium L. pneumophila. However, the genomic constitution of the environmental isolates should be correlated with clinical isolates to prove their pathogenic potential. Rapid diagnostic methods

such as multiplex PCR reported here, for elucidating gene markers, could help in future epidemiological studies of bacterium L. pneumophila.

DOI: 10.4103/ijmr.IJMR_623_16
PMID: 29355148

161: Vallonthaiel AG, Agarwal S, Jain D, Yadav R, Damle NA. Cytological features of warthin-like papillary thyroid carcinoma: A case report with review of previous cytology cases. Diagn Cytopathol. 2017 Sep;45(9):837-841. doi: 10.1002/dc.23739. Epub 2017 Apr 27. PubMed PMID: 28449420.

Warthin-like papillary thyroid carcinoma (WLPTC) is a rare morphological variant of papillary thyroid carcinoma which mimics various benign and malignant lesions on thyroid aspiration cytology. As correct cytological diagnosis is the cornerstone for appropriate patient management, awareness of the salient cytomorphological characteristics of this tumor is essential. Here, we present cytological features of a case of WLPTC along with discussion of the common differential diagnoses and a brief review of the literature to ascertain the most consistent cytological findings of WLPTC. The present case also harboured BRAFV600E mutation which is the commonest molecular alteration seen in WLPTC.

DOI: 10.1002/dc.23739
PMID: 28449420

162: Venkatesh P, Takkar B. Suprachoroidal injection of biological agents may have a potential role in the prevention of progression and complications in high myopia. Med Hypotheses. 2017 Sep;107:90-91. doi: 10.1016/j.mehy.2017.08.020. Epub 2017 Aug 24. PubMed PMID: 28915972.

The prevalence of myopia and its severe/progressive visually impairing forms is increasing all over the globe. Most of the preliminary clinical research has focused on rehabilitation and treatment of its complications. Pharmacological prevention of myopic progression has shown encouraging results recently and currently the scleral structure is believed to be responsible for disease progression. In this article, we have hypothesized injecting a biological cement in the potential space between the choroid and the sclera to halt the progressive elongation of the eye ball while preventing complications related to myopia.

DOI: 10.1016/j.mehy.2017.08.020
PMID: 28915972

163: Yadav K, Singh A, Badhwar S, Jaryal AK, Coshic P, Chatterjee K, Deepak KK. Decreased Spontaneous Baroreflex Sensitivity as an Early Marker for Progression of Haemorrhage. High Blood Press Cardiovasc Prev. 2017 Sep;24(3):275-281. doi: 10.1007/s40292-017-0205-4. Epub 2017 May 11. PubMed PMID: 28497338.

INTRODUCTION: Blood donation provides an ideal setup for assessment of cardiovascular responses to mild hypovolemia for understanding the underlying mechanisms.
AIM: To evaluate cardiovascular responses in time and magnitude by estimating the spontaneous baroreflex sensitivity (BRS) during and after donation of 450 ml of blood.
METHODS: Continuous beat-to-beat blood pressure and lead II ECG was recorded before, during and after blood donation in 54 healthy volunteers (age 34.7 ± 5.08 years; weight 77.9 ± 8.20 kg), followed by offline analyses of baroreflex sensitivity.
RESULTS: The systolic, diastolic or mean blood pressures did not change during or

after the blood donation. Decrease in pulse pressure and increase in heart rate was observed post donation. The spontaneous BRS decreased during [8.68 (6.038-12.69) ms/mmHg] and after blood donation [9.401 (6.396-11.59) ms/mmHg] as compared to the baseline [12.83 (6.884-18.18) ms/mmHg] with a significant decrease in α-HF on spectral analysis.
CONCLUSION: Mild blood loss (450 ml) results in non-hypotensive haemorrhage with a decrease in spontaneous BRS before the rise of heart rate during blood donation.

DOI: 10.1007/s40292-017-0205-4
PMID: 28497338 [Indexed for MEDLINE]

164: Yadav R, Yadav RK, Sarvottam K, Netam R. Framingham Risk Score and Estimated 10-Year Cardiovascular Disease Risk Reduction by a Short-Term Yoga-Based LifeStyle Intervention. J Altern Complement Med. 2017 Sep;23(9):730-737. doi: 10.1089/acm.2016.0309. Epub 2017 Feb 16. PubMed PMID: 28437144.

