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List of publications of AIIMS, New Delhi for the month of October, 2017

[Source: www.pubmed.com].

1: Agarwal K, Sharma U, Sah RG, Mathur S, Hari S, Seenu V, Parshad R, Jagannathan NR. Pre-operative assessment of residual disease in locally advanced breast cancer patients: A sequential study by quantitative diffusion weighted MRI as a function of therapy. Magn Reson Imaging. 2017 Oct;42:88-94. doi: 10.1016/j.mri.2017.06.002. Epub 2017 Jun 13. PubMed PMID: 28627463.

PURPOSE: The potential of diffusion weighted imaging (DWI) in assessing pathologic response and surgical margins in locally advanced breast cancer patients (n=38) undergoing neoadjuvant chemotherapy was investigated.
METHODS: DWI was performed at pre-therapy (Tp0), after I (Tp1) and III (Tp3) NACT at 1.5T. Apparent diffusion coefficient (ADC) of whole tumor (ADCWT), solid tumor (ADCST), intra-tumoral necrosis (ADCNec) was determined. Further, ADC of 6 consecutive shells (5mm thickness each) including tumor margin to outside tumor margins (OM1 to OM5) was calculated and the data analyzed to define surgical margins.

RESULTS: Of 38 patients, 6 were pathological complete responders (pCR), 19 partial responders (pPR) and 13 were non-responders (pNR). Significant increase was observed in ADCST and ADCWT in pCR and pPR following therapy. Pre-therapy ADC was significantly lower in pCR compared to pPR and pNR indicating the heterogeneous nature of tumor which may affect drug perfusion and consequently the response. ADC of outside margins (OM1, OM2, and OM3) was significantly different among pCR, pPR and pNR at Tp3 which may serve as response predictive parameter. Further, at Tp3, ADC of outside margins (OM1, OM2, and OM3) was significantly lower compared to that seen at Tp0 in pCR, indicating the presence of residual disease in these shells.
CONCLUSION: Pre-surgery information may serve as a guide to define cancer free margins and the extent of residual disease which may be useful in planning breast conservation surgery.

DOI: 10.1016/j.mri.2017.06.002
PMID: 28627463 [Indexed for MEDLINE]

2: Agarwal KK, Behera A, Kumar R, Bal C. (18)F-Fluorodeoxyglucose-Positron Emission Tomography/Computed Tomography in Tuberculosis: Spectrum of Manifestations. Indian J Nucl Med. 2017 Oct-Dec;32(4):316-321. doi: 10.4103/ijnm.IJNM_29_17. PubMed PMID: 29142348; PubMed Central PMCID: PMC5672752.

The objective of this article is to provide an illustrative tutorial highlighting the utility of 18F-fluorodeoxyglucose-positron emission tomography/computed tomography (18F-FDG-PET/CT) imaging to detect spectrum of manifestations in patients with tuberculosis (TB). FDG-PET/CT is a powerful tool for early diagnosis, measuring the extent of disease (staging), and consequently for evaluation of response to therapy in patients with TB.

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PMCID: PMC5672752
PMID: 29142348

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

3: Agarwal R, Narayan J, Bhattacharyya A, Saraswat M, Tomar AK. Gene expression profiling, pathway analysis and subtype classification reveal molecular heterogeneity in hepatocellular carcinoma and suggest subtype specific therapeutic targets. Cancer Genet. 2017 Oct;216-217:37-51. doi:

10.1016/j.cancergen.2017.06.002. Epub 2017 Jul 8. PubMed PMID: 29025594.

A very low 5-year survival rate among hepatocellular carcinoma (HCC) patients is mainly due to lack of early stage diagnosis, distant metastasis and high risk of postoperative recurrence. Hence ascertaining novel biomarkers for early diagnosis and patient specific therapeutics is crucial and urgent. Here, we have performed a comprehensive analysis of the expression data of 423 HCC patients (373 tumors and 50 controls) downloaded from The Cancer Genome Atlas (TCGA) followed by pathway enrichment by gene ontology annotations, subtype classification and overall survival analysis. The differential gene expression analysis using non-parametric Wilcoxon test revealed a total of 479 up-regulated and 91 down-regulated genes in HCC compared to controls. The list of top differentially expressed genes mainly consists of tumor/cancer associated genes, such as AFP, THBS4, LCN2, GPC3, NUF2, etc. The genes over-expressed in HCC were mainly associated with cell cycle pathways. In total, 59 kinases associated genes were found over-expressed in HCC, including TTK, MELK, BUB1, NEK2, BUB1B, AURKB, PLK1, CDK1, PKMYT1, PBK, etc. Overall four distinct HCC subtypes were predicted using consensus clustering method. Each subtype was unique in terms of gene expression, pathway enrichment and median survival. Conclusively, this study has exposed a number of interesting genes which can be exploited in future as potential markers of HCC, diagnostic as well as prognostic and subtype classification may guide for improved and specific therapy.

DOI: 10.1016/j.cancergen.2017.06.002
PMID: 29025594 [Indexed for MEDLINE]

4: Agarwal S, Jain D. Thyroid Cytology in India: Contemporary Review and Meta-analysis. J Pathol Transl Med. 2017 Nov;51(6):533-547. doi: 10.4132/jptm.2017.08.04. Epub 2017 Oct 5. Review. PubMed PMID: 28994274; PubMed Central PMCID: PMC5700878.

Fine-needle aspiration cytology (FNAC) is a screening test for triaging thyroid nodules, aiding in subsequent clinical management. However, the advantages have been overshadowed by the multiplicity of reporting systems and a wide range of nomenclature used. The Bethesda System for Reporting Thyroid Cytopathology (TBSRTC) was formulated in 2007, to give the world a uniform thyroid cytology reporting system, facilitating easy interpretation by the clinicians. Here, we review the status of thyroid FNAC in India in terms of various reporting systems used including a meta-analysis of the previously published data. An extensive literature search was performed using internet search engines. The reports with detailed classification system used in thyroid cytology were included. The meta-analysis of published data was compared with the implied risk of malignancy by TBSRTC. More than 50 studies were retrieved and evaluated. TBSRTC is currently the most widely used reporting system with different studies showing good efficacy and interobserver concordance. Ancillary techniques have, as of now, limited applicability and acceptability in thyroid cytology in India. Twenty-eight published articles met the criteria for inclusion in the meta-analysis. When compared with TBSRTC recommendations, the meta-analysis showed a higher risk of malignancy for categories I and III. Thyroid FNAC is practiced all over India. TBSRTC has found widespread acceptance, with most institutions using this system for routine thyroid cytology reporting. However, reasons for a high malignancy risk for categories I and III need to be looked into. Various possible contributing factors are discussed in the review.

DOI: 10.4132/jptm.2017.08.04

PMCID: PMC5700878
PMID: 28994274

5: Aggarwal A, Jana M, Kumar V, Srivastava DN, Garg K. MR neurography in intraosseous median nerve entrapment. World J Radiol. 2017 Oct 28;9(10):400-404. doi: 10.4329/wjr.v9.i10.400. PubMed PMID: 29104742; PubMed Central PMCID: PMC5661168.

Intraosseous entrapment of the median nerve is an uncommon complication of elbow dislocation and fractures. The condition is seen to occur in adolescent age group with a remote history of trauma. We report two rare cases of type 2 intraosseous median nerve entrapment. Though the diagnosis of median neuropathy is made with clinical tests and neurophysiological studies, however exact site of entrapment and presurgical mapping of nerve is done accurately with MR neurography. Imaging thus plays a pivotal role in management of this condition.

DOI: 10.4329/wjr.v9.i10.400
PMCID: PMC5661168
PMID: 29104742

Conflict of interest statement: Conflict-of-interest statement: The authors do not have any conflict of interest.

6: Aggarwal P, Kedia S, Sharma R, Bopanna S, Madhusudhan KS, Yadav DP, Goyal S, Jain S, Mouli VP, Das P, Dattagupta S, Makharia G, Ahuja V. Tubercular Intestinal Strictures Show a Poor Response to Anti-Tuberculous Therapy. Dig Dis Sci. 2017 Oct;62(10):2847-2856. doi: 10.1007/s10620-017-4727-3. Epub 2017 Aug 30. PubMed PMID: 28856488.

BACKGROUND: The literature on resolution of intestinal strictures in patients with intestinal tuberculosis (ITB) after anti-tuberculous therapy (ATT) is sparse and ambivalent. We aimed to assess the frequency of stricture resolution after ATT and its predictors.
METHODS: This ambispective cohort study included consecutive ITB patients with strictures who received ATT for ?6 months and were on regular follow-up between January 2004 and December 2015. Resolution of stricture was assessed at the end of ATT by endoscopy/radiology.
RESULTS: Of 286 patients, 128 had strictures, and 106 were finally included (63 males, median age 35 years). The stricture location was distal ileum/ileocecal in 52 (49.1%), colon in 37 (34.9%), ileocolonic in 4 (3.8%), proximal small bowel in 10 (9.4%), and gastroduodenal in 4 (3.8%) patients. Although all patients demonstrated mucosal healing (indicating resolution of active infection), stricture resolution occurred only in 25/106 (23.6%) patients. Symptoms pertaining to stricture (pain abdomen/recurrent SAIO) were present in 104/106 (98%) patients, and after a median of 6 (6-9) months of ATT, these symptoms resolved only in half, 88% (22/25) in patients with stricture resolution and 38% (30/79) in patients with persistent strictures. Colonic strictures had the least resolution (5.4%) followed by proximal small intestinal (20%) and distal ileal/ileocecal (36.5%). Although not statistically significant, stricture resolution was less frequent in patients with multiple strictures, longer strictures (>3 cm), and strictures in which scope was not negotiable prior to ATT.
CONCLUSION: Only one-fourth of ITB patients with strictures show resolution of stricture following ATT. The resolution of strictures is dependent on disease location, and majority of them exhibit symptoms pertaining to stricture even after ATT.

DOI: 10.1007/s10620-017-4727-3
PMID: 28856488 [Indexed for MEDLINE]

7: Aggarwal S, Ahuja V, Paul J. Attenuated GABAergic Signaling in Intestinal Epithelium Contributes to Pathogenesis of Ulcerative Colitis. Dig Dis Sci. 2017 Oct;62(10):2768-2779. doi: 10.1007/s10620-017-4662-3. Epub 2017 Jun 30. PubMed PMID: 28667430.

BACKGROUND: Neuromediators produced by enteric nervous system regulate inflammatory processes via interacting with enteric immune system. Role of ?-aminobutyric acid (GABA), which is also a neuromediator, has been implicated in autoimmune diseases like multiple sclerosis, type 1 diabetes, and rheumatoid arthritis, where they modulate the immune responses. However, its role in ulcerative colitis (UC) has not been defined.
AIMS: This study was carried out to investigate the role of GABA and its signaling components in pathogenesis of UC.
METHODS: Peripheral blood, colon mucosal biopsy, and fecal specimens were collected from UC and control groups. Quantification of GABA was done using ELISA. Expression of GABAergic signal system components was analyzed through RT-PCR analysis. Enumeration of GABA-producing bacteria was done by qPCR analysis. Activity of p38 MAPK and expression of proinflammatory cytokines were determined by immunohistochemistry and RT-PCR analysis, respectively.
RESULTS: GABA levels were significantly reduced in patients with UC as compared to control group when measured in serum and colon biopsy. Altered expression of GABAergic signal system was observed in UC patients. Reduced abundance of selected GABA-producing bacteria was detected in stool samples of UC patients as compared to control. p38 MAPK activity and expression of its downstream effector cytokines were found to be increased in UC patients as compared to control.
CONCLUSIONS: Reduced levels of GABA were observed in patients with UC, and this leads to hyperactivation of p38 MAPK and overexpression of downstream effector cytokines suggesting a role of GABA in pathogenesis of UC.

DOI: 10.1007/s10620-017-4662-3
PMID: 28667430 [Indexed for MEDLINE]

8: Agrawal S, Srigyan D, Nag HL, Kapil A, Dhawan B. Chronic osteomyelitis by Aeromonas hydrophila: A silent cause of concern. J Lab Physicians. 2017 Oct-Dec;9(4):337-339. doi: 10.4103/JLP.JLP_45_17. PubMed PMID: 28966503; PubMed Central PMCID: PMC5607770.

Aeromonas is a Gram-negative bacillus, widely found in aquatic environment. Osteoarticular pathology caused by Aeromonas hydrophila is rarely encountered. To the best of our knowledge, this is the first case of chronic osteomyelitis by A. hydrophila reported from India. We report a case of chronic osteomyelitis of the lower limb due to A. hydrophila, which occurred as a delayed complication following open reduction and internal fixation. Prompt medical and surgical intervention supplemented by a comprehensive microbiological workup aided in pathogen identification and specific antimicrobial administration resulting in the successful outcome of our patient. This case illustrates the utility of multidisciplinary management approach involving microbiologists and orthopedicians in investigating and appropriately managing such cases.

DOI: 10.4103/JLP.JLP_45_17
PMCID: PMC5607770
PMID: 28966503

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

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

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

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

10: Alampalli SV, Grover M, Chandran S, Tatu U, Acharya P. Proteome and Structural Organization of the Knob Complex on the Surface of the Plasmodium Infected Red Blood Cell. Proteomics Clin Appl. 2017 Oct 5. doi: 10.1002/prca.201600177. [Epub ahead of print] PubMed PMID: 28981210.

PURPOSE: The cell membrane of the erythrocytes infected with the malaria parasite Plasmodium falciparum undergoes several changes during the course of parasite life cycle and forms protrusions known as 'knobs' on its surface during the mature trophozoite and schizont stages. The structural organization of knob components especially PfEMP1 on the iRBC surface is the main determinant for the cytoadhesive and rosetting capacity of the iRBC by binding to various host receptors as well as for the variable antigenicity, which is crucial for immunoevasion. Although several studies report individual interactions among knob constituents, a comprehensive identification of the knob proteome is lacking.
EXPERIMENTAL DESIGN: The detergent-resistant membrane (DRM) rafts are isolated from the infected erythrocyte membrane and knob (KAHRP) positive fractions are subjected to proteomics analysis. In addition, structures of various knob components are modeled and assembled ab initio based on experimentally established protein interactions.
RESULTS: Proteins of various functional classes are found to be present in the knobs including the newly identified knob constituents which include host Hsp70, elongation factor 1A, acyl CoA synthetase, and some hypothetical proteins. Ab initio structural prediction of PfEMP1, KHARP, PfEMP2, PfEMP3, and PHIST shows

that these proteins are intrinsically disordered and can have varying number of protein-protein interactions depending on their lowest energy structure. Further in silico mathematical modeling of a single repeat unit of PfEMP1-PHIST is present 63-112 times along the periphery of a single knob.
CONCLUSIONS AND CLINICAL RELEVANCE: This study provides structural insight into the organization of the core knob components and uncovers novel proteins as knob components. This structural information can be used for the development of better vaccine design strategies or drug design to destabilize the knob structure, which is a major virulence determinant in P. falciparum malaria.

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PMID: 28981210

11: Anand S, Zheng Y, Montez-Rath ME, Wei WJ, Perico N, Carminati S, Narayan KV, Tandon N, Mohan V, Jha V, Zhang L, Remuzzi G, Prabahkaran D, Chertow GM. Do attributes of persons with chronic kidney disease differ in low-income and middle-income countries compared with high-income countries? Evidence from population-based data in six countries. BMJ Glob Health. 2017 Oct 9;2(4):e000453. doi: 10.1136/bmjgh-2017-000453. eCollection 2017. PubMed PMID: 29071132; PubMed Central PMCID: PMC5640036.

Kidney biopsies to elucidate the cause of chronic kidney disease (CKD) are performed in a minority of persons with CKD living in high-income countries, since associated conditions-that is, diabetes mellitus, vascular disease or obesity with pre-diabetes, prehypertension or dyslipidaemia-can inform management targeted at slowing CKD progression in a majority. However, attributes of CKD may differ substantially among persons living in low-income and middle-income countries (LMICs). We used data from population or community-based studies from five LMICs (China, urban India, Moldova, Nepal and Nigeria) to determine what proportion of persons with CKD living in diverse regions fit one of the three major clinical profiles, with data from the US National Health Nutrition and Examination Survey as reference. In the USA, urban India and Moldova, 79.0%-83.9%; in China and Nepal, 62.4%-66.7% and in Nigeria, 51.6% persons with CKD fit one of three established risk profiles. Diabetes was most common in urban India and vascular disease in Moldova (50.7% and 33.2% of persons with CKD in urban India and Moldova, respectively). In Nigeria, 17.8% of persons with CKD without established risk factors had albuminuria ?300?mg/g, the highest proportion in any country. While the majority of persons with CKD in LMICs fit into one of three established risk profiles, the proportion of persons who have CKD without established risk factors is higher than in the USA. These findings can inform tailored CKD detection and management systems and highlight the importance of studying potential causes and outcomes of CKD without established risk factors in LMICs.

DOI: 10.1136/bmjgh-2017-000453
PMCID: PMC5640036
PMID: 29071132

Conflict of interest statement: Competing interests: None declared.

12: Arjuman A, Chandra NC. LOX-1: A potential target for therapy in atherosclerosis; an in vitro study. Int J Biochem Cell Biol. 2017 Oct;91(Pt A):65-80. doi: 10.1016/j.biocel.2017.08.013. Epub 2017 Aug 30. PubMed PMID: 28860004.

Pro-inflammatory signal generated from the interaction of oxLDL with its cognate receptor LOX-1 has been attenuated successfully by a novel combination siRNA (siLOX-1?) targeting unique regions of Homo sapien LOX-1 mRNA. Signalling via LOX-1R was studied in a potentially pro-atherogenic arena recreated in a metabolic, pulse-chase set up. An initial pulse of oxLDL (20?g/mL;5h) was chased (without oxLDL) on a temporal scale upto 72h. Our study shows that the pro-inflammatory signal generated via oxLDL-LOX-1R interaction was mediated in two rungs, an initial sustained increase in LOX-1R expression up to 12h, and a renewal after 48h. TNF-? acted as a primary mediator of LOX-1R signalling, presumably also stimulating CD40 and MMP-9. Both TNF-? and IL-6 were involved in the second rung of LOX-1R signalling; maximum secretion of both was detected at 48h. Our study suggests a temporal sustenance of LOX-1R signalling by pro-inflammatory cytokines even on withdrawal of oxLDL. Also, siLOX-1? successfully abated LOX-1R expression along with its signalling intermediates, NO and NF-kB. Overall, LOX-1 signalling and the crucial role of cytokines in sustaining it is reported. Attenuation of this receptor may be of therapeutic value in atherosclerosis.

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PMID: 28860004 [Indexed for MEDLINE]

13: Arrossi S, Temin S, Garland S, Eckert LO, Bhatla N, CastellsaguÃ© X, Alkaff SE, Felder T, Hammouda D, Konno R, Lopes G, Mugisha E, Murillo R, Scarinci IC, Stanley M, Tsu V, Wheeler CM, Adewole IF, de SanjosÃ© S. Primary Prevention of Cervical Cancer: American Society of Clinical Oncology Resource-Stratified Guideline. J Glob Oncol. 2017 Mar 17;3(5):611-634. doi: 10.1200/JGO.2016.008151. eCollection 2017 Oct. PubMed PMID: 29094100; PubMed Central PMCID: PMC5646902.

Purpose: To provide resource-stratified (four tiers), evidence-based recommendations on the primary prevention of cervical cancer globally.
Methods: The American Society of Clinical Oncology convened a multidisciplinary, multinational panel of oncology, obstetrics/gynecology, public health, cancer control, epidemiology/biostatistics, health economics, behavioral/implementation science, and patient advocacy experts. The Expert Panel reviewed existing guidelines and conducted a modified ADAPTE process and a formal consensus-based process with additional experts (consensus ratings group) for one round of formal ratings.
Results: Existing sets of guidelines from five guideline developers were identified and reviewed; adapted recommendations formed the evidence base. Five systematic reviews, along with cost-effectiveness analyses, provided evidence to inform the formal consensus process, which resulted in agreement of ? 75%.
Recommendations: In all resource settings, two doses of human papillomavirus vaccine are recommended for girls age 9 to 14 years, with an interval of at least 6 months and possibly up to 12 to 15 months. Individuals with HIV positivity should receive three doses. Maximal and enhanced settings: if girls are age ? 15 years and received their first dose before age 15 years, they may complete the series; if no doses were received before age 15 years, three doses should be administered; in both scenarios, vaccination may be through age 26 years. Limited and basic settings: if sufficient resources remain after vaccinating girls age 9 to 14 years, girls who received one dose may receive additional doses between age 15 and 26 years. Maximal, enhanced, and limited settings: if ? 50% coverage in the priority female target population, sufficient resources, and cost effectiveness, boys may be vaccinated to prevent other noncervical human papillomavirus-related cancers and diseases. Basic settings: vaccinating boys is not recommended.

It is the view of the American Society of Clinical Oncology that health care providers and health care system decision makers should be guided by the recommendations for the highest stratum of resources available. The guideline is intended to complement but not replace local guidelines.

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Conflict of interest statement: The following represents disclosure information provided by authors of this manuscript. All relationships are considered compensated. Relationships are self-held unless noted. I = Immediate Family Member, Inst = My Institution. Relationships may not relate to the subject matter of this manuscript. For more information about ASCO's conflict of interest policy, please refer to www.asco.org/rwc or ascopubs.org/jco/site/ifc. Silvina ArrossiNo relationship to discloseSarah TeminNo relationship to discloseSuzanne GarlandLeadership: Merck Sharp & Dohme, CSL, GlaxoSmithKline Honoraria: Sanofi Pasteur, HPV standalone scientific symposium Barcelona 2014, lectures and media interviews on HPV best practices in Australia and Japan 2014, International Gynecological Cancer Society, Merck Sharp & Dohme, Merck Consulting or Advisory Role: Merck Sharp & Dohme Research Funding: Merck Sharp & Dohme (Inst), CSL (Inst), GlaxoSmithKline (Inst) Travel, Accommodations, Expenses: Merck Sharp & Dohme, Pan American Health Organization/WHO, GlaxoSmithKlineLinda O'Neal EckertNo relationship to discloseNeerja BhatlaResearch Funding: Merck Sharp & DohmeXavier CastellsaguéNo relationship to discloseSharifa Ezat AlkaffNo relationship to discloseTamika FelderHonoraria: Quest Diagnostics, Genentech, Merck, HologicDoudja HammoudaTravel, Accommodations, Expenses: MerckRyo KonnoHonoraria: GlaxoSmithKline, Merck Sharp & Dohme, Qiagen, Roche, Chugai Pharmaceutical Consulting or Advisory Role: GlaxoSmithKline, Merck Sharp & Dohme Research Funding: Chugai Pharmaceutical (Inst)Gilberto LopesHonoraria: AstraZeneca, Roche, Merck Serono, Merck Sharp & Dohme, Fresenius Kabi, Novartis, Bristol-Myers Squibb, Janssen-Cilag, Boehringer Ingelheim, Pfizer, Cipla, Sanofi, Eisai, Eli Lilly Consulting or Advisory Role: Pfizer, Bristol-Myers Squibb, Eli Lilly Research Funding: Eli Lilly, Pfizer, AstraZeneca, Merck Sharp & Dohme, Eisai, Bristol-Myers Squibb Expert Testimony: SanofiEmmanuel MugishaNo relationship to discloseRaul MurilloNo relationship to discloseIsabel C. ScarinciNo relationship to discloseMargaret StanleyHonoraria: Merck Sharp & Dohme Consulting or Advisory Role: GlaxoSmithKlineVivien TsuNo relationship to discloseCosette M. WheelerResearch Funding: GlaxoSmithKline (Inst), Roche (Inst)Isaac Folorunso AdewoleHonoraria: GlaxoSmithKlineSilvia de SanjoseResearch Funding: Merck (Inst), GlaxoSmithKline (Inst)

14: Bagchi S, Subbiah AK, Bhowmik D, Mahajan S, Yadav RK, Kalaivani M, Singh G, Dinda A, Kumar Agarwal S. Low-dose Rituximab therapy in resistant idiopathic membranous nephropathy: single-center experience. Clin Kidney J. 2018 Jun;11(3):337-341. doi: 10.1093/ckj/sfx105. Epub 2017 Oct 11. PubMed PMID: 29942496; PubMed Central PMCID: PMC6007352.

Background: Persistent significant proteinuria has been associated with increased risk of progression to end-stage kidney disease in patients with idiopathic membranous nephropathy (IMN). Rituximab (RTX) therapy has given encouraging results in IMN, but most of the studies have used a higher dose, which is limited by the high cost as well as a potential increased risk of infections. Our study aimed to assess the efficacy and safety of low-dose RTX in patients with immunosuppression-resistant IMN.
Methods: A total of 21 patients with treatment-resistant IMN treated with RTX from 2015 to 2016 at our center were included in the study. They received two

doses of RTX (500?mg each) infusion 7?days apart. CD19 count was performed after 4?weeks. A single dose of RTX was repeated after 4-6?weeks if CD19 count was not depleted.
Results: The mean standard deviation age of patients was 33.3?±?12.3?years and 33.3% were females. Mean proteinuria before RTX therapy was 6.2?±?2.2?g/day, serum creatinine was 0.9?±?0.3?mg/dL and estimated glomerular filtration rate (eGFR) was 95.8?±?26.9?mL/min/1.73 m2. All the patients were non-responders to prior immunosuppressive treatment. Twenty (95.2%) patients achieved targeted CD19 depletion with two doses of RTX. One patient required one additional RTX dose due to inadequate B-cell suppression. A total of 13 (61.9%) patients achieved remission with RTX therapy: 4 (19.0%) complete and 9 (42.9%) partial remission. Patients who did not respond to RTX had a significantly lower baseline eGFR compared with those who achieved remission (P?=?0.022). One patient developed respiratory tract infection following RTX during the follow-up, which responded to a course of oral antibiotics. During median follow-up of 13.1 (10-23.9)?months, four (19%) patients had deterioration in renal function and one patient relapsed after achieving partial remission. Renal survival was significantly better in patients who responded to RTX therapy as compared with those who did not achieve remission (P?=?0.0037).
Conclusion: Low-dose RTX therapy is effective and safe in immunosuppression-resistant IMN.

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PMCID: PMC6007352
PMID: 29942496

15: Bagchi S, Gopalakrishnan V, Srivastava SK, Upadhayay A, Singh G, Bhowmik D, Mahajan S, Dinda A, Agarwal SK. BK polyomavirus infection after renal transplantation: Surveillance in a resource-challenged setting. Transpl Infect Dis. 2017 Dec;19(6). doi: 10.1111/tid.12770. Epub 2017 Oct 25. PubMed PMID: 28834032.

BACKGROUND: There is a paucity of data available about BK polyomavirus (BKPyV) infection after renal transplantation (RTX) in resource-limited countries with a predominantly living-donor, ABO-compatible RTX program. We aimed to assess BKPyV infection in such patients in a public hospital in India.
METHODS: We prospectively evaluated plasma BKPyV replication in 62 patients at 1, 3, 6, 9, and 12 months after RTX. Sustained significant BK viremia (SSBKV) was defined as significant viremia (?10 000 copies/mL) detected ?2 times, and BKPyV-associated nephropathy (BKVAN) as histologic changes of BKVAN with BK viremia with/without graft dysfunction.
RESULTS: All patients underwent RTX without requiring desensitization. Incidence of BK viremia was: 17.7%, 41.9%, 16.1%, 25.8%, and 17.7% at 1, 3, 6, 9, and 12 months, respectively. Of 62 patients, 64.5% had BKPyV viremia during the study, 32.2% had significant viremia, all except one detected in the first 6 months. Nine (14.5%) patients had SSBKV. There was no biopsy-proven BKVAN. At the end of 1 year, mean serum creatinine was higher and graft dysfunction was significantly more common in patients with SSBKV compared to those without SSBKV.
CONCLUSION: Transient BK viremia is common in low/intermediate immunologic risk RTX recipients in India, with a peak occurring at 3-6 months. Most clear their viremia by 12 months. Graft dysfunction seems to be more frequent in patients with SSBKV, although BKVAN is uncommon on biopsy in these patients.

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PMID: 28834032

16: Bagri NK, Raj D, Kaur J, Punia H, Saini I, Lodha R, Kabra SK. Juvenile systemic sclerosis: experience from a tertiary care center from India. Rheumatol Int. 2017 Oct;37(10):1687-1691. doi: 10.1007/s00296-017-3793-3. Epub 2017 Aug 22. PubMed PMID: 28831595.

Juvenile systemic sclerosis (JSSc) is a rare disorder with paucity of information on its treatment and longterm outcome. Herein, we are sharing our experience with this rare entity. Case records of children, diagnosed to have systemic sclerosis attending Pediatric Rheumatology Clinic at All India Institute of Medical Sciences, New Delhi from January 1998 to June 2016 were reviewed. The demographic, clinical, laboratory, treatment and outcome details were recorded. Disease outcome was classified arbitrarily as controlled, partly controlled or non-responsive/progressive based on: (A) ability to perform activities of daily life (ADL) and (B) presence or absence of musculoskeletal symptoms, skin changes (ulceration/progressive digital pitting/gangrene), and visceral organ involvement (dyspahgia, cardiopulmonary symptoms). Controlled: ability to perform ADL and absence of B features for at least 6 months. Partly controlled: inability to perform ADL or any of the B features. Non-responsive/progressive disease: presence of both A and any of B features. Thirty-two children (21, girls) diagnosed as systemic sclerosis for whom follow-up of more than 6 months was available were included for this retrospective analysis. Mean (SD) age at presentation was 112.79 (30.05) months, while the median (IQR) delay in diagnosis was 28.5 (9-47.25) months. Of the 32 children 17 (53.12%) had diffuse systemic sclerosis (dSSc), 5 (15.62%) had limited systemic sclerosis (lSSc) and 10 (31.25%) had sclerosis with overlap syndrome. The common clinical features apart from sclerosis/induration proximal to metacarpophalangeal joint were Raynauds phenomenon (n = 22, 68.7%), skin rash (n = 20, 62%), arthritis or arthralgia (n = 16, 50%), and muscular weakness (n = 10, 31.2%). Among those for whom data regarding investigations were available; ANA was positive in 50% (12/24), whereas Anti Scl70 was positive in one out three cases. Treatment regimen included naproxen, methotrexate, calcium channel blockers with or without steroids. HCQ was added in children with skin rash or in children with partial control. Median (IQR) follow-up period was 19.75 (12-31.75) months. With the above treatment protocol, 19 (59.3%) children achieved disease control on treatment, 8 (26.6%) had partial control while 5 (16.6%) showed no response or progressive disease. Esophageal dysmotility and intertitial lung disease (ILD) were documented in three children each. Complication (cataract and herpes zoster) related to immunosuppressive therapy were observed in two children. There was no mortality during the study period. Juvenile Sclerosis though rare is associated with significant morbidities and lacks a curative treatment but a reasonable quality of life to perform daily activities can be achieved using methotrexate and steroid-based immuosuppressive therapy.

DOI: 10.1007/s00296-017-3793-3
PMID: 28831595

17: 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 [Indexed for MEDLINE]

18: Bergin PS, Beghi E, Sadleir LG, Tripathi M, Richardson MP, Bianchi E, D'Souza WJ; EpiNet Study Group. Do neurologists around the world agree when diagnosing epilepsy? - Results of an international EpiNet study. Epilepsy Res. 2018 Jan;139:43-50. doi: 10.1016/j.eplepsyres.2017.10.014. Epub 2017 Oct 26. PubMed PMID: 29175563.

OBJECTIVE: Previous studies have shown moderate agreement between physicians when diagnosing epilepsy, but have included small numbers. The EpiNet study group was established to undertake multicentre clinical trials in epilepsy. Before commencing trials, we wanted to determine levels of agreement between physicians from different countries and different health systems when diagnosing epilepsy, specific seizure types and etiologies.
METHODS: 30 Case scenarios describing six children and 24 adults with paroxysmal events (21 epileptic seizures, nine non-epileptic attacks) were presented to physicians with an interest in epilepsy. Physicians were asked how likely was a diagnosis of epilepsy; if seizures were generalised or focal; and the likely etiology. For 23 cases, clinical information was presented in Step 1, and investigations in Step 2.
RESULTS: 189 Participants from 36 countries completed the 30 cases. Levels of agreement were determined for 154 participants who provided details regarding their clinical experience. There was substantial agreement for diagnosis of epilepsy (kappa=0.61); agreement was fair to moderate for seizure type(s) (kappa=0.40) and etiology (kappa=0.41). For 23 cases with two steps, agreement increased from step 1 to step 2 for diagnosis of epilepsy (kappa 0.56-0.70), seizure type(s) (kappa 0.38-0.52), and etiology (kappa 0.38-0.47). Agreement was better for 53 epileptologists (diagnosis of epilepsy, kappa=0.66) than 56 neurologists with a special interest in epilepsy (kappa=0.58). Levels of agreement differed slightly between physicians practicing in different parts of the world, between child and adult neurologists, and according to one's experience with epilepsy.
CONCLUSION: Although there is substantial agreement when epileptologists diagnose epilepsy, there is less agreement for diagnoses of seizure types and etiology. Further education of physicians regarding semiology of different seizure types is required. Differences in approach to diagnosis, both between physicians and

between countries, could impact negatively on clinical trials of anti-epileptic drugs.

DOI: 10.1016/j.eplepsyres.2017.10.014
PMID: 29175563

19: Bhakuni T, Sharma A, Ali MF, Mahapatra M, Saxena R, Jairajpuri MA. Identification of 2 Novel Polymorphisms and rs3138521 in 5' Untranslated Region of SERPINC1 Gene in North Indian Population With Deep Vein Thrombosis. Clin Appl Thromb Hemost. 2017 Oct;23(7):865-870. doi: 10.1177/1076029616652725. Epub 2016 Jun 8. PubMed PMID: 27279637.

Antithrombin III (AT) is the most important endogenous anticoagulant, and genetic variability in SERPINC1, gene encoding AT, is low. Mutations leading to AT deficiency and increased thrombotic risk are well known; however, only 2 studies have reported mutations in regulatory region of SERPINC1 gene till date. Aim of the present study was to identify genetic variations in SERPINC1 5' untranslated region (UTR) in Indian patients with deep vein thrombosis (DVT) having AT deficiency. DNA sequencing was used to identify underlying genetic defects in SERPINC1 regulatory region. In silico tools TFBIND and PROMO were used to identify transcription factor binding sites in the promoter region. We have identified 2 novel polymorphisms, g.25G>A and g.-1A>T, and 2 known g.67G>A and rs3138521 5' UTR polymorphisms in SERPINC1 regulatory region in Indian patients with DVT for the first time. In present study, allele frequencies of rs3138521 (S: 0.37 and F: 0.63) were similar to that reported in Western population and were not associated with low plasma AT levels (P value .5). This is the first report of regulatory region polymorphisms in SERPINC1 gene in Indian population. Our results strongly suggest that similar studies should be included when ever no mutation is detected in protein-coding region of AT gene.

DOI: 10.1177/1076029616652725
PMID: 27279637 [Indexed for MEDLINE]

20: Bhalla AS, Das A, Naranje P, Goyal A, Guleria R, Khilnani GC. Dilemma of diagnosing thoracic sarcoidosis in tuberculosis-endemic regions: An imaging-based approach. Part 2. Indian J Radiol Imaging. 2017 Oct-Dec;27(4):380-388. doi: 10.4103/ijri.IJRI_201_17. PubMed PMID: 29379231; PubMed Central PMCID: PMC5761163.

The second part of the review discusses the role of different existing imaging modalities in the evaluation of thoracic sarcoidosis, including chest radiograph, computed tomography, magnetic resonance imaging, endobronchial ultrasound, and positron emission tomography. While summarizing the advantages and pitfalls of each imaging modality, the authors propose imaging recommendations and an algorithm to be followed in the evaluation of clinically suspected case of sarcoidosis in tuberculosis-endemic regions.

DOI: 10.4103/ijri.IJRI_201_17
PMCID: PMC5761163
PMID: 29379231

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

21: Bhalla AS, Das A, Naranje P, Goyal A, Guleria R, Khilnani GC. Dilemma of diagnosing thoracic sarcoidosis in tuberculosis endemic regions: An imaging-based

approach. Part 1. Indian J Radiol Imaging. 2017 Oct-Dec;27(4):369-379. doi: 10.4103/ijri.IJRI_200_17. PubMed PMID: 29379230; PubMed Central PMCID: PMC5761162.

Sarcoidosis is a multi-systemic disorder of unknown etiology, although commonly believed to be immune-mediated. Histologically, it is characterized by noncaseating granuloma which contrasts against the caseating granuloma seen in tuberculosis (TB), an infectious disease that closely mimics sarcoidosis, both clinically as well as radiologically. In TB-endemic regions, the overlapping clinico-radiological manifestations create significant diagnostic dilemma, especially since the management options are markedly different in the two entities. Part 1 of this review aims to summarize the clinical, laboratory, and imaging features of sarcoidosis, encompassing both typical and atypical manifestations, in an attempt to distinguish between the two disease entities.

DOI: 10.4103/ijri.IJRI_200_17
PMCID: PMC5761162
PMID: 29379230

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

22: Biswal S, Das D, Barhwal K, Kumar A, Nag TC, Thakur MK, Hota SK, Kumar B. Epigenetic Regulation of SNAP25 Prevents Progressive Glutamate Excitotoxicty in Hypoxic CA3 Neurons. Mol Neurobiol. 2017 Oct;54(8):6133-6147. doi: 10.1007/s12035-016-0156-0. Epub 2016 Oct 3. PubMed PMID: 27699604.

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

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

23: Chandra P, Kumawat D, Kumar V, Tewari R. Bilateral large subconjunctival haemorrhages unmasking immune thrombocytopenic purpura during retinopathy of prematurity screening. BMJ Case Rep. 2017 Oct 4;2017. pii: bcr-2017-221444. doi: 10.1136/bcr-2017-221444. PubMed PMID: 28978600.

Although thrombocytopenia is known to be associated with pathogenesis of

retinopathy of prematurity (ROP), immune thrombocytopenic purpura (ITP) is rare in infancy and not reported to occur with ROP. A preterm infant with aggressive posterior ROP developed bilateral massive subconjunctival haemorrhage after scleral indentation during screening. On evaluation, the infant was found to have severe ITP. Following intravenous transfusion of platelets and immunoglobulin, platelet counts improved and subconjunctival haemorrhage resolved over time. This case highlights the unusual presentation of ITP and also discusses the association of thrombocytopenia with ROP. Ophthalmologists should get prompt haematological work-up of such occurrences.

DOI: 10.1136/bcr-2017-221444
PMID: 28978600 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

24: Chaniyara MH, Bafna R, Urkude J, Sharma N. Rescuing the host Descemet's membrane in full-thickness traumatic wound dehiscence in deep anterior lamellar keratoplasty: intraoperative optical coherence tomography (iOCT)-guided technique. BMJ Case Rep. 2017 Oct 24;2017. pii: bcr-2017-221495. doi: 10.1136/bcr-2017-221495. PubMed PMID: 29066651.

Optimal visual recovery following full-thickness traumatic wound dehiscence in a case of operated deep anterior lamellar keratoplasty (DALK) is rarely seen. Here we report a case of 22-year-old male patient presented to our casualty department with complaint of sudden-onset diminution of vision in his right eye following blunt trauma of 1?day duration. DALK had been performed 11 months ago for advanced keratoconus in the same eye. Best-corrected visual acuity (BCVA) in the right eye was hand movement close to face with accurate projection of rays and in the left eye was 20/20. Slit-lamp examination showed the presence of inferior 180° graft dehiscence with broken sutures and shallow anterior chamber with corneal oedema. Repair of the dehiscence with descemetopexy was done under the guidance of intraoperative optical coherence tomography with the successful rescuing of the host Descemet's membrane. BCVA at 6 months follow-up was 20/40.

DOI: 10.1136/bcr-2017-221495
PMID: 29066651 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

25: 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.

26: Chaudhary K, Ramanujam B, Kumaran SS, Chandra PS, Wadhawan AN, Garg A, Tripathi M. Does education play a role in language reorganization after surgery in drug refractory temporal lobe epilepsy: An fMRI based study? Epilepsy Res. 2017 Oct;136:88-96. doi: 10.1016/j.eplepsyres.2017.07.017. Epub 2017 Jul 29.

PubMed PMID: 28802988.

OBJECTIVES: Patients with drug refractory epilepsy (DRE) and a high level of education may differ in their language recovery after surgery. Our aim was to determine whether there were differences in the extent of improvement and pattern of reorganization of language functions on functional magnetic resonance imaging (fMRI) after surgery to treat refractory temporal lobe epilepsy (TLE) between patients with more than 12 years of formal education versus those with a shorter period of regular schooling.
METHODS: After approval by an institutional ethics committee, 60 right-handed, adult patients of left TLE and 20 right-handed, healthy controls were recruited to the study. Multiple aspects of language (Repetition, Naming, Word fluency, Visual word and Comprehension reading) were tested using the Indian Aphasia Battery (IAB) in the Hindi language; fMRI was performed using a standardized Hindi language paradigm (lexical, semantic, syntactic and comprehension components) in both cases and controls, before and after an anterior temporal lobectomy (in cases) with a 1.5T MR Scanner. An array of performance tests of intelligence and the verbal adult intelligence scale (VAIS) were used to measure the Intelligence Quotient (IQ) in Left TLE (LTLE) patients before and after surgery. Language laterality was estimated using the laterality index (LI-toolbox-spm8). Cohen's d test was performed to determine the effect sizes of the differences in the IAB scores, and Pearson's correlation was applied between regional (IFG and STG) activation in controls and TLE patients with more than 12 years of schooling [higher educational status (HES subgroup)] and those with less than 12 years of schooling [lower educational status (LES subgroup)].
RESULTS: At the baseline, clinical testing with IAB showed better scores in controls than in cases. Better scores were observed in subjects with higher levels of education than in those with lower levels of education. An improvement was observed in IQ scores in both the HES and LES groups after ATLR; significant worsening in the abstract ability subtest was noted in the LES group, whereas in the HES group there was an improvement. Blood-oxygen-level dependent (BOLD) activation during language tasks was observed in both cerebral hemispheres in the TLE cases, while it was observed in the traditional left hemispheric language areas in controls. Postoperatively, greater BOLD activation was observed in the left inferior frontal gyri (IFG, $r=0.65^{*}$; $p<0.05$), middle frontal gyrus (MFG, $r=0.77^{**}$; $p<0.01$) superior temporal gyri (STG, $r=0.88^{*}$ $p<0.02$) and angular gyrus (AG, $r=0.73^{*}$; $p<0.04$) in HES compared to LES subjects. Similarly, LI showed left lateralization of the frontal (LIw=0.77 & 0.71) and temporal (LIw=0.74 & 0.5) regions in controls and the TLE group (post-surgery) compared to the pre-surgery group during language tasks.
CONCLUSIONS: Greater improvement in language skills and BOLD activation in the left hemisphere in TLE-patients (after epilepsy surgery) with a high level of education was similar to that of healthy controls, implying that education has an effect on the functional reorganization/recovery of language areas.

DOI: 10.1016/j.eplepsyres.2017.07.017
PMID: 28802988 [Indexed for MEDLINE]

27: Chawla R, Nair S, Venkatesh P, Garg S, Mittal K. Bilateral disc drusen in a diabetic patient simulating diabetic papillopathy as a cause of disc edema. Indian J Ophthalmol. 2017 Oct;65(10):1051-1053. doi: 10.4103/ijo.IJO_355_17. PubMed PMID: 29044087; PubMed Central PMCID: PMC5678315.

Bilateral optic disc edema in a diabetic patient may be caused by diabetic papillopathy. We herein report on a patient with bilateral optic disc drusen

simulating diabetic papillopathy. A 55-year-old patient with type 2 diabetes presented with decreased vision of 1-month. Diabetic papillopathy was initially considered as there was disc edema in both eyes with focal hemorrhages at the disc margin and mild visual loss. Ultrasound of the optic nerve head revealed optic disc drusen in both eyes and this was also confirmed by the control photograph. Optic nerve head drusen should be considered in the differential diagnosis of a diabetic patient presenting with disc edema.

DOI: 10.4103/ijo.IJO_355_17
PMCID: PMC5678315
PMID: 29044087 [Indexed for MEDLINE]

28: Chawla R, Pundlik GA, Chaudhry R, Thakur C. Rickettsial retinitis: Direct bacterial infection or an immune-mediated response? Indian J Ophthalmol. 2017 Oct;65(10):1038-1041. doi: 10.4103/ijo.IJO_369_17. PubMed PMID: 29044082; PubMed Central PMCID: PMC5678310.

Infectious retinitis postfebrile illness is known to be caused by chikungunya, dengue, West Nile virus, Bartonella, Lyme's disease, Rift Valley fever, rickettsia, Herpes viruses etc. Rickettsia is Gram-negative bacteria transmitted by arthropods vectors. Ocular involvement is common including conjunctivitis, keratitis, anterior uveitis, panuveitis, retinitis, retinal vascular changes, and optic nerve involvement. Retinitis lesions in rickettsia can occur because of an immunological response to the bacteria or because of direct invasion and proliferation of bacteria in the inner retina. We report such a case of bilateral rickettsial retinitis proven by serology which worsened on systemic steroids and responded dramatically to therapy with oral doxycycline and steroid taper. We thus believe that direct bacterial invasion plays a major role in the pathogenesis of rickettsial retinitis.

DOI: 10.4103/ijo.IJO_369_17
PMCID: PMC5678310
PMID: 29044082 [Indexed for MEDLINE]

29: Chhablani J, Roh YJ, Jobling AI, Fletcher EL, Lek JJ, Bansal P, Guymer R, Luttrull JK. Restorative retinal laser therapy: Present state and future directions. Surv Ophthalmol. 2018 May - Jun;63(3):307-328. doi: 10.1016/j.survophthal.2017.09.008. Epub 2017 Oct 5. Review. PubMed PMID: 28987614.

Because of complications and side effects, conventional laser therapy has taken a back seat to drugs in the treatment of macular diseases. Despite this, research on new laser modalities remains active. In particular, various approaches are being pursued to preserve and improve retinal structure and function. These include micropulsing, various exposure titration algorithms, and real-time temperature feedback control of short-pulse continuous wave lasers, and ultra-short-pulse nanosecond lasers. Some of these approaches are at the preclinical stage of development, whereas others are available for clinical use. Cell biology is providing important insights into the mechanisms of action of retinal laser treatment. We outline the technological bases of current laser platforms, their basic science, therapeutic concepts, clinical experience, and future directions for retinal laser treatment.

DOI: 10.1016/j.survophthal.2017.09.008
PMID: 28987614

30: Chowdhury UK, Chauhan AS, Kapoor PM, Hasija S, Jagia P, Ramakrishnan P. Successful surgical osteoplasty of the left main coronary artery with concomitant mitral valve replacement and tricuspid annuloplasty. Ann Card Anaesth. 2017 Oct-Dec;20(4):444-446. doi: 10.4103/aca.ACA_79_17. PubMed PMID: 28994682; PubMed Central PMCID: PMC5661316.

A 50-year-old woman with rheumatic heart disease, mitral stenosis, and critical isolated left main ostial stenosis was successfully treated by mitral valve replacement, tricuspid annuloplasty, and surgery of left main osteoplasty and is reported for its rarity. Notable clinical findings included an intermittently irregular pulse, blood pressure of 100/70 mmHg, cardiomegaly, a diastolic precordial thrill, a mid-diastolic murmur without presystolic accentuation that was loudest at the mitral area. Chest radiograph revealed cardiomegaly with a cardiothoracic ratio of 0.7 due to enlarged right atrium, right ventricle with a straightened left heart border and evidence of pulmonary hypertension. The investigation shows that surgical reconstruction of the left main coronary artery is safe and effective for the treatment.

DOI: 10.4103/aca.ACA_79_17
PMCID: PMC5661316
PMID: 28994682 [Indexed for MEDLINE]

31: Dada T. Is Glaucoma a Neurodegeneration caused by Central Insulin Resistance: Diabetes Type 4? J Curr Glaucoma Pract. 2017 Sep-Dec;11(3):77-79. doi: 10.5005/jp-journals-10028-1228. Epub 2017 Oct 27. PubMed PMID: 29151680; PubMed Central PMCID: PMC5684236.

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

BACKGROUND: Vitiligo is a multifactorial, autoimmune, depigmenting disorder of the skin where aberrant presentation of autoantigens may have a role.
OBJECTIVES: To study the association of two antigen-processing genes, PSMB8 and PSMB9, with vitiligo.
METHODS: In total 1320 cases of vitiligo (1050 generalized and 270 localized) and 752 healthy controls were studied for the PSMB9 exon 3 G/A single-nucleotide polymorphism (SNP), PSMB8 exon 2 C/A SNP and PSMB8 intron 6 G/T SNP at site 37 360 using polymerase chain reaction (PCR)-restriction fragment length polymorphism. Real-time PCR was used for transcriptional expression of PSMB8 and cytokines. Expression of ubiquitinated proteins and phosphorylated-p38 (P-p38) was studied by Western blotting.
RESULTS: Significant increases in PSMB8 exon 2 allele A ($P < 2.07 \times 10-6$, odds ratio 1·93) and genotypes AA ($P < 1.03 \times 10-6$, odds ratio 2·51) and AC ($P < 1.29 \times 10-6$, odds ratio 1·63) were observed in patients with vitiligo. Interferon-? stimulation induced lower expression of PSMB8 in peripheral blood mononuclear cells of cases compared with controls, suggesting impaired antigen processing, which was confirmed by accumulation of ubiquitinated proteins in both lesional and nonlesional skin of patients with vitiligo. Expression of proinflammatory cytokines - interleukin (IL)-6, IL-1? and IL-8 - was higher in the lesional skin. P-p38 expression was variable but correlated with the amount of ubiquitinated

proteins in the lesional and nonlesional skin, suggesting that the inflammatory cytokine responses in lesional skin could be a result of both P-p38-dependent and -independent pathways.
CONCLUSIONS: The PSMB8 exon 2 SNP is significantly associated with vitiligo. Accumulation of ubiquitinated proteins in skin of cases of vitiligo suggests their aberrant processing, which may promote the development of the disease.

DOI: 10.1111/bjd.15391
PMID: 28207947

33: Das CJ, Rathinam D, Manchanda S, Srivastava DN. Endovascular uterine artery interventions. Indian J Radiol Imaging. 2017 Oct-Dec;27(4):488-495. doi: 10.4103/ijri.IJRI_204_16. PubMed PMID: 29379246; PubMed Central PMCID: PMC5761178.

Percutaneous vascular embolization plays an important role in the management of various gynecologic and obstetric abnormalities. Transcatheter embolization is a minimally invasive alternative procedure to surgery with reduced morbidity and mortality, and preserves the patient's future fertility potential. The clinical indications for transcatheter embolization are much broader and include many benign gynecologic conditions, such as fibroid, adenomyosis, and arteriovenous malformations (AVMs), as well as intractable bleeding due to inoperable advanced-stage malignancies. The most well-known and well-studied indication is uterine fibroid embolization. Uterine artery embolization (UAE) may be performed to prevent or treat bleeding associated with various obstetric conditions, including postpartum hemorrhage (PPH), placental implantation abnormality, and ectopic pregnancy. Embolization of the uterine artery or the internal iliac artery also may be performed to control pelvic bleeding due to coagulopathy or iatrogenic injury. This article discusses these gynecologic and obstetric indications for transcatheter embolization and reviews procedural techniques and outcomes.

DOI: 10.4103/ijri.IJRI_204_16
PMCID: PMC5761178
PMID: 29379246

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

34: Das D, Anand V, Khandpur S, Sharma VK, Sharma A. T helper type 1 polarizing Î³Î´ T cells and Scavenger receptors contribute to the pathogenesis of Pemphigus vulgaris. Immunology. 2018 Jan;153(1):97-104. doi: 10.1111/imm.12814. Epub 2017 Oct 12. PubMed PMID: 28815581; PubMed Central PMCID: PMC5721249.

?? T cells and Scavenger receptors are key parts of the innate immune machinery, playing significant roles in regulating immune homeostasis at the epithelial surface. The roles of these immune components are not yet characterized for the autoimmune skin disorder Pemphigus vulgaris (PV). Phenotyping and frequency of ?? T cells estimated by flow cytometry have shown increased frequency of ?? T cells (6·7% versus 4·4%) producing interferon- ? (IFN-?; 35·2% versus 26·68%) in the circulation of patients compared with controls. Dual cytokine-secreting (IFN-? and interleukin-4) ?? T cells indicate the plasticity of these cells. The ?? T cells of patients with PV have shown higher cytotoxic potential and the higher frequency of ?? T cells producing IFN-? shows T helper type 1 polarization. The increased expression of Scavenger receptors expression (CD36 and CD163) could be contributing to the elevated inflammatory environment and immune imbalance in

this disease. Targeting the inflammatory ?? T cells and Scavenger receptors may pave the way for novel therapeutics.

DOI: 10.1111/imm.12814
PMCID: PMC5721249 [Available on 2019-01-01]
PMID: 28815581 [Indexed for MEDLINE]

35: Dash NR, Kilambi R, Singh AN, Pal S, Asfan MA. Presentation and Management of Pseudoaneurysmogastric Fistula: A Life Threatening Emergency. J Invest Surg. 2017 Oct;30(5):314-317. doi: 10.1080/08941939.2016.1244312. Epub 2016 Oct 21. PubMed PMID: 27768398.

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

DOI: 10.1080/08941939.2016.1244312
PMID: 27768398 [Indexed for MEDLINE]

36: Dass J, Dayama A, Mishra PC, Mahapatra M, Seth T, Tyagi S, Pati HP, Saxena R. Higher rate of central nervous system involvement by flow cytometry than morphology in acute lymphoblastic leukemia. Int J Lab Hematol. 2017 Oct;39(5):546-551. doi: 10.1111/ijlh.12694. Epub 2017 Jun 25. PubMed PMID: 28649769.

INTRODUCTION: Central nervous system (CNS) involvement in acute lymphoblastic leukemia (ALL) is diagnosed traditionally by cytopathology (CP) of the cerebrospinal fluid (CSF). Role of flow cytometry (FC) to diagnose CNS involvement has not been extensively investigated.
METHODS: We aimed to detect CNS involvement in 42 ALL patients (33 B-ALL, nine T-ALL) at diagnosis by FC and comparing it with CP and to correlate it with known risk factors for CNS disease like Lactate dehydrogenase (LDH). A receiver operating characteristic curve was used to determine the cutoff of LDH to predict CSF involvement. For the analysis of categorical/quantitative variables, Fisher's exact test was used. For the analysis of continuous variables, Mann-Whitney test was used. A P value of <.05 was taken as significant.
RESULTS: CP and FC were positive in five (11.9%) and 11 patients (26.14%) respectively with FC detecting a significantly higher level of involvement (P=.001). All CP-positive cases were FC positive. A LDH value of >472 U/L had a sensitivity of 61% and specificity of 62.5% for diagnosis of CSF involvement by FC.
CONCLUSIONS: CSF FC detects CNS disease in ALL patients at diagnosis at a rate double than CP alone and is statistically associated with an elevated LDH level. It should be incorporated in the evaluation of CSF to detect CNS involvement.

DOI: 10.1111/ijlh.12694
PMID: 28649769 [Indexed for MEDLINE]

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BACKGROUND AND AIM: The literature on possible factors that could trigger a relapse in patients with ulcerative colitis (UC) in clinical, endoscopic, and histological remission on long-term follow up is scarce. To determine the relapse rate in patients with UC in clinical, endoscopic, and histological remission and identify factors that may influence the risk of relapse.
METHODS: Patients with UC in clinical, endoscopic, and histological remission were enrolled between January and July 2010 and followed up for 1 year to determine the effect of clinical, dietary, and psychological factors on relapse. Information regarding factors that may affect relapse such as infection, antibiotic, or non-steroidal anti-inflammatory drugs (NSAIDs) use and any other factor that the patient felt important and compliance with medications was obtained.
RESULTS: Ninety-seven patients (59 males, mean age 39 ± 11.9 years) were followed up for a mean duration of 9 ± 2.3 months. Eighteen (18.6%) relapsed with the median time to relapse being 3.5 months. On univariate analysis, more relapsers had significantly higher NSAIDs use within 15 days of relapse, respiratory tract infection within 4 weeks, use of steroids more than once in past, higher consumption of calcium, riboflavin, and vitamin A, and lower consumption of sugars. On multivariate analysis, NSAIDs use (HR [95% CI]: 6.41 [1.88-21.9]) and intake of vitamin A (HR [95% CI]: 1.008 [1.000-1.016]) were statistically significant predictors of relapse.
CONCLUSION: With a relapse rate of 18.6% over a follow up of 9 months in patients with UC in clinical, endoscopic, and histological remission, independent predictors of relapse were history of NSAIDs use within 15 days of relapse and higher intake of vitamin A.

DOI: 10.1111/jgh.13770
PMID: 28220959 [Indexed for MEDLINE]

39: Dwivedi R, Ramanujam B, Chandra PS, Sapra S, Gulati S, Kalaivani M, Garg A, Bal CS, Tripathi M, Dwivedi SN, Sagar R, Sarkar C, Tripathi M. Surgery for Drug-Resistant Epilepsy in Children. N Engl J Med. 2017 Oct 26;377(17):1639-1647. doi: 10.1056/NEJMoa1615335. PubMed PMID: 29069568.

BACKGROUND: Neurosurgical treatment may improve seizures in children and adolescents with drug-resistant epilepsy, but additional data are needed from randomized trials.
METHODS: In this single-center trial, we randomly assigned 116 patients who were 18 years of age or younger with drug-resistant epilepsy to undergo brain surgery appropriate to the underlying cause of epilepsy along with appropriate medical therapy (surgery group, 57 patients) or to receive medical therapy alone

(medical-therapy group, 59 patients). The patients in the medical-therapy group were assigned to a waiting list for surgery. The primary outcome was freedom from seizures at 12 months. Secondary outcomes were the score on the Hague Seizure Severity scale, the Binet-Kamat intelligence quotient, the social quotient on the Vineland Social Maturity Scale, and scores on the Child Behavior Checklist and the Pediatric Quality of Life Inventory.
RESULTS: At 12 months, freedom from seizures occurred in 44 patients (77%) in the surgery group and in 4 (7%) in the medical-therapy group (P<0.001). Between-group differences in the change from baseline to 12 months significantly favored surgery with respect to the score on the Hague Seizure Severity scale (difference, 19.4; 95% confidence interval [CI], 15.8 to 23.1; P<0.001), on the Child Behavior Checklist (difference, 13.1; 95% CI, 10.7 to 15.6; P<0.001), on the Pediatric Quality of Life Inventory (difference, 21.9; 95% CI, 16.4 to 27.6; P<0.001), and on the Vineland Social Maturity Scale (difference, 4.7; 95% CI, 0.4 to 9.1; P=0.03), but not on the Binet-Kamat intelligence quotient (difference, 2.5; 95% CI, -0.1 to 5.1; P=0.06). Serious adverse events occurred in 19 patients (33%) in the surgery group, including hemiparesis in 15 (26%).
CONCLUSIONS: In this single-center trial, children and adolescents with drug-resistant epilepsy who had undergone epilepsy surgery had a significantly higher rate of freedom from seizures and better scores with respect to behavior and quality of life than did those who continued medical therapy alone at 12 months. Surgery resulted in anticipated neurologic deficits related to the region of brain resection. (Funded by the Indian Council of Medical Research and others; Clinical Trial Registry-India number, CTRI/2010/091/000525 .).