OBJECTIVE: The aim of this study was to evaluate the efficacy of a short-term yoga-based lifestyle intervention program in lowering Framingham Risk Score (FRS) and estimated 10-year cardiovascular risk.
METHODS: This was a single-arm, pre-post interventional study including data from a historical cohort with low to moderate risk for cardiovascular disease (CVD). It was conducted in a tertiary-care hospital. Participants with low (0 or 1 CVD risk factors) to moderately high risk (10-year risk between 10% and 20% and two or more CVD risk factors) were included. Participants with previously diagnosed CVD, defined as a history of myocardial infarction, congestive heart failure, or cerebrovascular accident, were excluded from the analysis. However, those with controlled hypertension were included. Intervention included a pretested short-term yoga-based lifestyle intervention, which included asanas (physical postures), pranayama (breathing exercises), meditation, relaxation techniques, stress management, group support, nutrition awareness program, and individualized advice. The intervention was for 10 days, spread over 2 weeks. However, participants were encouraged to include it in their day-to-day life. Outcomes included changes in FRS, and estimated 10-year CVD risk from baseline to week 2. A gender-based subgroup analysis was also done, and correlation between changes in FRS and cardiovascular risk factors was evaluated.
RESULTS: Data for 554 subjects were screened, and 386 subjects (252 females) were included in the analysis. There was a significant reduction in FRS ($p < 0.001$) and estimated 10-year cardiovascular risk ($p < 0.001$) following the short-term yoga-based intervention. There was a strong positive correlation between reduction in FRS and serum total cholesterol ($r = 0.60$; $p < 0.001$). There was a moderate positive correlation between reduction in FRS and low-density lipoprotein cholesterol ($r = 0.58$; $p < 0.001$), and a weak but positive correlation between reduction in FRS and triglycerides ($r = 0.26$; $p \leq 0.001$), serum very-low-density lipoprotein cholesterol ($r = 0.29$; $p < 0.001$), and systolic blood pressure ($r = 0.20$; $p \leq 0.001$).
CONCLUSIONS: This yoga-based lifestyle intervention program significantly reduced the CVD risk, as shown by lowered FRS and estimated 10-year CVD risk. Further testing of this promising intervention is warranted in the long term.

DOI: 10.1089/acm.2016.0309
PMID: 28437144 [Indexed for MEDLINE]

165: Zhao W, Rasheed A, Tikkanen E, Lee JJ, Butterworth AS, Howson JMM, Assimes TL, Chowdhury R, Orho-Melander M, Damrauer S, Small A, Asma S, Imamura M, Yamauch T, Chambers JC, Chen P, Sapkota BR, Shah N, Jabeen S, Surendran P, Lu Y, Zhang W, Imran A, Abbas S, Majeed F, Trindade K, Qamar N, Mallick NH, Yaqoob Z, Saghir T, Rizvi SNH, Memon A, Rasheed SZ, Memon FU, Mehmood K, Ahmed N, Qureshi IH, Tanveer-Us-Salam, Iqbal W, Malik U, Mehra N, Kuo JZ, Sheu WH, Guo X, Hsiung CA, Juang JJ, Taylor KD, Hung YJ, Lee WJ, Quertermous T, Lee IT, Hsu CC, Bottinger EP, Ralhan S, Teo YY, Wang TD, Alam DS, Di Angelantonio E, Epstein S, Nielsen SF,

Nordestgaard BG, Tybjaerg-Hansen A, Young R; CHD Exome+ Consortium, Benn M, Frikke-Schmidt R, Kamstrup PR; EPIC-CVD Consortium; EPIC-Interact Consortium; Michigan Biobank, Jukema JW, Sattar N, Smit R, Chung RH, Liang KW, Anand S, Sanghera DK, Ripatti S, Loos RJF, Kooner JS, Tai ES, Rotter JI, Chen YI, Frossard P, Maeda S, Kadowaki T, Reilly M, Pare G, Melander O, Salomaa V, Rader DJ, Danesh J, Voight BF, Saleheen D. Identification of new susceptibility loci for type 2 diabetes and shared etiological pathways with coronary heart disease. Nat Genet. 2017 Oct;49(10):1450-1457. doi: 10.1038/ng.3943. Epub 2017 Sep 4. PubMed PMID: 28869590.

To evaluate the shared genetic etiology of type 2 diabetes (T2D) and coronary heart disease (CHD), we conducted a genome-wide, multi-ancestry study of genetic variation for both diseases in up to 265,678 subjects for T2D and 260,365 subjects for CHD. We identify 16 previously unreported loci for T2D and 1 locus for CHD, including a new T2D association at a missense variant in HLA-DRB5 (odds ratio (OR) = 1.29). We show that genetically mediated increase in T2D risk also confers higher CHD risk. Joint T2D-CHD analysis identified eight variants-two of which are coding-where T2D and CHD associations appear to colocalize, including a new joint T2D-CHD association at the CCDC92 locus that also replicated for T2D. The variants associated with both outcomes implicate new pathways as well as targets of existing drugs, including icosapent ethyl and adipocyte fatty-acid-binding protein.

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PMID: 28869590 [Indexed for MEDLINE]