DOI: 10.1056/NEJMoa1615335
PMID: 29069568 [Indexed for MEDLINE]

40: Elavarasi A, Dash D, Warrier AR, Bhatia R, Kumar L, Jain D, Tripathi M. Spinal cord involvement in primary CNS lymphoma. J Clin Neurosci. 2018 Jan;47:145-148. doi: 10.1016/j.jocn.2017.10.027. Epub 2017 Oct 27. PubMed PMID: 29110994.

LETM is a common syndrome and the diagnosis of CNS lymphoma is not usually considered in the list of differentials. Primary CNS lymphoma can present as longitudinally extensive transverse myelopathy. Failure to suspect and evaluate leads to delay in diagnosis and treatment. PCNSL may be non contrast enhancing on gadolinium enhanced MRI. CSF analysis should be done preferably before starting corticosteroids as it is usual practice in treatment of transverse myelitis, as steroids may lead to transient improvement and mask the correct diagnosis. Repeated CSF examinations may be needed to clinch the diagnosis.

DOI: 10.1016/j.jocn.2017.10.027
PMID: 29110994 [Indexed for MEDLINE]

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Adult onset cerebellar dysfunction with neuropathy is a commonly encountered condition and is usually due to genetic causes such as spinocerebellar ataxia, gluten ataxia, alcohol related, toxic, degenerative, immune mediated, paraneoplastic causes and so on. Ataxia and neuropathy as presenting features of hepatitis-B related liver disease are very rare and have not been reported so

far.

DOI: 10.1136/bcr-2017-221912
PMID: 29054954 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

42: Garg B, Batra S, Dixit V. An unexpected healing of an established non union of the radial neck through teriparatide: A case report and review of literature. J Clin Orthop Trauma. 2018 Mar;9(Suppl 1):S103-S105. doi: 10.1016/j.jcot.2017.10.015. Epub 2017 Oct 27. PubMed PMID: 29628709; PubMed Central PMCID: PMC5883921.

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44: Garg R, Thakore S, Madan K, Mohan A. Use of i-gel for laser ablation of a bronchial lesion. BMJ Case Rep. 2017 Oct 24;2017. pii: bcr-2017-221679. doi: 10.1136/bcr-2017-221679. PubMed PMID: 29066653.

The use of laser for airway lesions requires airway management. Usual options include special laser-resistant endotracheal tubes. The use of supraglottic devices have been described in the literature. Laryngeal mask airway carries the risk of cuff damage during the use of laser. i-gel is made of thermoplastic material and does not require air inflation and thus potentially reduce the risk of cuff rupture. i-gel use in laser surgeries has not been described in the literature. We present successful airway management in laser surgery for bronchial tumour using i-gel.

DOI: 10.1136/bcr-2017-221679
PMID: 29066653 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

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Recent studies have suggested an important role of T helper 17 (Th17) cells in tumor biology however, their phenotypic and functional aspects are poorly understood in context with oral cancer. We therefore, investigated the various phenotypic and functional markers of Th17 cells elucidating their relevance in oral squamous cell carcinoma (OSCC). Multi-color flow cytometry (FACs) was used to analyze the frequency and different markers of circulating Th17 cells ex vivo in peripheral blood mono-nuclear cells (PBMCs) from 69 OSCC patients and 35 healthy controls. Percent Mean ± SEM of different types of cells were compared between the two groups using Mann-Whitney U test. We found significantly ($p < 0.0001$) increased frequency of Th17 cells in patients as compared to controls. These cells were found to express CCR6 profoundly but not CXCR4, CD62L, and CCR7 as chemokine receptors. Additionally, it expressed HLA-DR, CD69, and CD25 moderately but CD28 and CD161 highly. The cytokine profiling revealed 3 subsets namely Th17/1 (IL17A+IFN?+), Th17/inflammatory (IL17A+IL8+), and Th17/2 (IL17A+IL4+) which were found to be elevated in patients as compared to controls. The early stage patients had a shift toward Th17/1 type and vice versa. Our results suggest that Th17 cells may have effector immune functions in oral cancer immunity through CCR6, CD161, HLA-DR, CD69, CD28 receptors and inducing Th17/1 type of cells expressing polyfunctional antitumor IFN? cytokine. Thus, novel immune-boosting regimens based on enhancement of Th17 cells in oral cancer patients may provide therapeutic benefits in them.

DOI: 10.1080/08820139.2017.1360344
PMID: 28872971 [Indexed for MEDLINE]

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Ameloblastic carcinoma is a rare locally aggressive odontogenic neoplasm. These tumors are most commonly found to arise from mandible. Because of rarity, there is limited information about the clinical behaviour of such patients. We intended to perform this review of published literature to assess the demographic profile, pattern of care and assess survival outcomes. Two authors independently searched PubMed, Google search, and Cochrane library for eligible studies from 1950 until July 1 2016 published in English language. Data of 199 patients were retrieved from 94 publications for statistical analysis. Median age of the entire cohort was 49 years (range 7-91 years). The analysis revealed that a clear twofold higher incidence in male with male-to-female ratio was 2.4:1 (140:57). Mandible was found to be the commonest tumor location in 66.7% (n = 132) cases followed by maxilla (31.8%) (n = 64). The present analysis revealed that median PFS of 57 months (95% CI 39-120 months) with 5- and 10-year PFS was found to be 47.88 and 29.48%, respectively. Median OS for the entire cohort which was 122 months (95% CI 96-153 months) with 2- and 5-year OS for the entire cohort was 87.16 and 69.08%, respectively. In univariate analysis, patients with an R0 resection were found to have a favourable survival. In addition, patients with localized disease and younger age were found to have a better survival. Adjuvant radiation did not confer any survival advantage. The present analysis revealed excellent outcome

for patients treated with an R0 resection. Older patients with high-risk factor may benefit from adjuvant radiation. Role of chemotherapy needs to be evaluated.

DOI: 10.1007/s00405-017-4631-7
PMID: 28600599 [Indexed for MEDLINE]

49: Gosain M, Goel AD, Kharya P, Agarwal R, Amarchand R, Rai SK, Kapoor S, Paul VK, Krishnan A. Reduction of Neonatal Mortality Requires Strengthening of the Health System: A Situational Analysis of Neonatal Care Services in Ballabgarh. J Trop Pediatr. 2017 Oct 1;63(5):365-373. doi: 10.1093/tropej/fmw098. PubMed PMID: 28122945.

Background: Planning a comprehensive program addressing neonatal mortality will require a detailed situational analysis of available neonatal-specific health infrastructure.
Methods: We identified facilities providing essential and sick neonatal care (ENC, SNC) by a snowballing technique in Ballabgarh Block. These were assessed for infrastructure, human resource and equipment along with self-rated competency of the staff and compared with facility-based or population-based norms.
Results: A total of 35 facilities providing ENC and 10 facilities for SNC were identified. ENC services were largely in the public-sector domain (68.5% of births) and were well distributed in the block. SNC burden was largely being borne by the private sector (66% of admissions), which was urban-based. The private sector and nurses reported lower competency especially for SNC. Only 53.9% of government facilities and 17.5% of private facilities had a fully equipped newborn care corner.
Conclusions: Serious efforts to reduce neonatal mortality would require major capacity strengthening of the health system, including that of the private sector.

DOI: 10.1093/tropej/fmw098
PMID: 28122945 [Indexed for MEDLINE]

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Background & objectives: Pioglitazone was suspended for manufacture and sale by the Indian drug regulator in June 2013 due to its association with urinary bladder carcinoma, which was revoked within a short period (July 2013). The present questionnaire-based nationwide study was conducted to assess its impact on prescribing behaviour of physicians in India.
Methods: Between December 2013 and March 2014, a validated questionnaire was administered to physicians practicing diabetes across 25 centres in India. Seven hundred and forty questionnaires fulfilling the minimum quality criteria were included in the final analysis.
Results: Four hundred and sixteen (56.2%) physicians prescribed pioglitazone. Of these, 281 used it in less than the recommended dose of 15 mg/day. Most physicians (94.3%) were aware of recent regulatory events. However, only 333

(44.8%) changed their prescribing pattern. Seventeen of the 416 (4.1%) physicians who prescribed pioglitazone admitted having come across at least one type 2 diabetes mellitus patient (T2DM) who had urinary bladder carcinoma, and of these 13 said that it was in patients who took pioglitazone for a duration of more than two years. Only 7.8 per cent of physicians (n=58) categorically advocated banning pioglitazone, and the rest opined for its continuation or generating more evidence before decision could be taken regarding its use in T2DM.
Interpretation & conclusions: Majority of the physicians though were aware of the regulatory changes with regard to pioglitazone, but their prescribing patterns were not changed for this drug. However, it was being used at lower than the recommended dose. There is a need for generating more evidence through improved pharmacovigilance activities and large-scale population-based prospective studies regarding the safety issues of pioglitazone, so as to make effectual risk-benefit analysis for its continual use in T2DM.

DOI: 10.4103/ijmr.IJMR_1416_15
PMCID: PMC5819028
PMID: 29434060

Conflict of interest statement: None

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

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

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

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Disseminated Histoplasmosis in India: Literature Review and Retrospective Analysis of Published and Unpublished Cases at a Tertiary Care Hospital in North India. Mycopathologia. 2017 Dec;182(11-12):1077-1093. doi: 10.1007/s11046-017-0191-z. Epub 2017 Oct 27. Review. PubMed PMID: 29080114.

PURPOSE: Published literature lacks systematic studies on disseminated histoplasmosis in India, and previous reviews on its epidemiology in India were conducted two decades back. Thus, we review the Indian studies published in this century to understand the recent epidemiology of histoplasmosis in India and do a retrospective analysis of all cases diagnosed at our institute.
METHODS: A literature of review search was done in Pubmed/Medline and Scopus. Studies published during January 2001-December 2015 were considered along with retrospective analysis of cases presented to us. A distinction was made in the clinical presentation of immunocompetent and immunocompromised cases.
RESULTS: Ninety-five included studies described 204 cases, and 10 cases from our retrospective analysis were included. The mean age at presentation was 45.1 ± 15.4 years [range 3-83, median 45, interquartile range 37-55], and male-to-female ratio was 6:1. Most cases were reported from northern and northeastern states of India along the rivers Ganges, Yamuna and Brahmaputra and in people associated with agricultural activity. About 33% of cases were immunocompromised, out of which immunosuppression due to HIV was seen in 72% cases. The mean age of presentation was significantly lower in immunocompromised cases (37.9 vs. 49.2 years; $p < 0.00001$, Mann-Whitney test), and mortality was also higher (10 vs. 27.5%, $p = 0.01$, Fisher's exact test). Adrenal involvement was in significantly higher proportion of immunocompetent patients compared to immunocompromised population.
CONCLUSIONS: Disseminated histoplasmosis is being increasingly recognized in India. There is a need to undertake well-designed, analytical studies utilizing appropriate diagnostic modalities to understand the epidemiology of this neglected disease in proper perspective.

DOI: 10.1007/s11046-017-0191-z
PMID: 29080114

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DNA gyrase, a type II topoisomerase maintains the topology of DNA by introducing negative supercoils using energy generated by ATP hydrolysis. It is composed of two subunits, GyrA and GyrB (GyrA2GyrB2 hetero-tetramer). GyrB comprises two domains, a 43kDa amino N-terminus (GBNTD) and 47kDa carboxyl C- terminus (GBCTD). Till now no study has been reported in terms of stability of Gyrase B and its domains using chemical denaturants related to its function. To understand the role of each domain in GyrB subunit, we estimated the thermodynamic stability of GBF and its individual domains using urea and GdmCl. Changes in secondary and tertiary structures were monitored using circular dichroism and fluorescence spectroscopy. The Cm values for GBNTD, GBCTD and GBF proteins were found to be 2.25, 1.65 and 1.82M during GdmCl-induced denaturation and 2.95, 2.25 and 2.67M for urea-induced denaturation. It is observed that GBNTD is more stable than GBCTD and it contributes to overall stability of GyrB. The lower Cm and ?G values reflect the flexibility of GBCTD to form the catalytic site along with GANTD for cleavage or religation reaction. Both GdmCl- and urea-induced denaturation of GyrB domains were reversible over the entire range of concentration.

DOI: 10.1016/j.ijbiomac.2017.05.013
PMID: 28499947 [Indexed for MEDLINE]

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Background: Leishmaniasis manifests as visceral (VL), cutaneous (CL) or a dermal sequel of VL, known as Post kala-azar dermal leishmaniasis (PKDL). The aim of the study was to analyze the clinical and laboratory features of cases diagnosed with leishmaniasis.
Methods: This hospital-based retrospective study included all cases of VL, PKDL, and CL diagnosed between Jan 2011 to Jan 2016 at All India Institute of Medical Sciences, New Delhi. Clinical and laboratory profile of the diagnosed cases were analyzed in detail. All diagnosed cases were mapped according to the state and the district from which the cases originated.
Results: A total of 91 VL cases and 4 PKDL cases were reviewed. Only one case of CL (1 female) and mucocutaneous leishmaniasis (1 female) were observed during the study period. Majority of the cases of VL (75/91) originated from Bihar. The most common presenting symptoms in all our patients were fever (97.8%), weight loss (40.6%) and abdominal discomfort (17.6%) while the most common presenting signs were hepatosplenomegaly (45.8%), isolated splenomegaly (23.1%) and skin pigmentation (11%). The most common laboratory abnormality was anaemia followed by thrombocytopenia and leucopenia.
Conclusion: VL is globally recognized as a neglected tropical disease. Even after continued effort to bring down its transmission in India, it continues to affect the endemic states with reports from new pockets.

PMCID: PMC5756314
PMID: 29317889

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

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Hemoglobin degradation/hemozoin formation, essential steps in the Plasmodium life cycle, are targets of existing antimalarials. The pathway still offers vast possibilities to be explored for new antimalarial discoveries. Here, we characterize heme detoxification protein, PfHDP, a major protein involved in hemozoin formation, as a novel drug target. Using in silico and biochemical

approaches, we identified two heme binding sites and a hemoglobin binding site in PfHDP. Treatment of Plasmodium falciparum 3D7 parasites with peptide corresponding to the hemoglobin binding domain in PfHDP resulted in food vacuole abnormalities similar to that seen with a cysteine protease inhibitor, E-64 (I-1). Screening of compounds that bound the modeled PfHDP structure in the heme/hemoglobin-binding pockets from Maybridge Screening Collection identified a compound, ML-2, that inhibited parasite growth in a dose-dependent manner, thus paving the way for testing its potential as a new drug candidate. These results provide functional insights into the role of PfHDP in Hz formation and further suggest that PfHDP could be an important drug target to combat malaria.

DOI: 10.1021/acs.jmedchem.7b00089
PMID: 28949547 [Indexed for MEDLINE]

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60: Haresh KP, Gandhi AK, Mallick S, Benson R, Gupta S, Sharma DN, Julka PK, Rath GK. Prognostic Factors and Survival Outcomes of Intracranial Ependymoma Treated with Multimodality Approach. Indian J Med Paediatr Oncol. 2017 Oct-Dec;38(4):420-426. doi: 10.4103/ijmpo.ijmpo_202_15. PubMed PMID: 29333005; PubMed Central PMCID: PMC5759057.

Objectives: We aimed to analyze treatment outcomes of intracranial ependymoma (ICE) treated at our institute with multimodality approach.
Materials and Methods: Demography, treatment details, and survival data of 40 patients (2005-2012) were collected in a predesigned pro forma. Kaplan Meier method was used to analyze disease-free survival (DFS) and the impact of prognostic factors was determined using univariate analysis (log-rank test). Multivariate analysis was performed using Cox-proportional hazard model. SPSS version 21.0 was used for all statistical analysis.
Results: Male:female ratio was 29:11. Gross total resection: subtotal resection or less was 42.5%: 57.5%. A total of 16 patients (40%) had anaplastic histology. All except two patients received adjuvant radiotherapy. Four patients received concurrent chemotherapy (temozolomide [TMZ]) and 10 patients received adjuvant chemotherapy (6 carboplatin plus etoposide; 4 TMZ). Median follows up was 18 months (2-60 months). Median DFS for the entire cohort was 22.42 months. The estimated 1, 2, and 3 years DFS was found to be 58.5%, 41%, and 30.7%, respectively. On univariate analysis, patients receiving higher radiation dose (56 Gray vs. 60 Gray; hazard ratio [HR] 0.366; 95% confidence interval [CI] 0.142-0.9553; P = 0.02) and lower MIB labeling index (<20 vs. ?20; HR 0.238; 95% CI 0.092-0.617; P = 0.001) had a better DFS. Higher radiation dose continued to be an independent prognostic factor on multivariate analysis (HR 0.212; 95% CI 0.064-0.856; P = 0.03).
Conclusion: ICE has guarded prognosis. Adjuvant radiotherapy to a higher radiation dose improves survival. Higher MIB labeling index connotes a dismal survival despite the use of radiotherapy and chemotherapy.

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PMCID: PMC5759057
PMID: 29333005

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

61: Jain P, Arava S, Seth S, Lalwani S, Ray R. Histological and morphometric analysis of dilated cardiomyopathy with special reference to collagen IV expression. Indian J Pathol Microbiol. 2017 Oct-Dec;60(4):481-486. doi: 10.4103/IJPM.IJPM_213_16. PubMed PMID: 29323059.

INTRODUCTION: Collagen distribution alterations are well known in dilated cardiomyopathy. There are also changes in microvasculature along with other histomorphorphological features.
AIMS AND OBJECTIVES: To study the histomorphological features of DCM along with their quantitative correlation with LVEF. Alterations in collagen IV distribution pattern and microvasculature in DCM were also evaluated.
MATERIALS AND METHODS: The present study includes 34 right ventricular endomyocardial biopsies, 7 explanted native hearts and 41 autopsy control hearts. Sections were taken from lower half of right interventricular septum and stained for H and E, Masson trichrome and immunohistochemistry for CD34, SMA and Collagen IV to study the histological features, pattern of fibrosis, capillary and arteriolar distribution and collagen IV expression respectively. Morphometric analysis was carried out in all cases and controls using Image analysis software Image pro plus 7 and correlated with left ventricular ejection fraction.
RESULTS: The histomorphological changes of DCM include myocyte hypertrophy, nucleomegaly, and interstitial fibrosis. Interfiber fibrosis was the commonest. There was evidence of myocarditis, ischemic change and vessel wall alterations. Considerable alteration in Collagen IV distribution was observed with reduction in intensity and proportion of staining around myocytes quantified using Allred scoring against uniform pericellular staining in controls. Morphometric analysis revealed significant increase in nuclear area, myocyte width, percentage of fibrosis and reduction in capillary myocyte ratio in cases as compared to controls. There was no significant difference in arteriolar density. No significant association was observed between morphometric parameters and LVEF.
CONCLUSION: Histomorphological changes in DCM are non-specific. Quantitation of histological parameters cannot be used to predict the disease progression as there was no significant correlation with LVEF. There is appreciable alteration in Collagen IV distribution in DCM owing to extracellular matrix alterations.

DOI: 10.4103/IJPM.IJPM_213_16
PMID: 29323059

62: Jain S, Kedia S, Bopanna S, Sachdev V, Sahni P, Dash NR, Pal S, Vishnubhatla S, Makharia G, Travis SPL, Ahuja V. Faecal Calprotectin and UCEIS Predict Short-term Outcomes in Acute Severe Colitis: Prospective Cohort Study. J Crohns Colitis. 2017 Oct 27;11(11):1309-1316. doi: 10.1093/ecco-jcc/jjx084. PubMed PMID: 29088461.

Background and Aims: Early objective markers for failure of intravenous[iv] corticosteroid for acute severe colitis [ASC] can avoid delay in rescue therapy or colectomy. We investigated faecal calprotectin [FC], C-reactive protein [CRP], and endoscopy using the ulcerative colitis endoscopic index of severity [UCEIS] as predictors of steroid failure following intensive therapy of ASC.
Methods: Consecutive patients with ASC satisfying Truelove and Witts' criteria, hospitalised at a single centre from May 2015 to November 2016, were included; all received iv corticosteroids. The primary outcome measure was steroid failure

defined as colectomy and/or rescue therapy with ciclosporin or infliximab during admission. FC levels were measured at admission and on Day 3 of intensive therapy. UCEIS was scored at admission, and CRP on Day 3 of intensive therapy.
Results: Of 49 patients, 21 [43%] failed iv corticosteroids and 15 [31%] underwent surgery. FC levels were significantly higher in steroid failures (2522 [590-9654] µg/g) compared with steroid responders (1530 [352-10278] µg/g) at admission [p = 0.04], as well as on Day 3 of iv corticosteroid therapy (2718 [222-9175] µg/g vs 727 [218-4062] µg/g, p = 0.001). Steroid failures had a higher median [range] UCEIS score than responders (6 [4-8] vs 5 [4-7] [p = 0.001]). CRP level did not differ significantly between steroid failures and responders. A UCEIS > 6 at admission and FC > 1000 µg/g on Day 3 were independent predictors of steroid failure and need for rescue therapy/colectomy.
Conclusions: All patients with UCEIS > 6 and Day 3 FC > 1000 µg/g failed iv corticosteroids. The UCEIS score on admission and Day 3 FC are early predictors of failure of ivcorticosteroid therapy.

DOI: 10.1093/ecco-jcc/jjx084
PMID: 29088461 [Indexed for MEDLINE]

63: Jain S, Dhawan A, Kumaran SS, Pattanayak RD, Jain R. Cue-induced craving among inhalant users: Development and preliminary validation of a visual cue paradigm. Asian J Psychiatr. 2017 Dec;30:202-207. doi: 10.1016/j.ajp.2017.10.004. Epub 2017 Oct 16. PubMed PMID: 29126097.

INTRODUCTION: Cue-induced craving is known to be associated with a higher risk of relapse, wherein drug-specific cues become conditioned stimuli, eliciting conditioned responses. Cue-reactivity paradigm are important tools to study psychological responses and functional neuroimaging changes. However, till date, there has been no specific study or a validated paradigm for inhalant cue-induced craving research. The study aimed to develop and validate visual cue stimulus for inhalant cue-associated craving.
METHOD: The first step (picture selection) involved screening and careful selection of 30 cue- and 30 neutral-pictures based on their relevance for naturalistic settings. In the second step (time optimization), a random selection of ten cue-pictures each was presented for 4s, 6s, and 8s to seven adolescent male inhalant users, and pre-post craving response was compared using a Visual Analogue Scale(VAS) for each of the picture and time. In the third step (validation), craving response for each of 30 cue- and 30 neutral-pictures were analysed among 20 adolescent inhalant users.
RESULTS: Findings revealed a significant difference in before and after craving response for the cue-pictures, but not neutral-pictures. Using ROC-curve, pictures were arranged in order of craving intensity. Finally, 20 best cue- and 20 neutral-pictures were used for the development of a 480s visual cue paradigm.
CONCLUSION: This is the first study to systematically develop an inhalant cue picture paradigm which can be used as a tool to examine cue induced craving in neurobiological studies. Further research, including its further validation in larger study and diverse samples, is required.

DOI: 10.1016/j.ajp.2017.10.004
PMID: 29126097

64: Jain V, Kumar A, Agarwala A, Vikram N, Ramakrishnan L. Adiponectin, Interleukin-6 and High-sensitivity C-reactive Protein Levels in Overweight/Obese Indian children. Indian Pediatr. 2017 Oct 15;54(10):848-850. Epub 2017 Jul 11. PubMed PMID: 28699615.

OBJECTIVE: The aim of our study was to assess serum Adiponectin, Interleukin-6 (IL-6) and high-sensitivity C-reactive protein (hsCRP) levels and their correlation with conventional risk factors for cardiovascular disease and diabetes in overweight/obese Indian children.
METHODS: Body mass index (BMI), waist circumference, blood pressure, fasting serum adiponectin, IL-6, hsCRP, blood glucose, triglycerides, and total and high density lipoprotein cholesterol were measured in children aged 7-15 years with BMI >85th centile.
RESULTS: 84 overweight/obese children (48 boys) with mean (SD) age 10.2 (1.9) years were enrolled. Mean (SD) adiponectin, hsCRP and median (IQR) IL-6 levels were 6.0 (3.1) µg/mL, 3.4 (2.4) mg/L and 12.7 (5.0-90.0) pg/mL, respectively. Low adiponectin, high hsCRP and high IL-6 were noted in 16.5%, 49.4% and 54.4% participants, respectively. Adiponectin was inversely correlated with waist circumference, and IL-6 positively with BMI and blood glucose.
CONCLUSION: Inflammatory mediators, hsCRP and IL-6 were elevated in half of the overweight children. Adiponectin and IL-6 correlated well with traditional risk markers.

PMID: 28699615 [Indexed for MEDLINE]

65: Jain V, Kumar S, Vikram NK, Kalaivani M, Bhatt SP, Sharma R, Sushil KK. Glucose tolerance & insulin secretion & sensitivity characteristics in Indian children with cystic fibrosis: A pilot study. Indian J Med Res. 2017 Oct;146(4):483-488. doi: 10.4103/ijmr.IJMR_1360_15. PubMed PMID: 29434062; PubMed Central PMCID: PMC5819030.

Background & objectives: Cystic fibrosis (CF) is a life-limiting genetic condition resulting in chronic respiratory infections, pancreatic enzyme insufficiency and associated complications. This pilot study was undertaken to assess the glucose tolerance and insulin secretion and sensitivity among Indian children with CF.
Methods: Children with CF under regular follow up at the Paediatric Pulmonology Clinic of a tertiary care hospital in New Delhi, India, were enrolled. Children who had a history of acute exacerbation or intake of systemic steroids within the last two weeks were excluded. Anthropometry, pulmonary function and disease severity (Shwachman) score were assessed. Fasting venous sample was drawn to assess glucose, insulin, haemoglobin and calcium. Oral glucose tolerance test was performed, and blood glucose and insulin were assessed at 30, 60, 90 and 120 min. Insulin secretion and sensitivity indices were calculated.
Results: Twenty nine patients with a mean age of 11.2±4.1 yr were enrolled. Stunting, thinness, anaemia and hypocalcaemia were present in 31.0, 13.8, 37.0 and 48.3 per cent of the patients, respectively. Abnormal glucose tolerance (AGT) was present in 21.4 per cent. Insulin secretion was similar in individuals with AGT and normal glucose tolerance (NGT), but insulin sensitivity index was lower (0.12±0.02 vs 0.15±0.01, $P<0.001$) and homeostatic model assessment of insulin resistance higher [1.63 (0.53-1.76) vs 0.83 (0.28-4.43), $P<0.05$] in individuals with AGT compared to NGT.
Interpretation & conclusions: AGT was observed in 21.4 per cent of children with CF. The CF patients with AGT had significantly lower insulin sensitivity compared to patients with NGT. Future multicentric studies with a large sample should be conducted to assess insulin secretion and sensitivity indices in CF patients compared to healthy controls.

DOI: 10.4103/ijmr.IJMR_1360_15
PMCID: PMC5819030
PMID: 29434062

Conflict of interest statement: None

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

67: Jialal I, Vikram N. Nutrition therapy for diabetes: Implications for decreasing cardiovascular complications. J Diabetes Complications. 2017 Oct;31(10):1477-1480. doi: 10.1016/j.jdiacomp.2017.07.008. Epub 2017 Jul 26. PubMed PMID: 28830659.

68: Kailashiya C, Sharma HB, Kailashiya J. Telomerase based anticancer immunotherapy and vaccines approaches. Vaccine. 2017 Oct 13;35(43):5768-5775. doi: 10.1016/j.vaccine.2017.09.011. Review. PubMed PMID: 28893481.

Telomerase is a Reverse Transcriptase that maintains the telomere length. It is absent in most somatic cells but is found in stem cells, germ cells and around 90% of cancers. It plays a crucial role in developing and maintaining cancer cells. Telomerase, a HLA class-I antigen, is able to stimulate cell mediated immune response by inducing cytotoxic T-cells. This property of telomerase is being exploited in targeting cancers by host's own immune responses; stimulated by various Human Telomerase Reverse Transcriptase (hTERT) derived vaccines. Many approaches and studies including clinical trials have shown effective anticancer responses of these vaccines, without toxicity to non cancer cells. In this article we have compiled different hTERT based anticancer immunotherapy approaches, vaccines and their performances.

DOI: 10.1016/j.vaccine.2017.09.011
PMID: 28893481 [Indexed for MEDLINE]

69: Kalra S, Verma K, Singh Balhara YP. Management of diabetes distress. J Pak Med Assoc. 2017 Oct;67(10):1625-1627. PubMed PMID: 28955090.

This article discusses a comprehensive approach to the management of diabetes distress. It mentions the screening and diagnosis of diabetes distress, and discusses its etiopathogenesis, investigations and management strategies in detail. The management of diabetes distress, termed as diabetes therapy by the ear, is based upon four pillars: strengthening of self-care skills, optimization of coping skills, minimizing change-related discomfort, and utilization of external support. The article describes coping skills training and change-related discomfort mitigation in detail.

PMID: 28955090

70: Kant S, Haldar P, Lohiya A, Yadav K, Pandav CS. Status of Iodine Nutrition among Pregnant Women Attending Antenatal Clinic of a Secondary Care Hospital: A

Cross-sectional Study from Northern India. Indian J Community Med. 2017 Oct-Dec;42(4):226-229. doi: 10.4103/ijcm.IJCM_312_16. PubMed PMID: 29184324; PubMed Central PMCID: PMC5682723.

Background: Daily requirement of iodine increases during pregnancy making pregnant women a high-risk group for iodine deficiency disorders. The limited available literature shows that even in iodine sufficient population, pregnant women are iodine deficient.
Objective: The objective of this study is to assess the current iodine nutrition status among pregnant women in Ballabgarh, district Faridabad, Haryana.
Materials and Methods: Pregnant women were recruited from antenatal clinic (ANC) of subdistrict hospital (SDH), Ballabgarh, Haryana. Consecutive sampling strategy was followed to recruit pregnant women, and women of all trimesters were included in the study. Urinary iodine estimation was done using simple microplate method, and salt iodine was estimated using iodometric titration. The study was approved by Institute Ethics Committee, All India Institute of Medical Sciences (AIIMS), New Delhi.
Results: Out of the total 1031 pregnant women, 90.9% were using adequately iodized salt. Median (interquartile range [IQR]) salt consumption by the pregnant women was 8.3 (6.7, 11.1) g/day. Median (IQR) urinary iodine concentration (UIC) for the pregnant women was 260 (199, 323) µg/L. Only 13.5% of pregnant women had insufficient iodine intake (UIC <150 µg/L). There was no significant difference in median UIC values by household salt iodine content and across three trimesters of pregnancy.
Conclusion: Iodine nutrition status of the pregnant women attending ANC clinic of SDH Ballabgarh was adequate with attainment of universal salt iodization goal of >90% adequately iodized salt coverage in the study population.

DOI: 10.4103/ijcm.IJCM_312_16
PMCID: PMC5682723
PMID: 29184324

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

71: Kataria K, Ranjan P, Srivastava A. Stop Suturing Like Cobbler. Indian J Surg. 2017 Oct;79(5):472-474. doi: 10.1007/s12262-017-1681-4. Epub 2017 Aug 17. PubMed PMID: 29089715; PubMed Central PMCID: PMC5653591.

Suturing is the joining of tissues with needle and thread so that the tissues will bind together and that healing occurs by primary intention with least scarring. Professionals like tailor and cobbler are also involved with suturing. Although both professions are involved with suturing, they are not dealing with live tissue, so there are no problems like poor healing, ischemia and wound edge necrosis. These complications, which are common with live tissue, may finally lead to wound dehiscence and increased risk of surgical site infection, and ugly scar. Every surgeon should be cognizant of principles of wound healing and aesthetics.

DOI: 10.1007/s12262-017-1681-4
PMCID: PMC5653591 [Available on 2018-10-01]
PMID: 29089715

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

73: Kaushik N, Subramani C, Anang S, Muthumohan R, Shalimar, Nayak B, Ranjith-Kumar CT, Surjit M. Zinc Salts Block Hepatitis E Virus Replication by Inhibiting the Activity of Viral RNA-Dependent RNA Polymerase. J Virol. 2017 Oct 13;91(21). pii: e00754-17. doi: 10.1128/JVI.00754-17. Print 2017 Nov 1. PubMed PMID: 28814517; PubMed Central PMCID: PMC5640865.

Hepatitis E virus (HEV) causes an acute, self-limiting hepatitis in healthy individuals and leads to chronic disease in immunocompromised individuals. HEV infection in pregnant women results in a more severe outcome, with the mortality rate going up to 30%. Though the virus usually causes sporadic infection, epidemics have been reported in developing and resource-starved countries. No specific antiviral exists against HEV. A combination of interferon and ribavirin therapy has been used to control the disease with some success. Zinc is an essential micronutrient that plays crucial roles in multiple cellular processes. Zinc salts are known to be effective in reducing infections caused by few viruses. Here, we investigated the effect of zinc salts on HEV replication. In a human hepatoma cell (Huh7) culture model, zinc salts inhibited the replication of genotype 1 (g-1) and g-3 HEV replicons and g-1 HEV infectious genomic RNA in a dose-dependent manner. Analysis of a replication-defective mutant of g-1 HEV genomic RNA under similar conditions ruled out the possibility of zinc salts acting on replication-independent processes. An ORF4-Huh7 cell line-based infection model of g-1 HEV further confirmed the above observations. Zinc salts did not show any effect on the entry of g-1 HEV into the host cell. Furthermore, our data reveal that zinc salts directly inhibit the activity of viral RNA-dependent RNA polymerase (RdRp), leading to inhibition of viral replication. Taken together, these studies unravel the ability of zinc salts in inhibiting HEV replication, suggesting their possible therapeutic value in controlling HEV infection.IMPORTANCE Hepatitis E virus (HEV) is a public health concern in resource-starved countries due to frequent outbreaks. It is also emerging as a health concern in developed countries owing to its ability to cause acute and chronic infection in organ transplant and immunocompromised individuals. Although antivirals such as ribavirin have been used to treat HEV cases, there are known side effects and limitations of such therapy. Our discovery of the ability of zinc salts to block HEV replication by virtue of their ability to inhibit the activity of viral RdRp is important because these findings pave the way to test the efficacy of zinc supplementation therapy in HEV-infected patients. Since zinc supplementation therapy is known to be safe in healthy individuals and since high-dose zinc is used in the treatment of Wilson's disease, it may be possible to control HEV-associated health problems following a similar treatment regimen.

DOI: 10.1128/JVI.00754-17
PMCID: PMC5640865
PMID: 28814517 [Indexed for MEDLINE]

74: Kayal EB, Kandasamy D, Khare K, Alampally JT, Bakhshi S, Sharma R, Mehndiratta A. Quantitative Analysis of Intravoxel Incoherent Motion (IVIM) Diffusion MRI using Total Variation and Huber Penalty Function. Med Phys. 2017 Nov;44(11):5849-5858. doi: 10.1002/mp.12520. Epub 2017 Oct 11. PubMed PMID: 28817196.

PURPOSE: Quantitative analysis in intravoxel incoherent motion (IVIM) imaging commonly uses voxel-wise estimation of the bi-exponential model, which might not be reliable for clinical interpretation. Improving model fitting performance and qualitative and quantitative parametric estimation, two novel methodologies are

proposed here.
METHODS: Five IVIM analyses methodologies: (a) Bi-exponential (BE) model, (b) Segmented BE method with two-parameter fitting (BEseg-2), (c) Segmented BE method with one-parameter fitting (BEseg-1), (d) BE with adaptive Total Variation penalty function (BE+TV) and (e) BE with adaptive Huber penalty function (BE+HPF) were evaluated. Relative root-mean-square error (RRMSE), relative bias (RB) and relative parameters (Drel,Drel*,&frel) were calculated to estimate the accuracy of methods in simulations. Empirical datasets from 14 patients with bone tumor were analyzed using these methodologies. Coefficient of variation (CV) were estimated for each IVIM parameter in tumor volume to measure the precision of the estimation methods in vivo.
RESULTS: Both BE+TV and BE+HPF showed consistently lower RRMSE (~10-42%) and lower RB (-4 to 8%) at all noise levels, compared to BE, BEseg-2 and BEseg-1 (RRMSE: ~15-120% and RB: -20 to 62%). Estimated Drel,Drel*&frel for both BE+TV and BE+HPF methods were ~1 (0.96-1.08), whereas BE, BEseg-2 and BEseg-1 showed sub-optimal parameter estimation (0.80-1.62). For clinical data BE+TV and BE+HPF showed 30-50% improved CV in estimating D, D*, and f than BE and improved CV in estimating D* (7-23%) and f (26-30%) than BEseg-2 and BEseg-1.
CONCLUSIONS: Bi-exponential model with penalty function showed quantitatively and qualitatively improved IVIM parameter estimation for both simulated and clinical dataset of bone tumors, thus potentially making this approach suitable for clinical applications in future.

DOI: 10.1002/mp.12520
PMID: 28817196 [Indexed for MEDLINE]

75: Khalil S, Mirdha BR, Panda A, Singh Y, Makharia G, Paul J. Cryptosporidium species subtypes and associated clinical manifestations in Indian patients. Gastroenterol Hepatol Bed Bench. 2017 Fall;10(4):311-318. PubMed PMID: 29379597; PubMed Central PMCID: PMC5758740.

Aim: Present hospital based study was carried out at our tertiary care centre with an aim to study the distribution of Cryptosporidium species subtypes in patients with complaints of diarrhea.
Background: Cryptosporidium species are one of the important causative agents of parasitic diarrhea, amongst which Cryptosporidium hominis (C.hominis) and Cryptosporidium parvum (C.parvum) are the two major species that are associated with human cryptosporidiosis.
Methods: Four hundred and fifty (n=450) diarrheic patients complaining of different types of diarrhea were enrolled in the present study. Both microscopic and molecular diagnostic methods were used for the detection as well as for identification of Cryptosporidium species and its speciation and subtyping.
Results: Forty one (n=41) and forty three (n=43) patients were positive for Cryptosporidium species by microscopy and Polymerase chain reaction (PCR) assay respectively. Of these 43 cases, 70% (30/43) were identified as C. hominis and 21% (9/43) was as C. parvum, 7% (3/43) was as Cryptosporidium felis (C.felis) and 2% (1/43) as Cryptopsoridium viatorum (C. viatorum) respectively . Upon subtyping of C. hominis and C. parvum, 16 subtypes belonging to 8 different subtype families could be identified. The frequency of different families were Ia (13%, 5/39), Ib (15%, 6/39), Id (18%, 7/39), Ie (30%, 12/39) and IIa (5%, 2/39), IIc (8%, 3/39), IId (8%, 3/39) and IIe (3%, 1/39).
Conclusion: Our study results strongly suggest and reinforces the fact that most of the human cryptosporidiosis is anthroponotic and we expect that present molecular epidemiological data will provide more insight to unravel the changing clinical paradigm of human cryptosporidiosis at large.

PMCID: PMC5758740
PMID: 29379597

Conflict of interest statement: The authors declare that they have no conflict of interest.

76: Khanna A, Bhushan B, Chauhan PS, Saxena S, Gupta DK, Siraj F. High mTOR expression independently prognosticates poor clinical outcome to induction chemotherapy in acute lymphoblastic leukemia. Clin Exp Med. 2018 May;18(2):221-227. doi: 10.1007/s10238-017-0478-x. Epub 2017 Oct 26. PubMed PMID: 29076004.

In acute lymphoblastic leukemia (ALL), limited data are available on mTOR gene expression in clinical samples and its role in predicting response to induction chemotherapy. mRNA expression of mTOR gene was determined quantitatively by real-time PCR in 50 ALL patients (30 B-ALL and 20 T-ALL) and correlated with clinical outcome after induction chemotherapy. Expression level of mTOR was upregulated in more than 50% of cases of ALL. In T-ALL, high expression of mTOR was commonly seen, more in adults than children (82 vs. 55% cases), while in B-ALL it was same (~ 63% cases) in both adults and children. Mean fold change of mTOR expression was significantly higher in non-responders compared to responders of both adult B-ALL (7.4 vs. 2.7, p = 0.05) and T-ALL (13.9 vs. 2.4, p = 0.001). Similar results were seen in pediatric non-responders when compared to responders of both B-ALL (14.5 vs. 2.5, p = 0.006) and T-ALL (24.2 vs. 1.7, p = 0.002). Interestingly, we have observed that mTOR expression was two times higher in non-responders of children compared to adults in both B-ALL (14.5 vs. 7.4, p = 0.05) and T-ALL (24.2 vs. 13.9, p = 0.01). Multivariate analysis with other known prognostic factors revealed that mTOR expression independently predicts clinical response to induction chemotherapy in ALL. This study demonstrates that high mTOR expression is associated with poor clinical outcome in ALL and can serve as a potential target for novel therapeutic strategies.

DOI: 10.1007/s10238-017-0478-x
PMID: 29076004

77: Khare A, Sharma SP, Deganwa ML, Sharma M, Gill N. Effects of Dexmedetomidine on Intraoperative Hemodynamics and Propofol Requirement in Patients Undergoing Laparoscopic Cholecystectomy. Anesth Essays Res. 2017 Oct-Dec;11(4):1040-1045. doi: 10.4103/aer.AER_107_17. PubMed PMID: 29284872; PubMed Central PMCID: PMC5735447.

Background: Despite multiple benefits, laparoscopic surgery always poses anesthetic challenge due to significant alteration of hemodynamics. Various pharmacological agents have been used for the same with variable response. Dexmedetomidine, in addition to sympatholytic effect, diminishes intraoperative requirement of anesthetics including propofol. The present study was conducted to evaluate the effects of intravenous dexmedetomidine on intraoperative hemodynamics and propofol requirement using bispectral index (BIS) in laparoscopic cholecystectomy.
Methods: Forty patients undergoing laparoscopic cholecystectomy were randomly allocated to receive either dexmedetomidine (Group A; n = 20) or normal saline (Group B; n = 20). In Group A, dexmedetomidine was loaded (1 μg/kg) before anesthesia induction and infused (0.6 μg/kg/h) during surgery. Anesthesia was induced with propofol, and maintenance infusion rate was adjusted to a BIS of 55-60 in both groups. Mean arterial pressure (MAP) and heart rate (HR) were recorded at baseline and at various time points from loading of drugs to just

after tracheal extubation. All infusions were stopped with removal of scope from abdominal cavity. Recovery time (time from end of all infusions to BIS = 80) and extubation time (time from end of all infusions to extubation) were noted.
Results: After intubation, MAP and HR values in Group A were significantly lower than Group B at various time points of study. To achieve similar BIS values, significantly low doses of propofol were required in Group A during induction and intraoperatively. Doses were reduced by 36% and 31%, respectively. Mean recovery time and mean extubation time in Group A were also significantly less.
Conclusion: During propofol-based anesthesia for laparoscopic cholecystectomy, dexmedetomidine provides stable intraoperative hemodynamics and reduces propofol requirement for induction as well as maintenance, without compromising recovery profile.

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PMCID: PMC5735447
PMID: 29284872

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

78: Khokhar S, Takkar B, Agarwal E, Gaur N, Ravani R, Venkatesh P. Biometric evaluation of myopic eyes without posterior staphyloma: disproportionate ocular growth. Int Ophthalmol. 2017 Oct 24. doi: 10.1007/s10792-017-0745-6. [Epub ahead of print] PubMed PMID: 29067532.

PURPOSE: To evaluate changes in the anterior segment of myopic eyes and assess anterior biometry as a function of axial length (AL).
DESIGN: Retrospective investigational study.
PARTICIPANTS: Patients evaluated for phakic intraocular lens surgery at a tertiary eye care centre.
METHODS: Patients with corrected visual acuity > 20/40 and AL > 24.5 mm were included in the study. Posterior staphyloma and maculopathy were ruled out in all the patients, and 176 eyes were included for analysis. AL was measured with partial coherence interferometry, while keratometry, central corneal thickness (CCT), anterior chamber depth (ACD), and horizontal white to white (WTW) were measured with slit-scanning topography. Group 1 included 55 eyes with AL < 26.5 mm, group 2 had 57 eyes with AL between 26.5 and 28.5 mm while group 3 had 64 eyes with AL > 28.5 mm.
MAIN OUTCOME MEASURE: Correlation of AL with anterior biometry.
RESULTS: The mean AL of the study eyes was 27.88 + 2.14 mm. The mean values of ACD (2.99 mm), CCT (0.52 mm), WTW (11.68 mm), and keratometry (43.62 D) were within the normal range. Overall, very weak correlations could be established between AL and CCT (R = 0.17, p = 0.02), AL and keratometry (R = - 0.28, p < 0.001), and AL and WTW (R = 0.22, p = 0.002), while ACD did not relate to AL significantly. The ACD and CCT did not relate significantly to AL in any of the three groups. Keratometry had a weak negative relation with AL in groups 1 and 2, while WTW had a weakly positive relation with AL in group 2 only. No variable had any significant relation with AL in group 3.
CONCLUSION: There is disproportionate elongation of the eyeball in myopic patients with very weak or no correlation between anterior biometry and AL. This discord is more in longer eyes. Such a scenario can be challenging to a refractive surgeon treating highly myopic eyes and needs further evaluation.

DOI: 10.1007/s10792-017-0745-6
PMID: 29067532

79: Khullar B, Balyan R, Oswal N, Jain N, Sharma A, Abdin MZ, Bagga A, Bhatnagar S, Wadhwa N, Natchu UCM, George A, Rath S, Bal V, Sopory S. Interaction of CD80

with Neph1: a potential mechanism of podocyte injury. Clin Exp Nephrol. 2018 Jun;22(3):508-516. doi: 10.1007/s10157-017-1489-3. Epub 2017 Oct 11. PubMed PMID: 29022109.

BACKGROUND: The induction of CD80 on podocytes has been shown in animal models of podocyte injury and in certain cases of nephrotic syndrome. In a lipopolysaccharide (LPS)-induced mouse model of albuminuria, we have recently shown a signalling axis of LPS-myeloid cell activation-TNFα production-podocyte CD80 induction-albuminuria. Therefore, in this report, we investigated the cellular and molecular consequences of TNFα addition and CD80 expression on cultured podocytes.
METHODS: A murine podocyte cell line was used for TNFα treatment and for over-expressing CD80. Expression and localization of various podocyte proteins was analysed by reverse transcriptase-polymerase chain reaction, western blotting and immunofluorescence. HEK293 cells were used to biochemically characterize interactions.
RESULTS: Podocytes treated with LPS in vitro did not cause CD80 upregulation but TNFα treatment was associated with an increase in CD80 levels, actin derangement and poor wound healing. Podocytes stably expressing CD80 showed actin derangement and co-localization with Neph1. CD80 and Neph1 interaction was confirmed by pull down assays of CD80 and Neph1 transfected in HEK293 cells.
CONCLUSION: Addition of TNFα to podocytes causes CD80 upregulation, actin reorganization and podocyte injury. Overexpressed CD80 and Neph1 interact via their extracellular domain. This interaction implies a mechanism of slit diaphragm disruption and possible use of small molecules that disrupt CD80-Neph1 interaction as a potential for treatment of nephrotic syndrome associated with CD80 upregulation.

DOI: 10.1007/s10157-017-1489-3
PMID: 29022109

80: Khurana S, Mathur P, Kumar S, Soni KD, Aggrawal R, Batra P, Bhardwaj N. Incidence of ventilator-associated pneumonia and impact of multidrug-resistant infections on patient's outcome: Experience at an Apex Trauma Centre in North India. Indian J Med Microbiol. 2017 Oct-Dec;35(4):504-510. doi: 10.4103/ijmm.IJMM_16_186. PubMed PMID: 29405141.

INTRODUCTION: Ventilator-associated pneumonia (VAP) remains one of the most common nosocomial infections in the Intensive Care Unit. In the face of extremely high rates of antimicrobial resistance, it is essential to gauge the clinical significance of isolation of multidrug-resistant (MDR) pathogens from clinical samples. This study details the trend of VAP and the clinical significance of isolation of MDR pathogens from respiratory samples at an Indian tertiary care hospital.
METHODS: The study was conducted over a 5-year period. VAP was diagnosed on the basis of centres for disease control and prevention criteria. The trend in the rates was compared with preventive measures. Phenotypic and genotypic resistance to beta-lactamases was determined using standard methods. The correlation of isolation of a multi-resistant pathogen with the clinical outcome, length of stay and cost of antimicrobial was ascertained. A clone of Acinetobacter baumannii identified through multilocus sequence typing was used to answer the question of whether resistant bugs always have a fatal outcome.
RESULTS: The total ventilator days (VDs) for these patients amounted to 36,278. A total of 433 episodes of VAP occurred during the study, amounting to an overall VAP rate of 11.9/1000 VDs. There was a decline in the rates of VAP over the 5-year period, due to intensive surveillance and preventive activities. A. baumannii (54%) was the most common pathogen, followed by Pseudomonas aeruginosa

(21%). A high rate of MDR was seen, with the presence of extended-spectrum beta-lactamases, AmpC and carbapenemase genes. The presence of MDR was not always associated with a fatal outcome.
CONCLUSIONS: Isolation of MDR pathogens from bronchoalveolar lavage does not always adversely affect the outcome of patients. It requires an interdisciplinary team of clinical microbiologists, physicians and hospital infection control nurses, to collectively manage these patients.

DOI: 10.4103/ijmm.IJMM_16_186
PMID: 29405141

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Mucormycoses are opportunistic fungal infections with a high mortality rate. Rhizopus oryzae is the most common agent implicated in human infections. Although R. homothallicus has been previously reported to be a cause of pulmonary mucormycosis, it is the first time that we are reporting as a causative agent of rhino-orbital and cutaneous mucormycosis.

DOI: 10.1007/s11046-017-0153-5
PMID: 28623532

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83: Kumar A, Midha N, Mohanty S, Chohan A, Seth T, Gogia V, Gupta S. Evaluating role of bone marrow-derived stem cells in dry age-related macular degeneration using multifocal electroretinogram and fundus autofluorescence imaging. Int J Ophthalmol. 2017 Oct 18;10(10):1552-1558. doi: 10.18240/ijo.2017.10.12. eCollection 2017. PubMed PMID: 29062775; PubMed Central PMCID: PMC5638977.

AIM: To evaluate the role of bone marrow-derived stem cells in the treatment of advanced dry age-related macular degeneration (AMD) using multifocal electroretinogram (mf-ERG) and fundus autofluorescence imaging.
METHODS: Thirty patients (60 eyes) with bilateral central geographic atrophy (GA) were recruited. Worse eye of each patient received autologous bone marrow-derived hematopoietic stem cells (BM-HSCs) (group 1) and the fellow eye with better visual acuity served as control (group 2). The effect of stem cell therapy was determined in terms of visual acuity, amplitude and implicit time in mf-ERG and size of GA on fundus autofluorescence imaging. These tests were performed at presentation and first, third and sixth month follow up. Adverse events (if any) were also monitored.
RESULTS: At 6mo follow-up there was no statistically significant improvement in median logMAR best corrected visual acuity (BCVA) in either group. Mf-ERG revealed significant improvement in amplitude and implicit time in the intervention group. A significant decrease was also noted in greatest linear dimension (GLD) of GA in the eyes receiving stem cells [6.78±2.60 mm at baseline to 6.56±2.59 mm at 6mo (P=0.021)]. However, no such improvement was noted in the control group.
CONCLUSION: Electrophysiological and anatomical improvement in the intervention group sheds light on the therapeutic role of BM-HSCs. Further studies are required to determine the stage of disease at which the maximal benefit can be

achieved and to standardize the dose and frequency of stem cell injection.

DOI: 10.18240/ijo.2017.10.12
PMCID: PMC5638977
PMID: 29062775

84: Kumar KR, Anand RK, Kumar H, Arora MK. Desaturation due to dislodgement of inflation line from SACETTâ„¢ - Suction Above the Cuff Endotracheal Tube. J Anaesthesiol Clin Pharmacol. 2017 Oct-Dec;33(4):555-556. doi: 10.4103/0970-9185.222518. PubMed PMID: 29416259; PubMed Central PMCID: PMC5791280.

85: Kumar L, Gogi R, Patel AK, Mookerjee A, Sahoo RK, Malik PS, Sharma A, Thulkar S, Kumar R, Biswas A, Sharma OD, Gupta R. Multiple myeloma with extramedullary disease: impact of autologous stem cell transplantation on outcome. Bone Marrow Transplant. 2017 Oct;52(10):1473-1475. doi: 10.1038/bmt.2017.165. Epub 2017 Aug 14. PubMed PMID: 28805789.

86: Kumar L, Thakar A, Thakur B, Sikka K. Sensitivity and Specificity of Clinical and Laboratory Otolith Function Tests. Otol Neurotol. 2017 Oct;38(9):e378-e383. doi: 10.1097/MAO.0000000000001525. PubMed PMID: 28796086.

OBJECTIVE: To evaluate clinic based and laboratory tests of otolith function for their sensitivity and specificity in demarcating unilateral compensated complete vestibular deficit from normal.
STUDY DESIGN: Prospective cross-sectional study.
SETTING: Tertiary care hospital vestibular physiology laboratory.
SUBJECTS: Control group-30 healthy adults, 20-45 years age; Case group-15 subjects post vestibular shwannoma excision or post-labyrinthectomy with compensated unilateral complete audio-vestibular loss.
INTERVENTION: Otolith function evaluation by precise clinical testing (head tilt test-HTT; subjective visual vertical-SVV) and laboratory testing (headroll-eye counterroll-HR-ECR; vesibular evoked myogenic potentials-cVEMP).
MAIN OUTCOME MEASURE: Sensitivity and specificity of clinical and laboratory tests in differentiating case and control subjects.
RESULTS: Measurable test results were universally obtained with clinical otolith tests (SVV; HTT) but not with laboratory tests. The HR-ECR test did not indicate any definitive wave forms in 10% controls and 26% cases. cVEMP responses were absent in 10% controls.HTT test with normative cutoff at 2 degrees deviations from vertical noted as 93.33% sensitive and 100% specific. SVV test with normative cutoff at 1.3 degrees noted as 100% sensitive and 100% specific. Laboratory tests demonstrated poorer specificities owing primarily to significant unresponsiveness in normal controls.
CONCLUSIONS: Clinical otolith function tests, if conducted with precision, demonstrate greater ability than laboratory testing in discriminating normal controls from cases with unilateral complete compensated vestibular dysfunction.

DOI: 10.1097/MAO.0000000000001525
PMID: 28796086 [Indexed for MEDLINE]

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

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

DOI: 10.1111/ijd.13759
PMID: 28971483

88: Kumar P, Kumar V. Vitrectomy for epiretinal membrane in adult-onset Coats' disease. Indian J Ophthalmol. 2017 Oct;65(10):1046-1048. doi: 10.4103/ijo.IJO_322_17. PubMed PMID: 29044085; PubMed Central PMCID: PMC5678313.

Coats' disease is characterized by retinal vascular telangiectasia and subretinal and intraretinal exudation. A relatively benign form of the disease that occurs in adults is referred to as adult-onset Coats' disease. Involvement of macula in the form of macular edema and exudation are the common presenting features in both forms of the disease. We describe a rare case of adult-onset Coats' disease that presented with epiretinal membrane (ERM). Laser photocoagulation of retinal vascular telangiectasia resulted in worsening of patient's symptoms and ERM. Early pars plana vitrectomy resulted in resolution of the patient's symptoms. Utility of ultra-wide-field imaging and rationale of early vitrectomy in such cases are discussed.

DOI: 10.4103/ijo.IJO_322_17
PMCID: PMC5678313
PMID: 29044085 [Indexed for MEDLINE]

89: Kumar P, Bhari N, Gupta V, Ramachandran VG, Arava S, Dar L, Sharma VK, Verma KK, Dwivedi SN, Gupta S. Atypical morphology of anogenital warts is not a marker of atypical histology or of infection to the high-risk human papillomavirus genotypes. Int J Dermatol. 2017 Oct;56(10):1017-1021. doi: 10.1111/ijd.13711. Epub 2017 Jul 25. PubMed PMID: 28741750.

BACKGROUND: The clinical morphology of anogenital warts may vary from flat, filiform, papular, or verrucous to giant condyloma acuminatum. Clinically atypical-looking genital warts may alarm the clinician because of their suspected malignant potential, which may cause anxiety, often leading to aggressive interventions.

OBJECTIVE: To study if clinically atypical-looking anogenital warts are more likely to be premalignant or malignant as compared to typical warts.
METHOD: Data of 41 (37 males, 4 females) patients with anogenital warts was retrospectively analyzed. After a detailed literature review and in-house discussions, criteria for anogenital warts with typical and atypical clinical morphology were defined. Clinical photographs were independently reviewed by three dermatologists, and human papillomavirus (HPV) genotyping results, histological evaluation, and immunohistochemical analysis for p53 expression were evaluated.
RESULTS: Fifteen (36.6%) anogenital warts were classified as atypical by at least two of three blinded dermatologists. The histological examination showed mitotic figures in 31/41 (75.6%) specimens, dysplasia in 14/41 (44.1%) specimens, and p53 positivity in 34/41 (82.9%) specimens. There was no significant difference in the high-risk HPV genotyping (P = 0.67), frequency of dysplastic changes on histology (P = 0.19), and immunohistochemistry with p53 (P = 0.08) between clinically typical and atypical-appearing anogenital warts. Similarly, no significant difference was found in the frequency of dysplastic changes (P = 0.67) or p53 expressions (P =0.41) based on the HPV genotypes.
CONCLUSIONS: The atypical clinical morphology of anogenital warts may not be a marker of increased malignant potential. High-risk HPV genotypes do not have a statistically significant association with dysplasia or positive immunohistochemistry with p53.

DOI: 10.1111/ijd.13711
PMID: 28741750 [Indexed for MEDLINE]

90: Kumar P, Nag TC, Jha KA, Dey SK, Kathpalia P, Maurya M, Gupta CL, Bhatia J, Roy TS, Wadhwa S. Experimental oral iron administration: Histological investigations and expressions of iron handling proteins in rat retina with aging. Toxicology. 2017 Dec 1;392:22-31. doi: 10.1016/j.tox.2017.10.005. Epub 2017 Oct 6. PubMed PMID: 28993186.

Iron is implicated in age-related macular degeneration (AMD). The aim of this study was to see if long-term, experimental iron administration with aging modifies retinal and choroidal structures and expressions of iron handling proteins, to understand some aspects of iron homeostasis. Male Wistar rats were fed with ferrous sulphate heptahydrate (500mg/kg body weight/week, oral; elemental iron availability: 20%) from 2 months of age onward until they were 19.5 month-old. At 8, 14 and 20 months of age, they were sacrificed and serum and retinal iron levels were detected by HPLC. Oxidative stress was analyzed by TBARS method. The retinas were examined for cell death (TUNEL), histology (electron microscopy) and the expressions of transferrin, transferrin receptor-1 [TFR-1], H- and L-ferritin. In control animals, at any age, there was no difference in the serum and retinal iron levels, but the latter increased significantly in 14- and 20 month-old iron-fed rats, indicating that retinal iron accumulation proceeds with progression of aging (>14 months). The serum and retinal TBARS levels increased significantly with progression of aging in experimental but not in control rats. There was significant damage to choriocapillaris, accumulation of phagosomes in retinal pigment epithelium and increased incidence of TUNEL+ cells in outer nuclear layer and vacuolation in inner nuclear layer (INL) of 20 month-aged experimental rats, compared to those in age-matched controls. Vacuolations in INL could indicate a long-term effect of iron accumulation in the inner retina. These events paralleled the increased expression of ferritins and transferrin and a decrease in the expression of TFR-1 in iron-fed rats with

aging, thereby maintaining iron homeostasis in the retina. As some of these changes mimic with those happening in eyes with AMD, this model can be utilized to understand iron-induced pathophysiological changes in AMD.

DOI: 10.1016/j.tox.2017.10.005
PMID: 28993186 [Indexed for MEDLINE]

91: Kumar R, Khan R, Gupta N, Seth T, Sharma A, Kalaivani M, Sharma A. Identifying the biomarker potential of telomerase activity and shelterin complex molecule, telomeric repeat binding factor 2 (TERF2), in multiple myeloma. Leuk Lymphoma. 2017 Oct 18:1-13. doi: 10.1080/10428194.2017.1387915. [Epub ahead of print] PubMed PMID: 29043869.

Telomere length (TL) is maintained by telomere capping protein complex called shelterin complex. We studied the possible involvement and biomarker potential of shelterin complex molecules in naive multiple myeloma (MM) patients and controls. TL, relative telomerase activity (RTA), real-time PCR and Western blotting were performed in bonemarrow sample of 70 study subjects (patients = 50; controls = 20). Significantly lowered mean TL, increased RTA and higher mRNA expression of shelterin molecules were observed in patients, while PIN2/TERF1 interacting telomerase inhibitor 1 (PINX1) showed lower mRNA expression. Significantly increased protein expression of telomeric repeat binding factor 2 (TERF2), protection of telomeres 1, adrenocortical dysplasia homolog, Tankyrase 1 and telomere reverse transcriptase were observed in MM patients. Significant correlation was observed among genes and of genes with clinical parameters. In conclusion, our findings showed alteration of these molecules at mRNA and protein levels suggested their involvement in disease progression. Optimal sensitivity and specificity of TERF2 and RTA on receiver operating characteristics curve analysis and univariate analysis demonstrated their biomarkers potential in better prediction of disease course.

DOI: 10.1080/10428194.2017.1387915
PMID: 29043869

92: Kumar S, Prakash P, Joshi MK, Rathi V. Selective Non-operative Management of Patients with Abdominal Trauma-Is CECT Scan Mandatory? Indian J Surg. 2017 Oct;79(5):396-400. doi: 10.1007/s12262-016-1494-x. Epub 2016 May 6. PubMed PMID: 29089697; PubMed Central PMCID: PMC5653571.

CECT scan is considered essential for selective non-operative management (SNOM) of patients with abdominal trauma. However, CECT has its own hazards and limitations. We evaluated the safety and efficacy of selective non-operative management of patients with abdominal trauma without the mandatory use of CECT scan in a prospective study. Patients with peritonitis and ongoing intra-abdominal bleed were excluded. Consenting FAST positive, hemodynamically stable patients with blunt and penetrating abdominal trauma between 18 and 60 years of age were included and admitted for SNOM and detailed ultrasonography of the abdomen (in all) with or without CECT abdomen (selectively). Eighty-four patients with abdominal trauma were admitted during the study period. Twenty-two patients did not satisfy the inclusion criteria and 18 required immediate laparotomy based on primary survey. Remaining 44 patients were admitted for SNOM: mean ± SD age of these patients was 27 ± 8.7 years; 40 (89 %) were males. Thirty-five patients (79.54 %) sustained blunt trauma (RTI = 16, Fall = 16, others = 3) while nine patients (20.45 %) sustained penetrating trauma. SNOM without CECT was successful in 36 (81.82 %) patients. Five (11.36 %) patients

underwent delayed emergency laparotomy based on clinical and detailed USG evaluation. CECT was not done in these patients. Three patients underwent CECT for various reasons; however, they were managed with SNOM. Thus, SNOM without abdominal CECT was successful in 36 (81.82 %) patients. SNOM failed in five patients but abdominal USG was sufficient. SNOM can be practised safely in patients of abdominal trauma with limited use of CECT scan.

DOI: 10.1007/s12262-016-1494-x
PMCID: PMC5653571 [Available on 2018-10-01]
PMID: 29089697

93: Kumar V, Garg R, Gupta N, Bharati SJ. Rigid bronchoscopic stenting in a patient of tracheobronchial gout - perioperative anesthetic concerns. J Anaesthesiol Clin Pharmacol. 2017 Oct-Dec;33(4):558-559. doi: 10.4103/0970-9185.222517. PubMed PMID: 29416261; PubMed Central PMCID: PMC5791282.

94: Kumar V, Trehan H, Goel N. Sveinsson Chorioretinal Atrophy: Helicoid Peripapillary Chorioretinal Degeneration. JAMA Ophthalmol. 2017 Oct 12;135(10):e173236. doi: 10.1001/jamaophthalmol.2017.3236. Epub 2017 Oct 12. PubMed PMID: 29049677.

95: Kumar V. Insights into autofluorescence patterns in Stargardt macular dystrophy using ultra-wide-field imaging. Graefes Arch Clin Exp Ophthalmol. 2017 Oct;255(10):1917-1922. doi: 10.1007/s00417-017-3736-4. Epub 2017 Jul 8. PubMed PMID: 28689222.

PURPOSE: To characterize autofluorescence (AF) patterns occurring in Stargardt macular dystrophy (STGD1) using ultra-wide-field (UWF) imaging.
METHODS: This paper is a cross-sectional observational study of 22 eyes of 11 patients (mean age 23.44 years) with Stargardt disease-fundus flavimaculatus who presented with decrease of vision at a tertiary eye care center. UWF short-wave AF images were obtained from all the patients using an Optos TX200 instrument. The main outcome measures were to assess patterns of AF changes seen on UWF AF imaging.
RESULTS: All eyes showed a central area of hypoautofluorescence at the macula along with retinal flecks extending centrifugally as well as to the nasal side of the optic disc. Peripapillary sparing was seen in 100% of the eyes. Flecks were seen to be hypoautofluorescent in the center and hyperautofluorescent in the periphery in 77.8% eyes and were only hyperfluorescent in 27.2%. A background-increased fluorescence was visible in 100% of eyes, the outer boundary of which was marked by distribution of flecks in 81.9% eyes. A characteristic inferonasal vertical line was seen separating the nasal hypoautofluorescent area from the temporal hyperautofluorescent area in all the eyes.
CONCLUSIONS: UWF AF changes in STGD1 are not limited to the posterior pole and may extend more peripherally. UWF imaging is a useful tool for the assessment of patients with Stargardt macular dystrophy.

DOI: 10.1007/s00417-017-3736-4
PMID: 28689222 [Indexed for MEDLINE]

96: Kumar V, Tomar AK, Sahu V, Dey S, Yadav S. Structural insights of Mycobacterium GTPase-Obg and anti-sigma-F factor Usfx interaction. J Mol Recognit. 2017 Oct;30(10). doi: 10.1002/jmr.2636. Epub 2017 May 4. PubMed PMID: 28470740.

An essential protein for bacterial growth, GTPase-Obg (Obg), is known to play an unknown but crucial role in stress response as its expression increases in Mycobacterium under stress conditions. It is well reported that Obg interacts with anti-sigma-F factor Usfx; however, a detailed analysis and structural characterization of their physical interaction remain undone. In view of above-mentioned points, this study was conceptualized for performing binding analysis and structural characterization of Obg-Usfx interaction. The binding studies were performed by surface plasmon resonance, while in silico docking analysis was done to identify crucial residues responsible for Obg-Usfx interaction. Surface plasmon resonance results clearly suggest that N-terminal and G domains of Obg mainly contribute to Usfx binding. Also, binding constants display strong affinity that was further evident by intermolecular hydrogen bonds and hydrophobic interactions in the predicted complex. Strong interaction between Obg and Usfx supports the view that Obg plays an important role in stress response, essentially required for Mycobacterium survival. As concluded by various studies that Obg is crucial for Mycobacterium survival under stress, this structural information may help us in designing novel and potential inhibitors against resistant Mycobacterium strains.

DOI: 10.1002/jmr.2636
PMID: 28470740 [Indexed for MEDLINE]

97: Kumar Y, Jain V, Chauhan SS, Bharate V, Koli D, Kumar M. Influence of different forms and materials (zirconia or titanium) of abutments in peri-implant soft-tissue healing using matrix metalloproteinase-8: A randomized pilot study. J Prosthet Dent. 2017 Oct;118(4):475-480. doi: 10.1016/j.prosdent.2016.11.017. Epub 2017 Mar 24. PubMed PMID: 28343676.

STATEMENT OF PROBLEM: It is unclear how pathogenic bacteria adhere to different implant materials and whether biomarker matrix metalloproteinase-8 (MMP-8) level provides a reliable method of evaluating the connective tissue status of peri-implant tissues.
PURPOSE: The purpose of this pilot clinical study was to evaluate peri-implant connective tissue response by assessing the MMP-8 levels in peri-implant crevicular fluid around titanium and zirconia abutments.
MATERIAL AND METHODS: The study was designed as a prospective, within-subject comparison with left-right randomization low. Twelve participants with partial edentulism were selected according to inclusion and exclusion criteria. Peri-implant sulcal fluid sampling and pocket probing depths were assessed at 1, 3, and 12 months after placing the abutments. The MMP-8 protein level of the peri-implant sulcal fluid was determined by MMP-8-specific sandwich enzyme-linked immunosorbent assay system. The independent t test or Wilcoxon test was used to compare MMP-8 levels and probing depth assessment between the zirconia and titanium groups at different time points (1, 3, and 12 months). Repeated measures ANOVA was used for within-group comparison of the MMP-8 levels at 3 time points (α=.05).
RESULTS: At 1 and 3 months, the titanium abutments showed significantly higher MMP-8 levels and probing depths than the zirconia abutments ($P<.05$), but no significant differences were found at 12 months for either variable ($P>.05$).
CONCLUSIONS: This study suggests the presence of more remodeling and/or inflammatory phenomena around titanium implant abutments than around zirconia abutments of a different design during the early stages but not at 1 year.

DOI: 10.1016/j.prosdent.2016.11.017
PMID: 28343676

98: Kumawat B, Tripathy K, Venkatesh P, Chawla R, Sharma YR. Central Retinal Vein Occlusion-like Appearance: A Precursor Stage in Evolution of Frosted Branch Angiitis. J Ophthalmic Vis Res. 2017 Oct-Dec;12(4):440-442. doi: 10.4103/jovr.jovr_84_15. PubMed PMID: 29090058; PubMed Central PMCID: PMC5644415.

PURPOSE: To report a young man with a central retinal vein occlusion (CRVO)-like appearance which later evolved to frosted branch angiitis (FBA).
CASE REPORT: As 28-year-old Indian man presented with optic disc swelling, hyperemia, peripapillary hemorrhages, and dilated tortuous veins in the left eye, 6 months after being diagnosed with idiopathic FBA in the right eye. Within 3 days of presentation, the left eye developed FBA, which was promptly and successfully treated with oral steroids.
CONCLUSION: A CRVO-like picture may be the first stage of FBA. Young patients with CRVO and intraocular inflammation should be followed closely for early detection of FBA. Early initiation of oral steroids may preserve visual acuity in such cases.

DOI: 10.4103/jovr.jovr_84_15
PMCID: PMC5644415
PMID: 29090058

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

99: Kundu R, Subramaniam R, Sardar A. Anesthetic Management for Prolonged Incidental Surgery in Advanced Liver Disease. Anesth Essays Res. 2017 Oct-Dec;11(4):1101-1104. doi: 10.4103/aer.AER_94_17. PubMed PMID: 29284885; PubMed Central PMCID: PMC5735460.

In spite of advances in perioperative management, operative procedures in patients with chronic liver disease pose a significant challenge for the anesthesiologist due to multisystem involvement, high risk of postoperative hepatic decompensation, and mortality. We describe the anesthetic management of an elderly patient with advanced liver disease (model for end-stage liver disease 16) for prolonged abdominal surgery. The use of invasive hemodynamic monitoring, point-of-care biochemical, and hematological surveillance coupled with prompt correction of all abnormalities was responsible for good outcome. The patient's inguinal swellings turned out to be extensions of a large peritoneal mesothelioma, necessitating a large abdominal incision and blood loss. Analgesia was provided by bilateral transversus abdominis plane blocks, which helped to reduce opioid use and rapid extubation.

DOI: 10.4103/aer.AER_94_17
PMCID: PMC5735460
PMID: 29284885

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

100: Madaan P, Jauhari P, Gupta A, Chakrabarty B, Gulati S. A quinidine non responsive novel KCNT1 mutation in an Indian infant with epilepsy of infancy with migrating focal seizures. Brain Dev. 2018 Mar;40(3):229-232. doi: 10.1016/j.braindev.2017.09.008. Epub 2017 Oct 14. PubMed PMID: 29037447.

Epilepsy of infancy with migrating focal seizures {a.k.a malignant migrating partial seizures of infancy (MMPSI)} is an uncommon epileptic encephalopathy with a poor prognosis. Migrating focal seizures with autonomic features, developmental stagnation and refractoriness to treatment are its key features. It is caused by genetic defects in various ion channels, most common being sodium activated potassium channel (KCNT1), found in up to 50% of cases. With advent of genetic diagnosis and precision medicine, many targeted therapies have been identified. Antagonist of KCNT1 coded ion channel like Quinidine has shown promising results in MMPSI. Here we report first mutation proven case of MMPSI from India. This child had a novel heterozygous missense mutation in exon10 of the KCNT1 gene (chr9:138650308; c.808C>C/G (p.Q270E)) which was pathogenic. Neither quinidine nor ketogenic diet could control his seizures. Ultimately, the child succumbed to his illness at nine months of age.

DOI: 10.1016/j.braindev.2017.09.008
PMID: 29037447

101: Mahapatra A, Gupta R, Patnaik KP, Pattanaik RD, Khandelwal SK. Examining the psychometric properties of the Hindi version of Family Accommodation Scale-Self-Report (FAS-SR). Asian J Psychiatr. 2017 Oct;29:166-171. doi: 10.1016/j.ajp.2017.05.017. Epub 2017 May 22. PubMed PMID: 29061421.

CONTEXT: Family accommodation (FA) is the phenomenon whereby caregivers assist or facilitate rituals or behaviours related to obsessive compulsive disorder (OCD). There is a need for a self-rated instrument to assess this construct in resource-strained clinical settings of India.
AIM: To explore the factor structure of Hindi version of Family Accommodation Scale-Self Rated version (FAS-SR) and compare its validity with the gold standard Family Accommodation Scale-Interviewer Rated (FAS-IR) scale.
MATERIAL & METHODS: The Hindi version of FAS-SR scale and FAS-IR scale was applied on 105 caregivers of patients with OCD.
RESULTS: The initial factor analysis yielded three-factor models with an eigenvalue of >1 and the total variance explained by these factors was 72.017%. The internal consistency of the 19-item scale was 0.93 indicating good inter-item correlation. There was a significant positive correlation between FAS-IR scale total score and all the factors of the FAS-SR Scale. The average measure ICC was 0.889 with a 95% confidence interval from 0.783 to 0.981 (F (62,84)=37.547, p<001) indicating high degree of reliability between the Hindi version of FAS-SR and the FAS-IR scale.
CONCLUSIONS: FAS-SR is a practical alternative to FAS-IR and has the potential to be used widely in an Indian setting.

DOI: 10.1016/j.ajp.2017.05.017
PMID: 29061421 [Indexed for MEDLINE]

102: Mahapatra A, Khandelwal SK, Sharan P, Garg A, Mishra NK. Diffusion tensor imaging tractography study in bipolar disorder patients compared to first-degree relatives and healthy controls. Psychiatry Clin Neurosci. 2017 Oct;71(10):706-715. doi: 10.1111/pcn.12530. Epub 2017 Jun 19. PubMed PMID: 28419638.

AIM: We aimed to compare white matter structural changes in specific tracts by

diffusion tensor imaging (DTI) tractography in patients with bipolar disorder (BD) I, non-ill first-degree relatives (FDR) of the patients, and healthy controls (HC).
METHODS: In a cross-sectional study, we studied right-handed subjects consisting of 16 euthymic BD I patients, 15 FDR, and 15 HC. The anterior thalamic radiation, uncinate fasciculus, corpus callosum, and cingulum bundle were reconstructed by DTI tractography. Mean fractional anisotropy (FA) and apparent diffusion coefficient (ADC) values were compared for group differences followed by post-hoc analysis.
RESULTS: The three groups did not differ in terms of sociodemographic variables. There were significant group differences in the FA values among the BD I patients, their FDR, and the HC for the corpus callosum, the dorsal part of the right cingulum bundle, the hippocampal part of the cingulum bundle bilaterally, and the uncinate fasciculus ($P < 0.001$). The FA values in the patients were significantly lower than in controls, and FDR also showed similar differences; however, they were smaller than those in patients. No significant difference was found between the groups for FA values of the dorsal part of the left cingulum bundle and anterior thalamic radiation. Significant differences were present for ADC values among the groups for the corpus callosum, the dorsal and hippocampal parts of the cingulum, anterior thalamic radiation, and uncinate fasciculus bilaterally ($P < 0.01$). The FA and ADC values did not correlate significantly with age or any clinical variables.
CONCLUSION: These findings suggest that BD patients and their FDR show alterations in microstructural integrity of white matter tracts, compared to the healthy population.

DOI: 10.1111/pcn.12530
PMID: 28419638

103: ---

104: Makkar JK, Singh NP, Singh PM. Prolongation of Apnea Time in Obese Patients-Concerns With Rate of Rise of CO2. Anesth Analg. 2017 Oct;125(4):1422-1423. doi: 10.1213/ANE.0000000000002391. PubMed PMID: 28795965.

105: Malgulwar PB, Pathak P, Singh M, Kale SS, Suri V, Sarkar C, Sharma MC. Downregulation of SMARCB1/INI1 expression in pediatric chordomas correlates with upregulation of miR-671-5p and miR-193a-5p expressions. Brain Tumor Pathol. 2017 Oct;34(4):155-159. doi: 10.1007/s10014-017-0295-7. Epub 2017 Aug 20. PubMed PMID: 28825187.

Loss of SMARCB1/INI1 expression is considered to be a hallmark for childhood chordomas (CCs). Although mutation/loss of 22q has strongly established the loss of SMARCB1/INI1 in cancers, the cause in CCs remains elusive. Recent studies suggest role of miRNAs in regulation of SMARCB1/INI1 expressions. We examined 5 reported/target predicted miRNAs to SMARCB1/INI1 in SMARCB1/INI1 immunonegative and immunopositive cases, and found upregulation of miR-671-5p and miR-193a-5p in SMARCB1/INI1-immunonegative cases. Notably, these two miRNAs were significantly predicted to target TGF-β signaling, suggestive of dysregulation of developmental and osteoblast regulation pathway in CCs. Overall, we suggest miR-671-5p- and miR-193a-5p-mediated epigenetic mode of SMARCB1/INI1 loss and downregulated TGF-β pathway in CCs.

DOI: 10.1007/s10014-017-0295-7
PMID: 28825187 [Indexed for MEDLINE]

106: Malhotra R, Jain V, Kumar V, Gautam D. Evaluation of running knotless barbed suture for capsular closure in primary total knee arthroplasty for osteoarthritis-a prospective randomized study. Int Orthop. 2017 Oct;41(10):2061-2066. doi: 10.1007/s00264-017-3529-8. Epub 2017 Jun 21. PubMed PMID: 28639008.

AIMS: This study was conducted to compare the barbed vs. traditional suture technique in capsular closure of total knee arthroplasty in terms of closure time, cost, needle prick injury, post-operative complication, blood loss and post-operative function.
PATIENTS AND METHODS: Eighty patients in a barbed suture group and 90 in a traditional group were enrolled in this prospective randomized study.
RESULTS: Barbed suture was associated with 4.1 minutes ($P < 0.001$) faster closure. It was found to be cheaper in terms of direct material cost [30.4%]. Needle prick injury was found in 6.7% ($P = 0.020$) of cases in the traditional group. Blood loss, post-operative complication and post-operative function were comparable in both groups.
CONCLUSION: Barbed suture use in capsular closure of knee arthroplasty is an efficient and cost effective method, and recommended for use in the future.

DOI: 10.1007/s00264-017-3529-8
PMID: 28639008 [Indexed for MEDLINE]

107: Malik S, Sadhu S, Elesela S, Pandey RP, Chawla AS, Sharma D, Panda L, Rathore D, Ghosh B, Ahuja V, Awasthi A. Transcription factor Foxo1 is essential for IL-9 induction in T helper cells. Nat Commun. 2017 Oct 9;8(1):815. doi: 10.1038/s41467-017-00674-6. PubMed PMID: 28993609; PubMed Central PMCID: PMC5634439.

Interleukin 9 (IL-9)-producing helper T (Th9) cells have a crucial function in allergic inflammation, autoimmunity, immunity to extracellular pathogens and anti-tumor immune responses. In addition to Th9, Th2, Th17 and Foxp3+ regulatory T (Treg) cells produce IL-9. A transcription factor that is critical for IL-9 induction in Th2, Th9 and Th17 cells has not been identified. Here we show that the forkhead family transcription factor Foxo1 is required for IL-9 induction in Th9 and Th17 cells. We further show that inhibition of AKT enhances IL-9 induction in Th9 cells while it reciprocally regulates IL-9 and IL-17 in Th17 cells via Foxo1. Mechanistically, Foxo1 binds and transactivates IL-9 and IRF4 promoters in Th9, Th17 and iTreg cells. Furthermore, loss of Foxo1 attenuates IL-9 in mouse and human Th9 and Th17 cells, and ameliorates allergic inflammation in asthma. Our findings thus identify that Foxo1 is essential for IL-9 induction in Th9 and Th17 cells.The transcription factor Foxo1 can control regulatory T cell and Th1 function. Here the authors show that Foxo1 is also critical for IL-9 production by Th9 cells and other IL-9-producing cells.

DOI: 10.1038/s41467-017-00674-6
PMCID: PMC5634439
PMID: 28993609

108: Meel R, Dhiman R, Vanathi M, Pushker N, Tandon R, Devi S. Clinicodemographic profile and treatment outcome in patients of ocular surface squamous neoplasia. Indian J Ophthalmol. 2017 Oct;65(10):936-941. doi: 10.4103/ijo.IJO_251_17. PubMed PMID: 29044057; PubMed Central PMCID: PMC5678328.

PURPOSE: The aim is to study the clinicodemographic profile and treatment outcome of ocular surface squamous neoplasia (OSSN).
METHODS: This was a retrospective observational study of 57 eyes (56 cases) with clinically diagnosed OSSN, presenting in our center over the past year.
RESULTS: The median age of presentation was 55 years with male:female ratio being 4.5:1. Systemic predisposing conditions were xeroderma pigmentosa (1) postkidney transplant immunosuppression (1), and human immunodeficiency virus infection (1). Patients with predisposing conditions had a younger median age of onset (33 years). The majority of tumors were nodular (61.4%), gelatinous (61.4%), and had limbal involvement (96%). On ultrasound biomicroscopy (UBM), mean tumor height was 2.93 ± 1.02 mm, and intraocular extension was evident in seven eyes. OSSN with intraocular extension had a mean tumor height of 4.3 ± 1.32 mm. Nodal metastasis was seen in one case at presentation. As per American Joint Committee for Cancer Classification seventh edition staging-two cases were T1, one was T2, 46 were T3 and eight were T4. Treatment advised included conservative therapy for 39; wide local excision (4 mm margin clearance) with cryotherapy for seven; enucleation in four; and exenteration in four eyes. Overall, complete regression was achieved in 88% of cases during a mean follow-up of 13.5 ± 4.6 months. Recurrence was seen in three cases, which were treated with exenteration, radical neck dissection, and palliative chemo-radiotherapy, respectively.
CONCLUSION: Although associated with old age, earlier onset of OSSN is seen in patients with systemic predisposing conditions. Thicker tumors in the setting of a previous surgery or immunocompromised status should be considered high-risk features for intraocular extension and should be evaluated on UBM.

DOI: 10.4103/ijo.IJO_251_17
PMCID: PMC5678328
PMID: 29044057 [Indexed for MEDLINE]

109: Misra P, Majumdar A, Misra MC, Kant S, Gupta SK, Gupta A, Kumar S. Epidemiological Study of Patients of Road Traffic Injuries Attending Emergency Department of a Trauma Center in New Delhi. Indian J Crit Care Med. 2017 Oct;21(10):678-683. doi: 10.4103/ijccm.IJCCM_197_17. PubMed PMID: 29142380; PubMed Central PMCID: PMC5672674.

Background and Aims: There is paucity of data regarding some of the lesser known contextual and epidemiological factors with respect to road traffic injuries (RTIs). The objective was to study the epidemiological profile of RTI victims attending an emergency department of a tertiary care trauma center.
Methods: The present study was a hospital-based cross-sectional study conducted in the emergency department of a tertiary care trauma center in New Delhi. All patients of RTI attending the emergency department during the designated data collection days were included in the study. Patients brought dead were excluded from the study. A semi-structured interview schedule was developed for collecting data on various domains such as sociodemographic characteristics, vehicle-related factors, accident site-related factors, personal protection measures, contextual factors, and prehospital care-related factors.
Results: A total of 984 patients and informants were approached and finally data of 900 participants were analyzed after excluding those who refused participation and those for whom incomplete data were available. Out of 900 RTI victims, 756 were male (84.0%) and 144 (16.0%) were female. Mean age of the victims was 32.7 years. Most of the victims, i.e., 377 out of 900 (41.9%) were occupants rather than drivers. Majority of victim's vehicle meeting accidents were motorized two-wheelers (53.4%), and majority of the colliding vehicle was a four-wheeler (39.3*). Helmet use was found to be low (63.3%), but seat belt use was particularly low (32.4%). Most accidents (28%) happened between midnight and 6

A.M. More than half of the victims were in a hurry on the day of the accident. An ambulance was used to transport the victims in only 14.6% cases.
Conclusion: In road traffic accidents some lesser known epidemiological data were generated that may be useful in defining preventive measures.

DOI: 10.4103/ijccm.IJCCM_197_17
PMCID: PMC5672674
PMID: 29142380

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

110: Mittal D, Bhatnagar V, Agarwala S, Srinivas M, Jana M, Gupta AK, Das N, Singh MK. Pre-operative Hepatic Artery Resistive Index is a Non-invasive Predictive Indicator of Prognosis in Biliary Atresia. J Indian Assoc Pediatr Surg. 2017 Oct-Dec;22(4):237-241. doi: 10.4103/jiaps.JIAPS_103_17. PubMed PMID: 28974877; PubMed Central PMCID: PMC5615899.

AIMS: The aim of this study is to evaluate hepatic artery resistive index (HARI) as a noninvasive prognostic predictor by correlating it with peripheral blood nitric oxide (NO) levels, portal pressure (PP) and histopathological changes in the liver in patients of biliary atresia (BA).
MATERIALS AND METHODS: Twenty-five patients were included in the study prospectively from November 2012 to June 2014. All patients underwent Doppler sonography to calculate the HARI preoperatively. Peripheral blood NO was also measured preoperatively. Biochemical liver function tests (LFTs) were measured preoperatively and at 1, 3, and 6 months postoperatively. The PP was measured intraoperatively, and a liver biopsy was taken in all patients. Disappearance of jaundice defined successful surgical treatment. Postoperatively, a hepatobiliary IminoDiacetic Acid scan (HIDA) was done to demonstrate a patent bilio-enteric pathway.
RESULTS: The mean preoperative HARI was 0.78 ± 0.105, and the median was 0.80 (range 0.60–1.0). The median HARI was used to correlate the other parameters; 13 (52%) patients had HARI ≥0.8. The mean PP was 24.96 ± 6.54 mmHg. The HARI had a strong correlation with PP (P = 0.0001) and (NO) (P = 0.0001); with every 0.1 increase in HARI, there was 5.2 mmHg increase in PP and 3.8 μmol/L increase in NO. The histological parameters which reached significance in relation to HARI were hepatocellular damage, bile duct inflammation, portal inflammation, and portal fibrosis. The postoperative improvement in LFT was significantly better in patients with HARI <0.8. All four patients who died during or after the study period had HARI >0.8, elevated PP, and NO levels.
CONCLUSIONS: Preoperative HARI was found to have a direct correlation with PP and peripheral blood NO as a measure of portal hypertension. A preoperative HARI ≥0.8 should be considered as a risk factor for poor outcomes in BA.

DOI: 10.4103/jiaps.JIAPS_103_17
PMCID: PMC5615899
PMID: 28974877

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

111: Mohta S, Kumar A, Singh N, Wig N. A case of tuberculous gumma: there is more to it than meets the eye. BMJ Case Rep. 2017 Oct 19;2017. pii: bcr-2017-221701. doi: 10.1136/bcr-2017-221701. PubMed PMID: 29054947.

We present a case of a young girl who presented with multiple cutaneous abscesses over 2 years at different sites. She had no constitutional symptoms or history of tuberculosis. On investigation, she was found to have rifampicin-sensitive

tuberculosis presenting as tubercular gumma, a rare form of cutaneous tuberculosis which occurs due to haematogenous spread of the bacilli. She had disseminated disease involving the spinal column with associated psoas abscess. A thorough evaluation was done for immune-deficiency workup but was all negative. She was given antitubercular therapy and showed a good response to therapy at a follow-up of 1 month.

DOI: 10.1136/bcr-2017-221701
PMID: 29054947 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

112: Muiwo P, Pandey P, Ahmad HM, Ramachandran SS, Bhattacharya A. IsomiR processing during differentiation of myelogenous leukemic cell line K562 by phorbol ester PMA. Gene. 2018 Jan 30;641:172-179. doi: 10.1016/j.gene.2017.10.025. Epub 2017 Oct 17. PubMed PMID: 29051025.

Chronic myelocytic leukemia cell line K562 undergoes differentiation by phorbol esters to megakaryocytes and we have used this system to understand miRNA processing leading to isomiR generation. PMA treatment significantly altered the production of miRNA in K562 cells. Expression of 24.4% of miRNAs were found to be stimulated whereas expression of 10% miRNAs were inhibited by PMA treatment. Our results suggest that miRNA precursors are processed into isomiRs in a deterministic manner. The relative levels of different isomiRs of a miRNA remained mainly unchanged even after PMA treatment irrespective of overall changes in expression (either up-regulation or down-regulation). However, not all miRNAs behave in the same way, about 7% showed a variation of isomiR profiles after PMA treatment. Most of the later class of miRNAs were found to be oncogenic miRNAs. Further, it was also found that number of isomiRs was independent of abundance of a miRNA. Functional importance of different isomiRs was demonstrated using three different isomiRs of miR-22. Our results showed that different isomiRs could inhibit expression of targets genes with different efficiencies. Our study suggests that the heterogeneity of a miRNA population generated during processing is in general regulated and that variation in the generation of an isomiR can be a functionally important regulatory feature.

DOI: 10.1016/j.gene.2017.10.025
PMID: 29051025 [Indexed for MEDLINE]

113: Mukherjee A, Lodha R, Kabra SK. Current therapies for the treatment of multidrug-resistant tuberculosis in children in India. Expert Opin Pharmacother. 2017 Oct;18(15):1595-1606. doi: 10.1080/14656566.2017.1373090. Epub 2017 Oct 9. Review. PubMed PMID: 28847228; PubMed Central PMCID: PMC5942143.

INTRODUCTION: Multidrug-resistant tuberculosis (MDR-TB) is a serious life threatening condition affecting children as well as adults worldwide. Timely diagnosis and effective treatment, both of which are complex in children, are the prerogatives for a favorable outcome. Areas covered: This review covers epidemiology, treatment regimen and duration, newer drugs and adverse events in children with MDR-TB. Special note has been made of epidemiology and principles of treatment followed in Indian children. Expert opinion: High index of suspicion

is essential for diagnosing childhood MDR-TB. If there is high probability, a child can be diagnosed as presumptive MDR-TB and started on empiric treatment in consultation with experts. However, every effort should be made to confirm the diagnosis. Backbone of an effective MDR-TB regimen consists of four 2nd line anti-TB drugs plus pyrazinamide; duration being 18-24 months. The newer drugs delamanid and bedaquiline can be used in younger children if no other alternatives are available after consultation with experts. Wider availability of these drugs should be ensured for benefit to all concerned. More research is required for development of new and repurposed drugs to combat MDR-TB. Children need to be included in clinical trials for such life-saving drugs, so that nobody is denied the benefits.

DOI: 10.1080/14656566.2017.1373090
PMCID: PMC5942143
PMID: 28847228 [Indexed for MEDLINE]

114: Mukherjee PS, Vishnubhatla S, Amarapurkar DN, Das K, Sood A, Chawla YK, Eapen CE, Boddu P, Thomas V, Varshney S, Hidangmayum DS, Bhaumik P, Thakur B, Acharya SK, Chowdhury A. Etiology and mode of presentation of chronic liver diseases in India: A multi centric study. PLoS One. 2017 Oct 26;12(10):e0187033. doi: 10.1371/journal.pone.0187033. eCollection 2017. PubMed PMID: 29073197; PubMed Central PMCID: PMC5658106.

There is a paucity of health policy relevant data for chronic liver disease from India, impeding formulation of an interventional strategy to address the issue. A prospective, multicentric study to delineate the etiology and clinical profile of chronic liver disease in India is reported here. A centrally coordinated and monitored web-based data repository was developed (Feb, 2010 to Jan, 2013) and analyzed. Eleven hospitals from different parts of India participated. Data were uploaded into a web based proforma and monitored by a single centre according to a standardized protocol. 1.28% (n = 266621) of all patients (n = 20701383) attending the eleven participating hospitals of India had liver disease. 65807 (24·68%) were diagnosed for the first time (new cases). Of these, 13014 (19·77%, median age 43 years, 73% males) cases of chronic liver disease were finally analyzed. 33.9% presented with decompensated cirrhosis. Alcoholism (34·3% of 4413) was the commonest cause of cirrhosis while Hepatitis B (33·3%) was predominant cause of chronic liver disease in general and non-cirrhotic chronic liver disease (40·8% out of 8163). There was significant interregional differences (hepatitis C in North, hepatitis B in East and South, alcohol in North-east, Non-alcoholic Fatty Liver Disease in West) in the predominant cause of chronic liver disease. Hepatitis B (46·8% of 438 cases) was the commonest cause of hepatocellular Cancer.11·7% had diabetes. Observations of our study will help guide a contextually relevant liver care policy for India and could serve as a framework for similar endeavor in other developing countries as well.

DOI: 10.1371/journal.pone.0187033
PMCID: PMC5658106
PMID: 29073197 [Indexed for MEDLINE]

115: 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 [Indexed for MEDLINE]

116: Naalla R, Singhal M. A simple turnover technique to harvest skin graft from the avulsed skin. BMJ Case Rep. 2017 Oct 19;2017. pii: bcr-2017-222784. doi: 10.1136/bcr-2017-222784. PubMed PMID: 29054960.

117: Nag TC, Kumar P, Wadhwa S. Age related distribution of 4-hydroxy 2-nonenal immunoreactivity in human retina. Exp Eye Res. 2017 Dec;165:125-135. doi: 10.1016/j.exer.2017.09.014. Epub 2017 Oct 3. PubMed PMID: 28986146.

The retina is prone to be damaged by oxidative stress (OS), owing to its constant exposure to light, high rate of oxygen consumption and high membrane lipid content. Lipid peroxidation in aging human retina has been shown by biochemical means. However, information on the cellular sites of OS and antioxidant responses in aging human retina remains limited. Here, we show distribution of immunoreactivity (IR) to a marker of lipid peroxidation (4-hydroxy 2-nonenal [HNE] and antioxidant enzymes involved in counteracting lipid peroxidation (glutathione S-transferase-π1 and glutarexoxin-1) in donor human retinas at different ages (35-91 years; N = 24). Initially, HNE-IR was present in few macular cone outer segments (COS, sixth decade). With aging, IR appeared in many COS and peaked at ninth decade (14 vs 62 per 3850 μm2 area between 6 and 9 decade; $p < 0.001$) in the parafovea then seen elsewhere (perifoveal, mid-peripheral and nasal). IR was seen in the parafovea of all retinas, whereas it was present in 8/24 of perifoveal and 6/24 of mid-peripheral retinas, indicating that the parafovea is susceptible to undergo lipid peroxidation. Foveolar COS were immunonegative until 81 years, which developed IR later (>83 years). IR to glutathione S-transferase-π1 was moderate until eight decade and then showed a decrease in photoreceptor cells between ninth and tenth decade, while glutaredoxin-1 maintained a steady expression with aging. Damaged COS were present in aged retinas, and inner segments and photoreceptor nuclei also showed some degree of alterations. Although there was increased lipid peroxidation with aging, cone death was minimal in those retinas. The two antioxidant enzymes studied here, may play a role in protecting photoreceptors against OS with advanced aging.

DOI: 10.1016/j.exer.2017.09.014
PMID: 28986146 [Indexed for MEDLINE]

118: Narayan R, Agarwal T, Mishra D, Maji S, Mohanty S, Mukhopadhyay A, Maiti TK. Ectopic vascularized bone formation by human mesenchymal stem cell microtissues in a biocomposite scaffold. Colloids Surf B Biointerfaces. 2017 Dec 1;160:661-670. doi: 10.1016/j.colsurfb.2017.10.004. Epub 2017 Oct 5. PubMed PMID: 29031226.

Three-dimensional multicellular human bone marrow mesenchymal stem cells (hBM-MSCs) are showing a great promise in the repair of bone tissue due to its osteogenic differentiation potential, mimicking in vivo microenvironment and immunomodulatory property. In the present study, the potential of hBM-MSC microtissues (MTs) in combination with a biocomposite material to form vascularized bone-like tissue at an ectopic site in an immunocompromised mouse was evaluated. The scaffold was fabricated using gelatin, carboxymethyl cellulose, polyvinyl alcohol and nano-hydroxyapatite (GCnHP) by the freeze-drying method. The physico-chemico-biological characteristics were compared with control scaffold devoid of polyvinyl alcohol (GCnH). The scaffolds (GCnH and GCnHP) were highly porous and had interconnected pores. GCnHP showed higher mechanical strength, higher water adsorption and a lower rate of collagenase-mediated degradation in comparison to GCnH. The scaffolds also supported growth and proliferation of hBM-MSCs MTs and subsequent differentiation into osteoblast-like cells. The differentiated cells showed matrix mineralization and high expression of runX2, alkaline phosphatase, collagen type 1 and osteocalcin genes. A high expression of VEGF was also observed suggesting the potential of hBM-MSC MTs to induce angiogenesis. H&E and Masson's trichrome staining of the 4-weeks in vivo implanted scaffold revealed the presence of newly synthesized collagen and infiltration of host vasculature. IHC assessment showed expression of osteocalcin and osterix. These results demonstrate the efficacy of the combination of hBM-MSC MTs and biocomposite material as a promising approach for in vivo non-load bearing bone tissue repair for future clinical and various regenerative medicine applications.

DOI: 10.1016/j.colsurfb.2017.10.004
PMID: 29031226

119: Nath D, Arava S, Ray R, Bhoje AK, Saxena R, Chaudhary SK. Familial biatrial cardiac myxoma with glandular elements: A Rare entity with review of literature. Indian J Pathol Microbiol. 2017 Oct-Dec;60(4):568-570. doi: 10.4103/IJPM.IJPM_211_16. PubMed PMID: 29323076.

Cardiac myxomas are benign neoplasm of the heart with an incidence of 0.3%. Glandular cardiac myxomas are very rare and accounts for less than 3% of all cardiac myxomas. Here, we report a case of familial glandular cardiac myxoma in a 35 year old male who complained of exertional dyspneoa and weakness of right side of body on clinical presentation. Associated features of Carney's complex were not present. Family history revealed presence of cardiac myxoma in younger brother and sister. Transthoracic echocardiography detected biatrial myxoma. Excision of both lesions was done under cardiopulmonary bypass. Histopathology confirmed myxoma with glandular elements. Postoperative course was uneventful.

DOI: 10.4103/IJPM.IJPM_211_16
PMID: 29323076

120: Nehate C, Moothedathu Raynold AA, Koul V. ATRP Fabricated and Short Chain Polyethylenimine Grafted Redox Sensitive Polymeric Nanoparticles for Codelivery of Anticancer Drug and siRNA in Cancer Therapy. ACS Appl Mater Interfaces. 2017

Nov 15;9(45):39672-39687. doi: 10.1021/acsami.7b11716. Epub 2017 Oct 31. PubMed PMID: 29048878.

To overcome the limitations of conventional chemotherapy, nanoparticle-mediated combinatorial delivery of siRNA and drugs represents a new approach to overcome its associated side effects. Designing safe and efficient vehicles for their codelivery has emerged as a potential challenge in the clinical translation of these formulations. Herein, we have demonstrated a novel "two-in-one" polyplex nanosystem developed from redox sensitive, short chain polyethylenimine modified poly[(poly(ethylene)glycol methacrylate]-s-s-polycaprolactone copolymer synthesized by atom-transfer free-radical polymerization (ATRP), which can deliver doxorubicin and polo-like kinase I (plk1) siRNA, simultaneously for an enhanced chemotherapeutic effect. The nanoparticles were found to be stable at physiological buffer with and without fetal bovine serum (FBS). The developed polymeric nanosystem was found to be biocompatible and hemocompatible in vitro and in vivo at repeated dose administrations. The polymer could easily self-assemble into ~100 nm spherical nanoparticles with enhanced doxorubicin loading (~18%) and effective siRNA complexation at a polymer to siRNA weight ratio of 15. The doxorubicin loaded nanoparticles exhibited ~4-fold higher drug release in endosomal pH (pH 5) containing 10 mmol of GSH compared to pH 7.4, depicting their redox-sensitive behavior. The polyplexes were capable of delivering both cargos simultaneously to cancer cells in vitro as observed by their excellent colocalization in the cytoplasm of MDA-MB-231 and HeLa cells using confocal laser microscopy. Moreover, in vitro transfection of the cells with polyplexes exhibited 50-70% knockdown of plk1-mRNA expression in both cell lines. In vivo administration of the drug loaded polyplexes to EAT tumor bearing (EAT, Ehrlich ascites tumor) Swiss albino mice showed a ~29-fold decrease in percent tumor volume in comparison to the control group. The results highlight the therapeutic potential of the polyplexes as a combined delivery of doxorubicin and plk1-siRNA in cancer therapy.

DOI: 10.1021/acsami.7b11716
PMID: 29048878

121: 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 [Indexed for MEDLINE]

122: Pal A, Sharan P, Chadda RK. Internalized stigma and its impact in Indian outpatients with bipolar disorder. Psychiatry Res. 2017 Dec;258:158-165. doi: 10.1016/j.psychres.2017.09.087. Epub 2017 Oct 3. PubMed PMID: 29028582.

Patients with many psychiatric disorders have considerable internalized stigma. The current study intended to examine the level and impact of internalized stigma in patients with bipolar affective disorder (BPAD). 60 patients with BPAD, 33 patients with schizophrenia and 30 patients with anxiety disorders were compared on Internalized Stigma of Mental Illness scale and The Stigma Scale. The patients with BPAD were assessed using Rosenberg Self-Esteem Scale (RSES), Participation scale (PS) and World Health Organization Quality Of Life - Brief Version - Hindi (WHOQOL-bref). Significant differences were found in all domains of self-stigma measures among the three groups. Using appropriate covariates, it was found that the differences were significant and independent of the effect of the covariates. In patients of BPAD, stigma and its domains were significantly correlated with the measures on monthly income, education, socio-occupational functioning, RSES, PS and WHOQOL-bref. Patients with BPAD experience substantial stigma, which was intermediate between that experienced by patients with schizophrenia (higher) and that experienced by patients with anxiety disorder (lower). Internalized stigma has significant impact on self-esteem, socio-occupational participation and functioning, and quality of life in patients with BPAD. Small sample size, sample of convenience, and cross-sectional design, limit the generalizability of the results.

DOI: 10.1016/j.psychres.2017.09.087
PMID: 29028582 [Indexed for MEDLINE]

123: 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

124: Pandey A, Verma S, Kumar VL. Metformin maintains mucosal integrity in experimental model of colitis by inhibiting oxidative stress and pro-inflammatory signaling. Biomed Pharmacother. 2017 Oct;94:1121-1128. doi: 10.1016/j.biopha.2017.08.020. Epub 2017 Aug 16. PubMed PMID: 28821163.

Metformin, an antidiabetic drug, is well known for its multifarious properties and its ability to modulate inflammatory cascade. Ulcerative colitis (UC) is an inflammatory condition of the colon where drugs exhibiting anti-inflammatory property have been shown to induce and maintain remission. The objective of the present study was to evaluate the efficacy of metformin against acetic-acid induced colitis in rat. The study included five groups of rats namely normal control, experimental control, drug treated groups (50 and 500mg/kg of metformin, MET50, MET500 and 300mg/kg of mesalazine, MSZ300). Parameters like small intestinal transit and colonic macroscopic changes, ulcer score, weight/length (W/L) ratio, levels of oxidative stress and inflammatory markers, tissue histology and expression of COX-2, iNOS, NFκB(p65) were evaluated. The results of this study show that treatment with metformin significantly decreased colonic mucosal damage, maintained oxidative homeostasis and normalized intestinal transit and W/L ratio in a dose-dependent manner. The restorative effect of metformin on colonic mucosa was accompanied by a marked reduction in the tissue levels of pro-inflammatory mediators and immunoreactivity of COX-2, iNOS and NFκB(p65). Further, its protective effect was found to be comparable to that of mesalazine. This study shows that metformin targets oxidative stress and down regulates transcription factor NFκB(p65) mediated pro-inflammatory signaling and has a therapeutic potential in treating inflammatory conditions of the colon.

DOI: 10.1016/j.biopha.2017.08.020
PMID: 28821163 [Indexed for MEDLINE]

125: Pandey AK, Saroha K, Sharma PD, Patel C, Bal C, Kumar R. Development of a Simple Image Processing Application that Makes Abdominopelvic Tumor Visible on Positron Emission Tomography/Computed Tomography Image. Indian J Nucl Med. 2017 Oct-Dec;32(4):330-332. doi: 10.4103/ijnm.IJNM_66_17. PubMed PMID: 29142351; PubMed Central PMCID: PMC5672755.

Introduction: In this study, we have developed a simple image processing application in MATLAB that uses suprathreshold stochastic resonance (SSR) and helps the user to visualize abdominopelvic tumor on the exported prediuretic

positron emission tomography/computed tomography (PET/CT) images.
Methods: A brainstorming session was conducted for requirement analysis for the program. It was decided that program should load the screen captured PET/CT images and then produces output images in a window with a slider control that should enable the user to view the best image that visualizes the tumor, if present. The program was implemented on personal computer using Microsoft Windows and MATLAB R2013b.
Results: The program has option for the user to select the input image. For the selected image, it displays output images generated using SSR in a separate window having a slider control. The slider control enables the user to view images and select one which seems to provide the best visualization of the area(s) of interest.
Conclusion: The developed application enables the user to select, process, and view output images in the process of utilizing SSR to detect the presence of abdominopelvic tumor on prediuretic PET/CT image.

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PMCID: PMC5672755
PMID: 29142351

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

126: Pandey AK, Sharma PD, Dheer P, Parida GK, Goyal H, Patel C, Bal C, Kumar R. Investigating the Role of Global Histogram Equalization Technique for (99m)Technetium-Methylene diphosphonate Bone Scan Image Enhancement. Indian J Nucl Med. 2017 Oct-Dec;32(4):283-288. doi: 10.4103/ijnm.IJNM_61_17. PubMed PMID: 29142344; PubMed Central PMCID: PMC5672748.

Purpose of the Study: 99mTechnetium-methylene diphosphonate (99mTc-MDP) bone scan images have limited number of counts per pixel, and hence, they have inferior image quality compared to X-rays. Theoretically, global histogram equalization (GHE) technique can improve the contrast of a given image though practical benefits of doing so have only limited acceptance. In this study, we have investigated the effect of GHE technique for 99mTc-MDP-bone scan images.
Materials and Methods: A set of 89 low contrast 99mTc-MDP whole-body bone scan images were included in this study. These images were acquired with parallel hole collimation on Symbia E gamma camera. The images were then processed with histogram equalization technique. The image quality of input and processed images were reviewed by two nuclear medicine physicians on a 5-point scale where score of 1 is for very poor and 5 is for the best image quality. A statistical test was applied to find the significance of difference between the mean scores assigned to input and processed images.
Results: This technique improves the contrast of the images; however, oversaturation was noticed in the processed images. Student's t-test was applied, and a statistically significant difference in the input and processed image quality was found at $P < 0.001$ (with $\alpha = 0.05$). However, further improvement in image quality is needed as per requirements of nuclear medicine physicians.
Conclusion: GHE techniques can be used on low contrast bone scan images. In some of the cases, a histogram equalization technique in combination with some other postprocessing technique is useful.

DOI: 10.4103/ijnm.IJNM_61_17
PMCID: PMC5672748
PMID: 29142344

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

127: Pandey AK, Sharma PD, Kumar JP, Saroha K, Patel C, Bal CS, Kumar R. Calculating Gamma Camera Uniformity Parameters: Beyond the Vendor-specific Protocol. Indian J Nucl Med. 2017 Oct-Dec;32(4):279-282. doi: 10.4103/ijnm.IJNM_67_17. PubMed PMID: 29142343; PubMed Central PMCID: PMC5672747.

Objectives: The aim of this study was to develop and verify a personal computer-based software tool for calculating uniformity indices of gamma camera.
Materials and Methods: The program was developed in MATLAB R2013b under Microsoft Windows operating system. Noise-less digital phantoms with known uniformity parameters were used to verify the accuracy of the program. Two hundred and forty-four Co-57 flood source images were acquired on Symbia T6 and Discovery nuclear medicine/computed tomography 670. The uniformity indices of these images were determined with their respective vendor's software and also by the tool developed. Bland-Altman plots were used for measuring the agreements between the developed program and the vendor's program for the calculation of uniformity indices.
Results: The tool for calculating uniformity indices was found to be accurate. Uniformity indices measured with the tool revealed a very good correlation with vendor's software based on Bland-Altman analysis, as almost all measurements were within the ±2 standard deviation range.
Conclusion: The software tool for calculation of uniformity indices is accurate, and the uniformity indices calculated by it are in agreement with uniformity indices calculated by the vendor's software.

DOI: 10.4103/ijnm.IJNM_67_17
PMCID: PMC5672747
PMID: 29142343

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

128: ---

129: Panwar R, Singh PM. Efficacy and safety of metallic stents in comparison to plastic stents for endoscopic drainage of peripancreatic fluid collections: a meta-analysis and trial sequential analysis. Clin J Gastroenterol. 2017 Oct;10(5):403-414. doi: 10.1007/s12328-017-0763-y. Epub 2017 Jul 18. Review. PubMed PMID: 28721541.

Metallic stents are being increasingly used for endoscopic drainage of peripancreatic fluid collections (PFCs) but their superiority over plastic stents has not been proven. We carried out a meta-analysis to consolidate the results from available studies and to suggest evidence-based recommendations. Studies that compared plastic and metallic stents for endoscopic drainage of PFCs and published before October 2016 were searched. Comparisons were performed for clinical success, adverse events, salvage interventions, mortality, technical success and recurrence. We included six studies with 856 patients (479 in the metallic stent group and 377 in the plastic stent group). The clinical success rate was significantly higher with metallic stents than with plastic stents (Mantel-Haenszel odds ratio [MH-OR] 3.22; 95% CI 1.87-5.54; P < 0.001). The rate of adverse events (MH-OR 0.40; 95% CI 0.24-0.65; P < 0.001) and the need for salvage procedures (MH-OR 0.31; 95% CI 0.13-0.70; P = 0.01) were also significantly lower with the use of metallic stents. Subgroup analysis for the type of PFC also found better results with the metallic stents. The results of Egger's regression test (X-axis intercept at -0.63, P = 0.47) and funnel plot did not suggest any significant publication bias. We conclude that compared to plastic stents, the use of metallic stents for endoscopic drainage of PFCs is associated with significantly better clinical success and significantly lower

rates of adverse events and the need for salvage procedures. However, further high-quality randomized trials are required to confirm these findings.

DOI: 10.1007/s12328-017-0763-y
PMID: 28721541 [Indexed for MEDLINE]

130: Parmar A, Patil V, Sarkar S. Ethical management of substance use disorders: the Indian scenario. Indian J Med Ethics. 2017 Oct-Dec;2(4):265-270. doi: 10.20529/IJME.2017.051. PubMed PMID: 28433964.

Substance use disorders are among the most prevalent and emergent public health problems in India. The treatment of individuals with these disorders is associated with many ethical dilemmas. Due to the pervasiveness of substance use disorders, the majority of mental health professionals working in the area of addiction medicine face several ethical dilemmas. When discussing substance use disorders, it must be borne in mind that there are important differences between India and the western countries in terms of the social and cultural aspects, as well as the legislative framework and healthcare delivery system. In this paper, we discuss the common ethical dilemmas that practitioners of addiction medicine face when dealing with patients with substance use disorders. We use the principlist approach defined by the four ethics principles - autonomy, beneficence, nonmaleficence and justice - to deliberate upon these dilemmas and how they may be resolved. Further, we emphasise the need to sensitise practitioners to the importance of giving due consideration to the ethical aspects in their clinical work..

DOI: 10.20529/IJME.2017.051
PMID: 28433964 [Indexed for MEDLINE]

131: Patel D, Tandon R, Ganger A, Vij A, Lalwani S, Kumar A. Study of death to preservation time and its impact on utilisation of donor corneas. Trop Doct. 2017 Oct;47(4):365-370. doi: 10.1177/0049475517713406. Epub 2017 Jun 13. PubMed PMID: 28610538.

To evaluate the impact of death-to-preservation time (DPT) on effective utilisation of donor corneas. In a prospective observational study conducted at our tertiary eye centre, donated corneas received over a 15-month period from November 2011 to January 2013 were evaluated. Donor age, donor refrigeration (done or not), DPT, endothelial cell density (ECD), corneal grading, clinical utilisation and surgical outcome after graft transplantation were noted. To analyse the impact of different DPT on donor cornea transplantation, primary outcome measures (corneal grading and endothelial cell density) and secondary outcome measures (primary graft failure and graft infection) were analysed. A total of 990 corneas were assessed. Primary outcomes showed no significant difference for higher DPT ($P > 0.01$). ECD, where DPT was >12 h, was better for refrigerated corneas ($P < 0.001$). Prolonged DPT had no significant effect on primary graft failure ($P = 0.131$) and graft infection ($P = 0.137$) in the first month after transplantation. We find that DPT should not be the only criteria to assess the cornea quality; other donor characteristics should be considered equally important. Donor refrigeration should be encouraged in cases where early retrieval is not possible.

DOI: 10.1177/0049475517713406
PMID: 28610538 [Indexed for MEDLINE]

132: Patra S, Gupta V, Kumar R, Verma KK. Clinical and radiological improvement in idiopathic calcinosis cutis with topical 25% sodium metabisulfite. Int J

Dermatol. 2017 Dec;56(12):1464-1465. doi: 10.1111/ijd.13789. Epub 2017 Oct 26. PubMed PMID: 29076152.

133: Patwardhan V, Kumar D, Goel V, Singh S. Changing prevalence and antibiotic drug resistance pattern of pathogens seen in community-acquired pediatric urinary tract infections at a tertiary care hospital of North India. J Lab Physicians. 2017 Oct-Dec;9(4):264-268. doi: 10.4103/JLP.JLP_149_16. PubMed PMID: 28966488; PubMed Central PMCID: PMC5607755.

AIMS AND OBJECTIVES: The aim and objective of this study was to assess the temporal changes in the microbiological profiles and antimicrobial resistance patterns of uropathogens in pediatric community-acquired UTI.
MATERIALS AND METHODS: This is a retrospective analysis of data collected over a Scattered period of 5 years. The baseline data collected were from January to December 2009, and the second period considered for comparison was from January to December 2014. Urine specimens from children (<17 years) suspected of UTI were cultured by a semi-quantitative method on cysteine lactose electrolyte-deficient medium. Antibiotic sensitivity was put up by Kirby-Bauer disc diffusion method as per the Clinical and Laboratory Standard Institute guidelines.
RESULTS: In the year 2009, 340 of 2104 (16.15%) urine specimens yielded significant colony count, whereas in 2014, it was 407 of 2212 (18.39%) (P = 0.051). Escherichia coli was the predominant pathogen and was significantly more prevalent in girls than in boys (P < 0.0001) during both periods. There was a significant overall increase in resistance to ampicillin (from 40.29% to 58.72%), amoxyclav (from 26.17% to 40.54%), nitrofurantoin (from 28.82% to 39.06%), and norfloxacin (from 30% to 41.42%). However, the maximum increase in the resistance was noted for co-trimoxazole from 35.58% in 2009 to 63.39% in 2014 (P = 0.0000058). The prevalence of extended-spectrum beta-lactamases (ESBLs) has also significantly increased from 21.7% to 33.16% (P = 0.0045).
CONCLUSION: Although E. coli remains the prime pathogen in pediatric UTI, the prevalence of resistance has dramatically increased over the 5-year study period. Our study highlights the emergence of community-acquired ESBL-producing uropathogens in children proclaiming treatment challenges.

DOI: 10.4103/JLP.JLP_149_16
PMCID: PMC5607755
PMID: 28966488

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

134: Phalak M, Das S, Singh M, Sharma BS. Unusual cause of lumbar canal stenosis in 8(th) decade of life - Spinal epidural lipomatosis. J Craniovertebr Junction Spine. 2017 Oct-Dec;8(4):382-383. doi: 10.4103/jcvjs.JCVJS_103_15. PubMed PMID: 29403255; PubMed Central PMCID: PMC5763600.

Spinal Epidural lipomatosis (SEL) is an uncommon condition, usually presents in young and middle aged patients, with male preponderance. Idiopathic SEL is rare, particularly in 8th decade of life. SEL should also be considered as a differential diagnosis in approach of elderly patient presenting with lumbar canal stenosis. Such a case of 77 year old man is presented here.

DOI: 10.4103/jcvjs.JCVJS_103_15
PMCID: PMC5763600
PMID: 29403255

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

135: Prabhakar H, Mahajan C, Kapoor I. Anesthesia for minimally invasive neurosurgery. Curr Opin Anaesthesiol. 2017 Oct;30(5):546-550. doi: 10.1097/ACO.0000000000000499. Review. PubMed PMID: 28682827.

PURPOSE OF REVIEW: With an ultimate aim of improving patients overall outcome and satisfaction, minimally invasive surgical approach is becoming more of a norm. The related anesthetic evidence has not expanded at the same rate as surgical and technological advancement. This article reviews the recent evidence on anesthesia and perioperative concerns for patients undergoing minimally invasive neurosurgery.
RECENT FINDINGS: Minimally invasive cranial and spinal surgeries have been made possible only by vast technological development. Points of surgical interest can be precisely located with the help of stereotaxy and neuronavigation and special endoscopes which decrease the tissue trauma. The principles of neuroanethesia remain the same, but few concerns are specific for each technique. Dexmedetomidine has a favorable profile for procedures carried out under sedation technique. As the new surgical techniques are coming up, lesser known anesthetic concerns may also come into light.
SUMMARY: Over the last year, little new information has been added to existing literature regarding anesthesia for minimally invasive neurosurgeries. Neuroanesthesia goals remain the same and less invasive surgical techniques do not translate into safe anesthesia. Specific concerns for each procedure should be taken into consideration.

DOI: 10.1097/ACO.0000000000000499
PMID: 28682827 [Indexed for MEDLINE]

136: Priyadarshini P, Singh VP, Aggarwal S, Garg H, Sinha S, Guleria R. Impact of bariatric surgery on obstructive sleep apnoea-hypopnea syndrome in morbidly obese patients. J Minim Access Surg. 2017 Oct-Dec;13(4):291-295. doi: 10.4103/jmas.JMAS_5_17. PubMed PMID: 28872099; PubMed Central PMCID: PMC5607797.

BACKGROUND: Obstructive sleep apnea (OSA) is commonly associated with morbid obesity. Weight loss following bariatric surgery results in resolution or improvement of OSA. However, few studies have done objective assessment of the impact of bariatric surgery on OSA.
OBJECTIVE: The aim of this study was to assess the outcome of bariatric surgery on OSA.
SETTING: The study was conducted in the teaching institution of a tertiary care centre.
METHODS: Twenty-seven morbidly obese patients seeking bariatric surgery were administered Epworth Sleepiness Scale (ESS) health questionnaire and subjected to overnight polysomnography. Repeat assessment using ESS and polysomnography was done at 3-6 months after surgery.
RESULTS: Mean age was 42.4 ± 10.5 years, and majority (77.8%) were female. The mean pre-operative weight and body mass index (BMI) were 126.4 ± 24.9 kg and 48.4 ± 8.2 kg/m2, respectively. Nearly 29.6% patients had symptoms of excessive daytime somnolence based on ESS score and overnight polysomnography detected the presence of OSA in 96.3% patients, of which 51.9% had severe OSA. At mean follow-up of 5.2 ± 2.5 months after surgery, mean weight and BMI decreased to 107.4 ± 24.5 kg and 41.2 ± 8.2 kg/m2, respectively. Mean ESS score and mean apnoea-hypopnea index declined from 8.9 ± 3.2 to 4.03 ± 2.15 ($P < 0.001$) and from 31.8 ± 20.4 to 20.2 ± 23.1 ($P = 0.007$), respectively. Number of patients requiring continuous positive airway pressure (CPAP) therapy declined from 15 to 3 and average CPAP requirement came down from 11.3 cm of H2O to 6 cm of H2O.
CONCLUSION: OSA was present in a significant proportion of patients undergoing

bariatric surgery. Bariatric surgery resulted in significant improvement in both subjective and objective parameters of OSA.

DOI: 10.4103/jmas.JMAS_5_17
PMCID: PMC5607797
PMID: 28872099

137: Pujari A, Temkar S, Singh R, Urkude J. Child with hypopyon. BMJ Case Rep. 2017 Oct 20;2017. pii: bcr-2017-221834. doi: 10.1136/bcr-2017-221834. PubMed PMID: 29054898.

138: Punia H, Gathwala G, Dhaulakhandi DB, Aamir M. Diagnosis of neonatal sepsis using 16S rRNA polymerase chain reaction. Trop Doct. 2017 Oct;47(4):336-339. doi: 10.1177/0049475517701875. Epub 2017 Apr 14. PubMed PMID: 28409532.

The gold standard for detecting bacterial sepsis is blood culture. However, the sensitivity of blood culture is low and the results take 48-72 h. Molecular assays for the detection of bacterial DNA permit early detection of a bacterial cause as the turnaround time is 6-8 h. We undertook an evaluation of the performance of universal bacterial primer (16S rRNA) polymerase chain reaction (PCR) in the diagnosis of neonatal sepsis at a tertiary care medical college teaching hospital. 16S rRNA PCR was positive in all cases of blood culture proven sepsis. PCR revealed 95.6% sensitivity, 100% specificity, 100% positive predictive value and 91.2% negative predictive value and so appears to be a useful tool for the early diagnosis of bacterial neonatal sepsis.

DOI: 10.1177/0049475517701875
PMID: 28409532 [Indexed for MEDLINE]

139: Raheja A, Karsy M, Eli I, Guan J, Couldwell WT. Endonasal Operative Corridor Expansion by Sphenoidal Pneumosinus Dilatans in Tuberculum Sellae Meningiomas. World Neurosurg. 2017 Oct;106:686-692. doi: 10.1016/j.wneu.2017.07.050. Epub 2017 Jul 19. PubMed PMID: 28735137.

BACKGROUND: A retrospective cohort study of patients with tuberculum sellae meningioma (TSM)-associated sphenoidal pneumosinus dilatans (PSD) over a recent epoch was evaluated using a propensity-matched morphometric analysis.
METHODS: A total of 38 patients with TSM and sphenoidal PSD were identified and matched by age and sex to 32 patients without tumors (controls).
RESULTS: Overall, no significant difference between test and control groups was noted in sphenoid sinus size or other parameters; however, significantly greater mean distances from the posterior margin of the planum sphenoidale to the diaphragma sella (0.76 ± 0.23 vs. 1.03 ± 0.27, respectively; P = 0.0001) and angle between the planum sphenoidale to anterior face of sella turcica (113.41 ± 10.58 vs. 123.21 ± 12.55, respectively; P = 0.001) were seen in patients with TSM and PSD, suggestive of a selective expansion of the tuberculum sellae region. TSM/sphenoid sinus morphologies were divided into 3 types (A, B, and C) based on the extent of tumor and sinus morphology. There was progressive increase in tumor volume and anteroposterior sinus diameter from sphenoidal PSD types A-C, which influenced selection of surgical approach.
CONCLUSIONS: This study suggests that TSM-associated sphenoidal PSD leads to more selective splaying of the tuberculum sellae region rather than cumulative increase in sinus volume. This may lead to operative corridor expansion for endonasal access to TSM associated with sphenoidal PSD. A radiologic classification scheme for sphenoidal PSD associated with TSM is suggested that may aid surgical decision-making.

DOI: 10.1016/j.wneu.2017.07.050
PMID: 28735137 [Indexed for MEDLINE]

140: Rai N, Kothari SS. Recurrent prosthetic heart valve thrombosis secondary to eosinophilia: a missed diagnosis. BMJ Case Rep. 2017 Oct 3;2017. pii: bcr-2017-221313. doi: 10.1136/bcr-2017-221313. PubMed PMID: 28974508.

Prosthetic heart valve thrombosis (PHVT) is a major cause of morbidity and mortality in patients with mechanical heart valves. We present a case of recurrent PHVT associated with eosinophilia. A 17-year-old girl underwent aortic and mitral valve replacement for rheumatic heart disease. Over a period of 4 years, she had four episodes of PHVT despite oral anticoagulation with adequate INR. Her investigations revealed eosinophilia which was missed during the previous episodes. No further episodes of PHVT occurred after treatment of eosinophilia with steroids on limited follow-up.

DOI: 10.1136/bcr-2017-221313
PMID: 28974508 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

141: Rao J, Ashraf S, Tan W, van der Ven AT, Gee HY, Braun DA, FehÃ©r K, George SP, Esmaeilniakooshkghazi A, Choi WI, Jobst-Schwan T, Schneider R, Schmidt JM, Widmeier E, Warejko JK, Hermle T, Schapiro D, Lovric S, Shril S, Daga A, Nayir A, Shenoy M, Tse Y, Bald M, Helmchen U, Mir S, Berdeli A, Kari JA, El Desoky S, Soliman NA, Bagga A, Mane S, Jairajpuri MA, Lifton RP, Khurana S, Martins JC, Hildebrandt F. Advillin acts upstream of phospholipase C Ïµ1 in steroid-resistant nephrotic syndrome. J Clin Invest. 2017 Dec 1;127(12):4257-4269. doi: 10.1172/JCI94138. Epub 2017 Oct 23. PubMed PMID: 29058690; PubMed Central PMCID: PMC5707164.

Steroid-resistant nephrotic syndrome (SRNS) is a frequent cause of chronic kidney disease. Here, we identified recessive mutations in the gene encoding the actin-binding protein advillin (AVIL) in 3 unrelated families with SRNS. While all AVIL mutations resulted in a marked loss of its actin-bundling ability, truncation of AVIL also disrupted colocalization with F-actin, thereby leading to impaired actin binding and severing. Additionally, AVIL colocalized and interacted with the phospholipase enzyme PLCE1 and with the ARP2/3 actin-modulating complex. Knockdown of AVIL in human podocytes reduced actin stress fibers at the cell periphery, prevented recruitment of PLCE1 to the ARP3-rich lamellipodia, blocked EGF-induced generation of diacylglycerol (DAG) by PLCE1, and attenuated the podocyte migration rate (PMR). These effects were reversed by overexpression of WT AVIL but not by overexpression of any of the 3 patient-derived AVIL mutants. The PMR was increased by overexpression of WT Avil or PLCE1, or by EGF stimulation; however, this increased PMR was ameliorated by inhibition of the ARP2/3 complex, indicating that ARP-dependent lamellipodia formation occurs downstream of AVIL and PLCE1 function. Together, these results delineate a comprehensive pathogenic axis of SRNS that integrates loss of AVIL function with alterations in the action of PLCE1, an established SRNS protein.

DOI: 10.1172/JCI94138
PMCID: PMC5707164
PMID: 29058690

142: Rathi A, Takkar B, Sharma N. Sclerokeratouveitis and lens dislocation in a patient with genital ulcer: was the great imitator imitated? BMJ Case Rep. 2017 Oct 4;2017. pii: bcr-2017-221668. doi: 10.1136/bcr-2017-221668. PubMed PMID: 28978606.

Uveitis is the most common ocular manifestation of syphilis, while scleritis is rare. A case of nodular scleritis, peripheral keratitis and uveitis in a patient with genital ulcer is presented in this report. This patient had a clinical profile suggestive of syphilis, though the serology was negative for treponemal antibodies. Other possible differential diagnosis imitating syphilis are discussed.

DOI: 10.1136/bcr-2017-221668
PMID: 28978606 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

143: Rathi A, Takkar B, Venkatesh P, Gaur N, Kumar A. Ultrasonographic evaluation of transition from normal to ectatic area: A comparison between myopic staphylomata and coloboma. Indian J Ophthalmol. 2017 Oct;65(10):1030-1032. doi: 10.4103/ijo.IJO_415_17. PubMed PMID: 29044079; PubMed Central PMCID: PMC5678307.

Choroidal coloboma and posterior staphyloma are two clinically distinct entities, with choroidal excavation being a unifying feature. They are associated with early onset cataract which can make ophthalmoscopy difficult. This report studies the transition between the normal and ectatic area in these cases with ultrasound. We evaluate "posterior hump" as a sign of differentiation between these two conditions.

DOI: 10.4103/ijo.IJO_415_17
PMCID: PMC5678307
PMID: 29044079 [Indexed for MEDLINE]

144: Razik A, Madhusudhan KS, Aggarwal A, Panwar R, Srivastava DN. Gastrointestinal Stromal Tumor of the Jejunum With Active Bleeding Demonstrated on Dual-Energy MDCT Angiography: A Case Report. Curr Probl Diagn Radiol. 2017 Oct 31. pii: S0363-0188(17)30271-2. doi: 10.1067/j.cpradiol.2017.10.008. [Epub ahead of print] PubMed PMID: 29169676.

Gastrointestinal stromal tumor (GIST) is the most common mesenchymal tumor of the gastrointestinal tract and may occasionally present with acute gastrointestinal bleed (GIB). Multidetector computed tomography (MDCT) angiography is extremely useful in demonstrating the tumor as well as the presence of active hemorrhage, thereby guiding subsequent interventional or surgical management. We report a case of a 38-year-old man who presented with acute-onset melena and compensated shock, whose source of bleed remained elusive on endoscopy. MDCT angiography performed on a dual-energy scanner showed a jejunal tumor with active intraluminal contrast extravasation. The tumor was subsequently resected and the

patient did well on follow-up. This was one of the few instances when MDCT angiography demonstrated active bleeding in a GIST and the first such case demonstrated on a dual-energy scanner.

DOI: 10.1067/j.cpradiol.2017.10.008
PMID: 29169676

145: Sachdev HS, Sinha S, Sareen N, Pandey RM, Kapil U. Survival and Recovery in Severely Wasted Under-five Children Without Community Management of Acute Malnutrition Programme. Indian Pediatr. 2017 Oct 15;54(10):817-824. Epub 2017 Jul 11. PubMed PMID: 28699610.

OBJECTIVE: To evaluate recovery and survival of severely wasted children without community management of acute malnutrition programme.
DESIGN: Single time point follow-up (24th December 2013 - 2nd April, 2014) of severely wasted children identified in a community-based cross-sectional survey (September 2012 - October 2013).
SETTING: Rural Meerut District, Uttar Pradesh, India.
PARTICIPANTS: 409 severely wasted (WHO weight-for-height <-3Z), 6- to 59-month-old children.
OUTCOME MEASURES: Survival and recovery (weight-for-height ≥-2Z).
RESULTS: Median (IQR) follow-up contact duration was 7.4 (6.6, 10.1) months. Among 11 deaths, there were 5 (case-fatality 1.2%), 6 (1.5%), 8 (2.0%) and 10 (2.4%) events within 1, 1.5, 4 and 6 months of enrolment, respectively. Ten deaths occurred in children aged between 6 and 24 months. Younger age (P=0.04), poorer household-head occupation (P=0.04) and lower enrolment anthropometry (any variable; P<0.001) were significant predictors of mortality. Children below 18 months of age had higher adjusted mortality risk (HR 4.7; 95% CI 0.95, 22.51; P=0.053). At follow-up, 30% of survivors were still severely wasted, 39% were moderately wasted (weight-for-height -3 to <-2Z) and 31% had recovered spontaneously. Younger age (P<0.001), female gender (P=0.04) and longer follow-up duration (P=0.003) were significant independent predictors of recovery. The adjusted OR (95% CI) for recovery <24 months was 2.81 (1.70, 4.65).
CONCLUSION: Without community management of acute malnutrition in rural Meerut District, severely wasted children had low (1.2%-2.7%) case-fatality with long-term spontaneous recovery of around 25-30%.

PMID: 28699610 [Indexed for MEDLINE]

146: Sahay P, Maharana PK, Sharma N, Titiyal JS. Post laser-assisted in situ keratomileusis keratomycotic malignant glaucoma. BMJ Case Rep. 2017 Oct 13;2017. pii: bcr-2017-222525. doi: 10.1136/bcr-2017-222525. PubMed PMID: 29030369.

We report a case of a 24-year-old male patient with post-laser assisted in situ keratomileusis (LASIK) culture-proven mycotic keratitis who developed pupillary block glaucoma on day 19 of medical management. The case was initially managed with multiple Nd-Yag peripheral iridotomy along with systemic and topical antiglaucoma medications. However, an emergency therapeutic penetrating keratoplasty (TPK) with lens extraction was done in view of persistently raised intraocular pressure (IOP) and seclusio pupillae. On postoperative day 1, IOP was 10 mm Hg with graft clarity 2 plus and deep anterior chamber with no evidence of residual infection or recurrence. Pupillary block glaucoma can occur in cases of post-LASIK mycotic keratitis, which may necessitate emergency TPK.

DOI: 10.1136/bcr-2017-222525
PMID: 29030369 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

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

148: Sakthivel P, Singh CA. Torus mandibularis. Pan Afr Med J. 2017 Oct 25;28:177. doi: 10.11604/pamj.2017.28.177.14038. eCollection 2017. PubMed PMID: 29541323; PubMed Central PMCID: PMC5847250.

149: Sankar J, Ismail J, Sankar MJ, C P S, Meena RS. Fluid Bolus Over 15-20 Versus 5-10 Minutes Each in the First Hour of Resuscitation in Children With Septic Shock: A Randomized Controlled Trial. Pediatr Crit Care Med. 2017 Oct;18(10):e435-e445. doi: 10.1097/PCC.0000000000001269. PubMed PMID: 28777139.

OBJECTIVES: To compare the effect of administration of 40-60 mL/kg of fluids as fluid boluses in aliquots of 20 mL/kg each over 15-20 minutes with that over 5-10 minutes each on the composite outcome of need for mechanical ventilation and/or impaired oxygenation-increase in oxygenation index by 5 from baseline in the initial 6 and 24 hours in children with septic shock.
DESIGN: Randomized controlled trial.
SETTING: Pediatric emergency and ICU of a tertiary care institute.
PATIENTS: Children (< 18 yr old) with septic shock.
INTERVENTIONS: We randomly assigned participants to 15-20 minutes bolus (study group) or 5-10 minutes bolus groups (control group).
MEASUREMENTS AND MAIN RESULTS: We assessed the composite outcomes in the initial 6 and 24 hours after fluid resuscitation in both groups. We performed logistic regression to evaluate factors associated with need for ventilation in the first hour. Data were analyzed using Stata 11.5. Of the 96 children, 45 were randomly assigned to "15-20 minutes group" and 51 to "5-10 minutes group." Key baseline characteristics were not different between the groups. When compared with 5-10 minutes group, fewer children in 15-20 minutes group needed mechanical ventilation or had an increase in oxygenation index in the first 6 hours (36% vs 57%; relative risk, 0.62; 95% CI, 0.39-0.99) and 24 hours (43% vs 68%; relative risk, 0.63; 95% CI, 0.42-0.93) after fluid resuscitation. We did not find any difference in secondary outcomes such as death (1.2; 0.70-2.03), length of stay (mean difference: 0.52; -1.72 to 2.7), or resolution of shock (0.98; 0.63-1.53).
CONCLUSION: Children receiving fluid boluses over 5-10 minutes each had a higher risk of intubation than those receiving boluses over 15-20 minutes each. Notwithstanding the lack of difference in risk of mortality and the possibility that a lower threshold of intubation and mechanical ventilation was used in the presence of fluid overload, our results raise concerns on the current recommendation of administering boluses over 5-10 minutes each in children with septic shock.

DOI: 10.1097/PCC.0000000000001269
PMID: 28777139 [Indexed for MEDLINE]

150: 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 [Indexed for MEDLINE]

151: Sardar A, Prasad G, Arora MK, Kashyap L. Comparison of Efficacy of Oral versus Regional Clonidine for Postoperative Analgesia following Ilioinguinal/iliohypogastric Block in Children: A Prospective, Randomized, Double-blinded, Placebo-controlled Study. Anesth Essays Res. 2017 Oct-Dec;11(4):892-897. doi: 10.4103/aer.AER_152_17. PubMed PMID: 29284845; PubMed Central PMCID: PMC5735484.

Background: Clonidine improves quality and prolongs the duration of analgesia in ilioinguinal/iliohypogastric nerve block when given along with local anesthetic and as well as premedication. The objective of this study was to compare the efficacy of oral and regional clonidine for postoperative analgesia in pediatric population after ilioinguinal/iliohypogastric block.
Materials and Methods: Sixty children aged between 1 and 8 years scheduled for elective hernia surgery were randomly allocated to three groups. Group I received oral midazolam and regional bupivacaine, Group II received oral midazolam with oral clonidine and regional bupivacaine, and Group III received oral midazolam and regional clonidine with bupivacaine. Preoperative sedation and separation score and postoperative duration and quality of analgesia, analgesic need, sedation score, and side effects of clonidine were assessed up to 6 h, postoperatively.
Results: Duration of analgesia was prolonged in Group II (2.83 ± 2.01 h) and Group III (4.43 ± 2.29 h) compared to Group I (3.98 ± 2.58 h), but the difference

was not statistically significant (P = 0.161). Analgesic requirement was comparable between all the groups intraoperatively (P = 0.708) and postoperatively (P = 0.644). Group II had better parental separation (P < 0.001) and sedation score (P < 0.001) compared to Group I and III. Postoperatively, patients of Group II and III were more sedated compared to Group I up to 120 min. Adverse effects of clonidine were equally distributed in all the groups. Conclusion: Both oral and regional clonidine was equally efficacious in prolongation of duration and quality of analgesia. Oral clonidine produces better preoperative sedation and parenteral separation which is an added advantage in pediatric population.

DOI: 10.4103/aer.AER_152_17
PMCID: PMC5735484
PMID: 29284845

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

152: Sarin K, Chauhan S, Bisoi AK, Kapoor PM, Gharde P, Choudhury A. Relationship between perioperative left atrial appendage doppler velocity estimates and new-onset atrial fibrillation in patients undergoing coronary artery bypass graft surgery with cardiopulmonary bypass. Ann Card Anaesth. 2017 Oct-Dec;20(4):403-407. doi: 10.4103/aca.ACA_73_17. PubMed PMID: 28994674; PubMed Central PMCID: PMC5661308.

BACKGROUND: Literature search reveals that postoperative atrial fibrillation (POAF) occurs in 15%-40% of coronary artery bypass graft (CABG) patients. Although several risk models exist for predicting the development of POAF, few have studied left atrial appendage (LAA) velocity. We hypothesize that an association between LAA velocity and development of POAF exists.
DESIGN AND METHODS: Single institution university hospital prospective observational clinical study performed between May 2016 and November 2016 in 96 adult patients undergoing CABG surgery utilizing cardiopulmonary bypass (CPB). Transesophageal echocardiography was performed perioperatively to measure LAA velocity and left atrial (LA) size after anesthetic induction, post-CPB and during the postoperative period before extubation. Student's t-test was used for inter-group comparisons. Data are expressed as mean ± (standard deviation). The value of P < 0.05 was considered statistically significant.
RESULTS: A total of 95 patients (69 males and 26 females) completed the study and were included in the final analysis. Of these, 21 (22%) (15 males and 5 females) developed POAF. The patient group which developed POAF was compared with the group that did not develop POAF. On comparing mean age of patients in each group (59 years in patients with no POAF and 63.71 years in patients with POAF, P = 0.04). LA volume indexed in POAF group (34.13 ml/m2) compared with that in group with no POAF (34.82 ml/m2) resulted in P = 0.04. Mean LAA velocities (pre-CPB, post-CPB, postoperative Intensive Care Unit) in group with no POAF were 41.06, 56.33, and 60.44 cm/s, respectively, whereas in the other group with POAF the values were 39.68, 55.04, and 58.09 cm/s, respectively. No statistical significance was noted (P > 0.05). Comparison of comorbidities also did not yield any significant results (P > 0.05).
CONCLUSIONS: Decreasing LAA velocity does not appear to independently predict the development of POAF in patients undergoing CABG surgery with the use of CPB. There is, however, a positive correlation of POAF with age and LA volume.

DOI: 10.4103/aca.ACA_73_17
PMCID: PMC5661308
PMID: 28994674 [Indexed for MEDLINE]

153: Satija A, Bhatnagar S. Complementary Therapies for Symptom Management in Cancer Patients. Indian J Palliat Care. 2017 Oct-Dec;23(4):468-479. doi: 10.4103/IJPC.IJPC_100_17. PubMed PMID: 29123357; PubMed Central PMCID: PMC5661353.

Cancer patients are often poly-symptomatic which distressingly affects their quality of lives (QOLs). Alhough, conventional management provides adequate symptom control, yet is coupled with some limitations. Complementary therapies (CTs) have shown beneficial effects in cancer patients for symptomatic relief. The aim of this article is to provide evidence-based review of commonly used CTs for symptom management in cancer care. Hypnosis has promising evidence to be used for managing symptoms such as pain, chemotherapy-induced nausea/vomiting, distress, fatigue, and hot flashes. Guided imagery increases comfort and can be used as a psycho-supportive therapy. Meditation substantially improves psychological function, mental health, and QOL. Cognitive behavioral therapies effectively reduce pain, distress, fatigue, anxiety, and depression; and improve subjective sleep outcomes along with mood and QOL. Yoga has short term beneficial effects for anxiety, depression, fatigue, perceived stress, QOL, and well-being. T'ai Chi and qigong are beneficial adjunctive therapies for supportive cancer care, but their role in reducing cancer pain is not well proven. Acupuncture is effective for reducing treatment related side-effects, pain and fatigue. Other therapies such as massage techniques, energy therapies, and spiritual interventions have also demonstrated positive role in managing cancer-related symptoms and improve overall well-being. However, the clinical effectiveness of these therapies for symptom management in cancer patients cannot be concluded due to poor strength of evidence. Nonetheless, these are relatively free from risks and hence can be given along with conventional treatments. Only by tailoring these therapies as per patient's beliefs and preferences, optimal patient-centered holistic care can be provided.

DOI: 10.4103/IJPC.IJPC_100_17
PMCID: PMC5661353
PMID: 29123357

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

154: Satyarthee GD, Chandra PS, Sharma BS, Mehta VS. Comparison of Stereotactic and Ultrasound-guided Biopsy of Solid Supratentorial Tumor: A Preliminary Report. Asian J Neurosurg. 2017 Oct-Dec;12(4):664-669. doi: 10.4103/1793-5482.215765. PubMed PMID: 29114280; PubMed Central PMCID: PMC5652092.

Introduction: The computed tomography (CT) guided stereotactic biopsy (STB) is considered as method of choice for biopsy of intracranial mass lesions. However, it's disadvantages are frame fixation, time requirement for transportation between CT scan suit to the operation theater with added much higher equipment cost in the relatively resource scarred developing country. Ultrasound-guided biopsy (USGB) is relatively simpler, economical, less time consuming, and real-time procedure.
Clinical Materials and Methods: Thirty-seven consecutively admitted patients with supratentorial brain tumors, who underwent biopsy of the lesion using CT compatible stereotactic and ultrasound-guided (USGB) procedure formed cohort of the study. Based on location and size of the lesions, the cases were divided into two groups, superficial and deep. Twenty-two patients underwent ultrasound-guided biopsy and 15 with STB.
Results: The diagnostic yield of STB was 93% and 91% for ultrasound-guided biopsy. The mean operation time of STB group was 149.00 min and 94 min for USGB, which was statistically significant. Two cases in each group developed hematoma;

however, one case in USGB group needed surgical evacuation. The real-time monitoring detected two hematoma intraoperatively, which were further also confirmed on postoperative CT scan head.
Conclusions: The ultrasound-guided biopsy procedure (USGB) was simple, relatively shorter time-consuming procedure and equally efficacious and utilizing economical equipment and can act as a safer alternative to CT STB process for biopsy of the intracranial mass lesion. Furthermore, USGB also provided intra-operative real-time monitoring, which provided clue for close monitoring in the postoperative period after completion of biopsy to look for development of fresh hematoma development not only at the biopsy site but also along the biopsy track and adjoining area. Perhaps, a longer period of ultrasonic monitoring following the procedure would be of greater help to detect hematoma formation, which is one of the most common complications of the biopsy procedure.

DOI: 10.4103/1793-5482.215765
PMCID: PMC5652092
PMID: 29114280

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

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

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

DOI: 10.1111/add.14034
PMID: 28921778

156: Selvan H, Patil M, Yadav S, Tandon R. Triple chamber: a clinical rarity after deep anterior lamellar keratoplasty and role of optical coherence tomography in management. Int Ophthalmol. 2017 Oct 30. doi: 10.1007/s10792-017-0755-4. [Epub ahead of print] PubMed PMID: 29086324.

PURPOSE: To report a case demonstrating triple chamber following deep anterior lamellar keratoplasty (DALK) and its successful intra-operative optical coherence tomography-guided management.
METHOD: Case report of a young male with macular corneal dystrophy, who underwent DALK in his left eye by Big-Bubble technique. The surgery was uneventful. On the first post-operative day, triple chamber was observed and followed-up with serial clinical photography and anterior segment optical coherence tomography. Due to decrease in graft clarity and increase in volume of the two extra chambers, interface drainage along with descemetopexy was undertaken 4 days later.
RESULT: The compartments constituting the triple chamber were those in-between the donor tissue and host pre-Descemet layer (Dua's layer), the latter and host Descemet membrane and the true anterior chamber. Presence of viscoelastic in the interface was identified as the cause. Microscope integrated optical coherence tomography (MiOCT) guided drainage followed by intracameral air tamponade ensured near total disappearance of the two extra chambers at the end of surgery. Examination on the next day confirmed complete apposition of the graft and host.
CONCLUSION: To the best of our knowledge, this is a unique demonstration of Dua's layer in vivo by slit lamp biomicroscopy and description of MiOCT guided management of triple chamber.

DOI: 10.1007/s10792-017-0755-4
PMID: 29086324

157: Seth R, Singh A, Guru V, Chawla B, Pathy S, Sapra S. Long-term follow-up of retinoblastoma survivors: Experience from India. South Asian J Cancer. 2017 Oct-Dec;6(4):176-179. doi: 10.4103/sajc.sajc_179_16. PubMed PMID: 29404299; PubMed Central PMCID: PMC5763631.

Background: Retinoblastoma (Rb) is the most common primary intraocular tumor of infancy and childhood. Survivors' ocular and visual problems and increased risk for subsequent malignancy are well documented, but data on long-term health status of Rb survivors are limited, this being particularly true for India.
Methodology: Children who had completed treatment for Rb at least 2 years ago before and were under follow-up at the after cancer treatment clinic were evaluated.
Results: In our series of 213 patients, the median age was 29 months, there was a male preponderance, and majority had unilateral disease. Enucleation was done in almost three-fourth and 3% underwent bilateral enucleation. Majority of the patients received chemotherapy, and few received radiation. Growth was affected in about one-third and majority were those who had received radiation. Diminished vision was noticed in about one-sixth. Orbital hypoplasia and contracted socket were seen in 14.1% cases. 2.7% were hearing impaired. About one-sixth had a global intelligence delay. Second neoplasms were seen in 0.01%. No other abnormalities were seen.
Conclusions: Common late effects in our Rb survivors include diminished vision in the salvage eye, intellectual disability, and contracted socket; there is a need

for timely institution of prosthesis to avoid late effects such as hypoplasia, contracted sockets, and better cosmesis and enhanced self-esteem. Second neoplasm is a concern. Lifelong follow-up and counseling of a healthy lifestyle are needed for Rb survivors.

DOI: 10.4103/sajc.sajc_179_16
PMCID: PMC5763631
PMID: 29404299

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

158: Shalimar, Gamanagatti SR, Patel AH, Kedia S, Nayak B, Gunjan D, Ranjan G, Paul SB, Acharya SK. Long-term outcomes of transjugular intrahepatic portosystemic shunt in Indian patients with Budd-Chiari syndrome. Eur J Gastroenterol Hepatol. 2017 Oct;29(10):1174-1182. doi: 10.1097/MEG.0000000000000945. PubMed PMID: 28763339.

BACKGROUND/AIM: Transjugular intrahepatic portosystemic shunt (TIPS) is the treatment of choice in Budd-Chiari syndrome (BCS) based on current data. Our objective was to evaluate outcomes and assess prognostic factors in BCS patients undergoing TIPS.
PATIENTS AND METHODS: In this retrospective analysis of a propectively maintained database, all consecutive BCS patients undergoing TIPS from September 2010 to February 2017 were included. Complete response after TIPS was defined as resolution of symptoms (ascites/pedal edema) with no requirement of diuretics at the end of 4 weeks. The Cox proportional hazard regression model was used to assess predictors of outcome and complications.
RESULTS: Eighty patients with BCS who underwent TIPS were included; 40 (50%) were male. The mean age at onset of symptoms was 24.2±8.7 years. The median (range) follow-up was 660 (2-2400) days. The 1-, 3-, and 5-year rates for TIPS stent patency were 89, 81, and 81%, respectively. Cumulative encephalopathy-free rates were 91, 86, and 86%, respectively, and survival rates were 93, 89, and 84%, respectively. Eight (10.0%) patients died during follow-up, five within the first year (three of these five had incomplete response). On univariate analysis, serum bilirubin, response to intervention, serum creatinine, Child class, model for end-stage liver disease, and All India Institute of Medical Sciences-hepatic venous outflow tract obstruction score were significantly different between survivors and nonsurvivors. On multivariate analysis, response to therapy after TIPS (hazard ratio: 8.37; 95% confidence interval: 1.60-43.82) was independently associated with mortality. The 1-year survival was 97% in patients with complete response, compared with 59% in those with incomplete response ($P<0.004$).
CONCLUSION: Incomplete symptom response after TIPS is associated with poor outcome and can be used for selection of patients for liver transplantation.

DOI: 10.1097/MEG.0000000000000945
PMID: 28763339 [Indexed for MEDLINE]

159: Shankar H, Kumar N, Sandhir R, Mittal S, Adhikari T, Kumar A, Rao DN. Micronutrients Drift During Daily and Weekly Iron Supplementation in Non-anaemic and Anaemic Pregnancy. Indian J Clin Biochem. 2017 Oct;32(4):473-479. doi: 10.1007/s12291-017-0634-9. Epub 2017 Jan 17. PubMed PMID: 29062181; PubMed Central PMCID: PMC5634982.

AIMS: Pregnancy is a phenomenon associated with dynamic changes in physical, mental and biochemical status of body and demands increased nutritional intake for developing foetus. The level of various micronutrients which act as co-factors for antioxidant enzymes or it-self as antioxidants gets altered with

the progression of pregnancy. The present longitudinal study summarized the trend of selected micronutrients level in anaemic (AP) and non-anaemic primigravida (NAP) supplemented with daily and weekly oral iron folic acid (IFA) tablet during pregnancy and postpartum.
METHODS: A total of 200 primigravida {N = 100; NAP (Hb > 11 g/dl) and N = 100 AP (Hb = 8-11 g/dl) assigned daily (N = 50) and weekly (N = 50) supplementation} were recruited and overnight fasting blood samples were withdrawn at 13-16 weeks, after 3 months and 6 weeks postpartum. The serum iron, copper, zinc, magnesium and manganese were estimated by inductively coupled plasma-atomic emission spectrophotometer.
RESULTS: Serum manganese ($p < 0.05$) at baseline and magnesium ($p < 0.01$) at postpartum was significantly different between NAP and AP supplemented with daily IFA tablets. The trend of copper found to be increased during pregnancy and later declined at postpartum in both the groups. Daily supplementation resulted in significantly high iron ($p < 0.05$) in NAP during third trimester.
CONCLUSIONS: Hypozincemia and hypomagnesemia was observed in anaemic pregnancy supplemented with weekly and daily IFA respectively. Clear evidence of altered micronutrients levels during healthy and anaemic pregnancy was seen. The reference values may be drawn from this study for the nutritional assessment during pregnancy for healthy pregnancy outcomes.
TRIAL REGISTRATION: Clinical Trial Registry-India, http://ctri.nic.in, CTRI/2014/10/005135.

DOI: 10.1007/s12291-017-0634-9
PMCID: PMC5634982 [Available on 2018-10-01]
PMID: 29062181

160: Sharan J, Koul V, Dinda AK, Kharbanda OP, Lale SV, Duggal R, Mishra M, Gupta G, Singh MP. Bio-functionalization of grade V titanium alloy with type I human collagen for enhancing and promoting human periodontal fibroblast cell adhesion - an in-vitro study. Colloids Surf B Biointerfaces. 2018 Jan 1;161:1-9. doi: 10.1016/j.colsurfb.2017.10.024. Epub 2017 Oct 9. PubMed PMID: 29035745.

Surface modification of medical grade V titanium alloy (Ti-6Al-4V) with biomolecules is an important and vital step for tailoring it for various biomedical applications. Present study investigates theinfluence of type I human collagen (T1HC) bio-conjugation through a three stage process. Polished grade V titanium alloy discs were functionalizedwith free OH group by means of controlled heat and alkali treatment followed by coating of 3-aminopropyltriethoxy (APTES) silane couplingagent. T1HC were bio-conjugated through 1-ethyl-3-(3-dimethyl aminopropyl) carbodiimide hydrochloride N-hydroxysuccinimide (EDCNHS)coupling reaction. At each stage, grade V titanium alloy surfaces were characterized by atomic force microscopy (AFM), scanning electronmicroscopy (SEM), Fourier transform infrared spectroscopy (FTIR) and Xrayphotoelectron spectroscopy (XPS). FTIR and XPS studies confirms thecovalent attachment of APTES with titanium alloy surface while terminalamine groups of APTES remained free for further attachment of T1HCthrough covalent bond. Aqueous stability of bio-conjugated titanium discsat various pH and time intervals (i.e. at pH of 5.5, 6.8 and 8.0 at timeinterval of 27 and 48h) confirmed the stability of T1HC bioconjugated collagen on titanium surface. Further human periodontalfibroblast cell line (HPdlF) culture revealed enhanced adhesion on theT1HC bio-conjugated surface compared to the polystyrene and polishedgrade V titanium alloy surfaces.

DOI: 10.1016/j.colsurfb.2017.10.024
PMID: 29035745

161: Sharma A, Mohan A, Bhalla AS, Vishnubhatla S, Pandey AK, Bal CS, Kumar R. Role of various semiquantitative parameters of 18F-FDG PET/CT studies for interim treatment response evaluation in non-small-cell lung cancer. Nucl Med Commun. 2017 Oct;38(10):858-867. doi: 10.1097/MNM.0000000000000723. PubMed PMID: 28817456.

PURPOSE: The aim of this study was to prospectively evaluate the role of various semiquantitative parameters obtained from fluorine-18 fluorodeoxyglucose (F-FDG) PET/CT in interim treatment response assessment in biopsy-proven non-small-cell lung cancer (NSCLC) and to find the best parameter, if any.
MATERIALS AND METHODS: Totally, 32 patients (male/female: 25/7) with biopsy proven NSCLC and a mean age of 54.71±12.65 years were enrolled in the study. Each patient underwent whole-body F-FDG PET/CT scan after injecting 5.18-7.77 MBq/kg of F-FDG intravenously at baseline and after four cycles of chemotherapy. Five parameters - that is, target-to-background ratio (TBR), maximum standardized uptake value (SUVmax), average standardized uptake value (SUVavg), whole-body metabolic tumor volume (MTVwb), and whole-body total lesion glycolysis (TLGwb) - were evaluated for both scans along with their percentage changes ([INCREMENT]). Patients were divided into two response groups as per Response Evaluation Criteria in Solid Tumors (RECIST) 1.1 criteria: responders and nonresponders. All parameters were compared among the two response groups using appropriate statistical methods; P value of less than 0.05 was considered significant.
RESULTS: All postchemotherapy parameters were found to have a significant role in the prediction of two response groups. Post-TBR had highest area under the receiver operating characteristic curve of 0.83 with a sensitivity and specificity of 75 and 82%, respectively, at a cutoff value of 4. The [INCREMENT]s, [INCREMENT]MTVwb, [INCREMENT]TLGwb, and [INCREMENT]SUVmax were significant with cutoffs of -56, -75, and -32%, respectively. [INCREMENT]MTVwb had the highest area under the receiver operating characteristic curve of 0.83 with sensitivity and specificity of 81.25%. In multivariate analysis, post-TBR and [INCREMENT]MTVwb were found to be the independent variables for prediction of interim treatment response.
CONCLUSION: Our study proves that a multitude of semiquantitative parameters as documented above differ significantly between two response groups in patients with advanced stage NSCLC receiving chemotherapy. Moreover, parameters in combination (ΔMTV and post-TBR) with appropriate cutoffs can predict response groups with acceptable reliability.

DOI: 10.1097/MNM.0000000000000723
PMID: 28817456 [Indexed for MEDLINE]

162: Sharma A, Kumar S, Devarajan SLJ, Agarwal H. Rare Post-Tonsillectomy Internal Carotid Artery Pseudoaneurysm: Management by Parent Artery Occlusion Using Detachable Balloons. Vasc Endovascular Surg. 2017 Oct;51(7):506-508. doi: 10.1177/1538574417723154. Epub 2017 Aug 2. PubMed PMID: 28764608.

Iatrogenic cervical internal carotid artery pseudoaneurysm is a rare and potentially lethal complication following tonsillectomy. It can be complicated by thromboembolism, mass effect and eventually may rupture leading to death. Various endovascular treatment options are available for the management of these pseudoaneurysms, including coil embolization, detachable balloon occlusion, or stent graft placement. Parent artery occlusion using detachable balloons can be a therapeutic option in a subset of patients. However, evaluation of cross circulation with preprocedure balloon test occlusion is imperative in such cases.

DOI: 10.1177/1538574417723154

PMID: 28764608 [Indexed for MEDLINE]

163: Sharma JB, Kriplani A, Gupta M, Seenu V. Successful maternal and perinatal outcomes in a term pregnancy with giant abdominopelvic leiomyomatosis. BMJ Case Rep. 2017 Oct 24;2017. pii: bcr-2017-221954. doi: 10.1136/bcr-2017-221954. PubMed PMID: 29066658.

A 30-year-old second gravida with history of laparoscopic myomectomy and one previous caesarean section was admitted at 31 weeks and 2 days period of gestation (POG) with a diagnosis of diffuse abdominopelvic leiomyomatosis and moderate anaemia. After correction of anaemia with intravenous iron and erythropoietin, laparotomy was performed at 37 weeks POG. A healthy female baby weighing 2.9 kg was delivered by classical caesarean section followed by hysterectomy in view of multiple fibroid uterus with uncontrolled bleeding. Debulking surgery was performed, and multiple large intraperitoneal leiomyomata with encasing blood vessels were removed. There was another 15×15 cm leiomyoma arising from the diaphragm which was excised. She received 4 units of packed red blood cells and fresh frozen plasma intraoperatively. The postoperative course was uneventful, both mother and baby were healthy and discharged 7 days after surgery.

DOI: 10.1136/bcr-2017-221954
PMID: 29066658 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

164: Sharma N, Urkude J, Chaniyara M, Titiyal JS. Microscope-integrated intraoperative optical coherence tomography-guided small-incision lenticule extraction: New surgical technique. J Cataract Refract Surg. 2017 Oct;43(10):1245-1250. doi: 10.1016/j.jcrs.2017.10.015. PubMed PMID: 29120709.

We describe the surgical technique of microscope-integrated intraoperative optical coherence tomography (OCT)-guided small-incision lenticule extraction. The technique enables manual tracking of surgical instruments and identification of the desired dissection plane. It also helps discern the relation between the dissector and the intrastromal lenticule. The dissection plane becomes hyperreflective on dissection, ensuring complete separation of the intrastromal lenticule from the overlying and underlying stroma. Inadvertent posterior plane entry, cap-lenticule adhesion, incomplete separation of the lenticule, creation of a false plane, and lenticule remnants may be recognized intraoperatively so corrective steps can be taken immediately. In cases with a hazy overlying cap, microscope-integrated intraoperative OCT enables localization and extraction of the lenticule. The technique is helpful for inexperienced surgeons, especially in cases with low amplitudes of refractive errors, ie, thin lenticules.

DOI: 10.1016/j.jcrs.2017.10.015
PMID: 29120709

165: Sharma P, Mehta N, Narayan A. Isolated Traumatic Brachialis Muscle Tear: A Case Report and Review of Literature. Bull Emerg Trauma. 2017 Oct;5(4):307-310. doi: 10.18869/acadpub.beat.5.4.476.. PubMed PMID: 29177180; PubMed Central PMCID:

PMC5694606.

Isolated traumatic brachialis muscle tears are uncommonly reported - leading to occasional misdiagnosis and misdirected treatment. The rarity of brachialis muscle tear may promote misdiagnosis or mistreatment of this injury. We report an isolated brachialis muscle tear in a young female, possibly caused by strenuous exercise in the gymnasium. The diagnosis was made clinically and confirmed by magnetic resonance imaging. The patient was subsequently managed adequately with conservative treatment. We herein present a 35-year-old woman who was diagnosed with an acute brachialis muscle tear being diagnosed with a combination of clinical signs and imaging and successfully managed non-operatively. A chronologically arranged review of literature is also presented.

DOI: 10.18869/acadpub.beat.5.4.476.
PMCID: PMC5694606
PMID: 29177180

166: Sharma R, Phalak M, Tandon V, Mahapatra AK. Letter to the Editor. Long-term efficacy of ETV and shunt surgery for management of hydrocephalus. J Neurosurg Pediatr. 2018 Jan;21(1):94-95. doi: 10.3171/2017.5.PEDS17242. Epub 2017 Oct 27. PubMed PMID: 29076796.

167: Sharma S, Gupta DK. Surgical modifications, additions, and alternatives to Kasai hepato-portoenterostomy to improve the outcome in biliary atresia. Pediatr Surg Int. 2017 Dec;33(12):1275-1282. doi: 10.1007/s00383-017-4162-8. Epub 2017 Oct 4. Review. PubMed PMID: 28980051.

Kasai hepato-portoenterostomy (HPE) is the most widely used surgical technique to restore bile flow in biliary atresia (BA). We aimed to review literature on HPE substitutes and additions to Kasai especially in advanced BA (ABA). A PubMed search was done for surgical procedures apart from or along with Kasai HPE for BA. Additional procedures to prevent cholangitis were also reviewed. Procedures and outcome were analysed. Alternative procedures done by the authors have also been described briefly. Results have been compiled in this review article. In ABA, with portal hypertension and liver cirrhosis, Kasai HPE is associated with poor outcome, increased morbidity, and even mortality. Most require liver transplant (LT). Some alternatives to HPE include exploration at porta hepatis to assess the bile flow yet avoid the major surgery (HPE) as a bridge to LT. Conduit diversion may help to combat cholangitis resistant to steroid therapy. Stoma formation is not preferred in cases listed for LT due to high risk of bleeding. Hepatocyte infusion, stem cell therapy, and synthetic liver are the future options to meet the challenges in BA. Various alternative procedures may become handy in the future especially in ABA.

DOI: 10.1007/s00383-017-4162-8
PMID: 28980051 [Indexed for MEDLINE]

168: Sharma SK, Chaubey J, Singh BK, Sharma R, Mittal A, Sharma A. Drug resistance patterns among extra-pulmonary tuberculosis cases in a tertiary care centre in North India. Int J Tuberc Lung Dis. 2017 Oct 1;21(10):1112-1117. doi: 10.5588/ijtld.16.0939. PubMed PMID: 28911354.

BACKGROUND: xtra-pulmonary tuberculosis (EPTB) is a growing public health concern, and data on drug resistance are limited.
MATERIAL AND METHODS: Specimens from 2468 clinically diagnosed EPTB patients

received at the Intermediate Reference Laboratory (IRL) of a tertiary centre in India were subjected to Ziehl-Neelsen staining, Xpert® MTB/RIF testing, liquid culture and drug susceptibility testing (DST) using automated BACTEC MGIT™ 960™. Line-probe assay (LPA) was performed on all culture-positive isolates. Gene sequencing was performed on rifampicin-resistant/multidrug-resistant TB (RR/MDR-TB) and phenotypic/genotypic discrepant isolates.
RESULTS: The culture positivity rate was 18.9% (483/2553). The sensitivity and specificity of Xpert in diagnosing EPTB were respectively 70.8% (95%CI 66.5-74.8) and 97.7% (95%CI 96.9-98.3), with liquid culture as the reference standard. Prevalence of RR/MDR-TB was 10.1% (49/483). Prevalence of pre-extensively drug-resistant TB (pre-XDR-TB) was 18.4% (09/49), whereas the prevalence of XDR-TB among MDR-TB patients was 2% (01/49). The sensitivity of genotypic DST for the detection of rifampicin resistance was 92.7% (95%CI 81.1-98.5) and specificity was 99.3% (95%CI 97.5-99.9), with 100% concordance between Xpert and LPA.
CONCLUSION: The burden of drug resistance, including M/XDR-TB, among EPTB patients is high. Novel molecular tests can help in early diagnosis and treatment to prevent disease progression and amplification of resistance.

DOI: 10.5588/ijtld.16.0939
PMID: 28911354 [Indexed for MEDLINE]

169: Sheemar A, Takkar B, Temkar S, Venkatesh P. Solar retinopathy: the yellow dot and the rising sun. BMJ Case Rep. 2017 Oct 4;2017. pii: bcr-2017-222690. doi: 10.1136/bcr-2017-222690. PubMed PMID: 28978614.

170: Sheemar A, Takkar B, Temkar S, Venkatesh P. Ultra-wide imaging in a case of retinal vasculitis with macular star. BMJ Case Rep. 2017 Oct 20;2017. pii: bcr-2017-222596. doi: 10.1136/bcr-2017-222596. PubMed PMID: 29054905.

171: ---

172: Shukla G, Kazutaka J, Gupta A, Mosher J, Jones S, Alexopoulos A, Burgess RC. Magnetoencephalographic Identification of Epileptic Focus in Children With Generalized Electroencephalographic (EEG) Features but Focal Imaging Abnormalities. J Child Neurol. 2017 Oct;32(12):981-995. doi: 10.1177/0883073817724903. Epub 2017 Aug 22. PubMed PMID: 28828916.

PURPOSE: Children with generalized seizures are often excluded as epilepsy surgery candidates. This prospective study was conducted to evaluate the utility of magnetoencephalography (MEG) to refine the location of the "irritative zone" in children with single lesions on magnetic resonance imaging (MRI) but with generalized ictal electroencephalographic (EEG) findings.
METHODS: Patients admitted with refractory epilepsy with imaging studies showing focal or hemispheric abnormalities but scalp video EEG showing generalized or multiregional epileptiform abnormalities were included. Patients were encouraged into natural sleep, and simultaneous whole-head MEG/EEG was recorded. Source localization of epileptic spikes on MEG was carried out while blinded to other results. Acceptable dipoles were classified into 3 groups: focal, hemispheric clusters, and single focal cluster with additional widespread dipoles.
RESULTS: Nine patients (4 female, 5 males; ages 10 months to 15 years) were included. Two had focal features on clinical semiology, whereas all had generalized or multiregional interictal and ictal EEG. Etiologies included tuberous sclerosis complex (2), postencephalitic sequelae (1), focal cortical dysplasia (1), and unknown (2). Five patients had clear focal lesions on brain

MRI whereas the other 2 had focal positron emission tomography (PET) abnormalities. An average of 38 spikes were accepted (average goodness of fit = 85.3%). A single tight cluster of dipoles was identified in 5 patients, 1 had dipoles with propagation from left occipital to right temporal. One patient had 2 distinct dipole clusters. MEG demonstrated focal findings 9 times more often than the simultaneously recorded scalp EEG, and 3 times more often than the associated multiday video EEG recordings.
CONCLUSION: This study shows that neurophysiologic evidence of focal epileptiform abnormalities in patients with focal brain lesions and generalized EEG findings can be strengthened using MEG. Further feasibility of surgical candidacy should be evaluated in these patients.

DOI: 10.1177/0883073817724903
PMID: 28828916 [Indexed for MEDLINE]

173: Sihota R, Rao A, Srinivasan G, Gupta V, Sharma A, Dada T, Kalaiwani M. Long-term scanning laser ophthalmoscopy and perimetry in different severities of primary open and chronic angle closure glaucoma eyes. Indian J Ophthalmol. 2017 Oct;65(10):963-968. doi: 10.4103/0301-4738.216734. PubMed PMID: 29044061; PubMed Central PMCID: PMC5678332.

PURPOSE: To determine rate of change over time on scanning laser ophthalmoscopy, HRT, compared to perimetry, and to determine incidence, parametric changes, and risk factors for progression in primary open angle glaucoma (POAG) and chronic primary angle closure angle glaucoma (CPACG) eyes.
METHODS: Prospective clinical study of 116 POAG eyes and 129 CPACG eyes of different severities of glaucoma. Standard automated perimetry and optic nerve head topography were studied at baseline and thereafter every 6 months. Changes in HFA and HRT parameters, in response to IOP, were compared over at least 5 years.
RESULTS: Fourteen POAG eyes (12.1%) and 20 CPACG eyes (15.5%) showed progression on SAP over time. Percentage drop of IOP was similar in eyes that progressed and in stable eyes. The change in MD in CPACG eyes was 1.8 dB/year on SAP and 1.36 dB/year in POAG eyes, P = 0.1. Twenty-nine eyes showed progression on HRT with 24 confirmed on SAP. Trend analysis picked up progression more frequently than other HRT parameters. Eyes that progressed in both groups, in all severities of glaucoma, had intermittent fluctuations of ≥ 4 mmHg over mean IOP on ≥3 follow up visits, P ≤ 0.001.
CONCLUSION: IOP fluctuations of ≥ 4 mmHg over the mean IOP and duration of disease were associated with progression in POAG and CPACG eyes.

DOI: 10.4103/0301-4738.216734
PMCID: PMC5678332
PMID: 29044061 [Indexed for MEDLINE]

174: Sikary AK, Dixit S, Murty OP. Fatal carbon monoxide poisoning: A lesson from a retrospective study at All India Institute of Medical Sciences, New Delhi. J Family Med Prim Care. 2017 Oct-Dec;6(4):791-794. doi: 10.4103/jfmpc.jfmpc_408_16. PubMed PMID: 29564265; PubMed Central PMCID: PMC5848400.

Background: Carbon monoxide (CO) is a colorless, odorless, tasteless, and nonirritating gas which makes it difficult for those who are exposed, to detect it, leading to unexpected death. This study was undertaken to see the pattern of fatal CO poisoning and to discuss preventive aspect.
Materials and Methods: It was a retrospective descriptive study of fatal CO cases which were autopsied at All India Institute of Medical Sciences, New Delhi, from the year 2010 to the year 2015. The cases were analyzed as per age groups,

circumstances of death, season of death, and sources of CO formation.
Results and Discussion: The study involved 40 cases of fatal CO poisoning. About 80% of cases were reported in winter months. The maximum cases were reported in the month of January followed by November and December. All the cases except one, died with a source of CO nearby and the person was inside a room or some closed space without ventilation. Source of CO was firepot and electric room heater in most of the cases. Some cases were of CO build inside the car with a running engine. Most of the cases occurred accidentally.
Conclusion: Clustering of cases is seen in winters. Poisoning can occur in different ways. The study documents the various possibilities of CO poisoning and advocates community education targeting the high-risk groups and masses, especially during the winter season.

DOI: 10.4103/jfmpc.jfmpc_408_16
PMCID: PMC5848400
PMID: 29564265

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

175: Singh AN, Pal S, Mangla V, Kilambi R, George J, Dash NR, Chattopadhyay TK, Sahni P. Pancreaticojejunostomy: Does the technique matter? A randomized trial. J Surg Oncol. 2018 Mar;117(3):389-396. doi: 10.1002/jso.24873. Epub 2017 Oct 16. PubMed PMID: 29044532.

BACKGROUND: Despite a large number of studies, the ideal technique of pancreaticojejunostomy (PJ) after pancreaticoduodenectomy (PD) remains debatable. We compared the two most common techniques of PJ (duct-to-mucosa and dunking) in a randomized trial.
METHODS: This open-label randomized trial was done at a tertiary care center from January 2009 to October 2015. Patients with resectable periampullary tumours with a pancreatic duct diameter ≥2 mm, requiring PD were randomly assigned to one of the two techniques using computer generated random numbers. The primary outcome was postoperative pancreatic fistula (POPF) rate and secondary outcomes were frequency of other postoperative complications.
RESULTS: A total of 193 patients were randomized and analyzed (intention-to-treat analysis), 97 in duct-to-mucosa and 96 in dunking group. Both groups were comparable for baseline demographic and clinical profiles. The incidence of POPF in the entire study group was 23.8%. There was no statistically significant difference between the two groups (24.7% vs 22.9%, P = 0.71). Similarly, the incidence of grades B and C (clinically significant) POPF was comparable (16.5% vs 13.5%, P = 0.57). Both groups were comparable with respect to the secondary outcomes.
DISCUSSION: The duct-to-mucosa technique of PJ after PD is not superior to the dunking technique with respect to POPF rate. (CTRI/2010/091/000531).

DOI: 10.1002/jso.24873
PMID: 29044532 [Indexed for MEDLINE]

176: Singh D, Bhat R, Kothari SS. 25-year-old man with chest pain. Heart. 2018 Jan;104(1):72. doi: 10.1136/heartjnl-2017-312164. Epub 2017 Oct 14. PubMed PMID: 29032363.

CLINICAL INTRODUCTION: A 25-year-old man presented with complaints of acute-onset chest pain for 2 hours associated with diaphoresis and generalised weakness. He had history of smoking for 10 years. There was no history of hypertension,

diabetes, family history of premature coronary artery disease or drug abuse. On evaluation, his heart rate was 76/min, blood pressure 130/90 mm Hg and oxygen saturation 97% on room air. Cardiovascular examination was normal. The ECG is shown in figure 1.heartjnl;104/1/72/F1F1F1Figure 1.

DOI: 10.1136/heartjnl-2017-312164
PMID: 29032363 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

177: Singh GP, Rath GP. Report on Neurosciences Sessions During the 16th World Congress of Anaesthesiologists (WCA 2016 Hong Kong). J Neurosurg Anesthesiol. 2017 Oct;29(4):475-477. doi: 10.1097/ANA.0000000000000405. PubMed PMID: 28079736.

178: Singh K, Kondal D, Shivashankar R, Ali MK, Pradeepa R, Ajay VS, Mohan V, Kadir MM, Sullivan MD, Tandon N, Narayan KMV, Prabhakaran D. Health-related quality of life variations by sociodemographic factors and chronic conditions in three metropolitan cities of South Asia: the CARRS study. BMJ Open. 2017 Oct 15;7(10):e018424. doi: 10.1136/bmjopen-2017-018424. PubMed PMID: 29038187; PubMed Central PMCID: PMC5652573.

OBJECTIVES: Health-related quality of life (HRQOL) is a key indicator of health. However, HRQOL data from representative populations in South Asia are lacking. This study aims to describe HRQOL overall, by age, gender and socioeconomic status, and examine the associations between selected chronic conditions and HRQOL in adults from three urban cities in South Asia.
METHODS: We used data from 16 287 adults aged ≥20 years from the baseline survey of the Centre for Cardiometabolic Risk Reduction in South Asia cohort (2010-2011). HRQOL was measured using the European Quality of Life Five Dimension-Visual Analogue Scale (EQ5D-VAS), which measures health status on a scale of 0 (worst health status) to 100 (best possible health status).
RESULTS: 16 284 participants completed the EQ5D-VAS. Mean age was 42.4 (±13.3) years and 52.4% were women. 14% of the respondents reported problems in mobility and pain/discomfort domains. Mean VAS score was 74 (95% CI 73.7 to 74.2). Significantly lower health status was found in elderly (64.1), women (71.6), unemployed (68.4), less educated (71.2) and low-income group (73.4). Individuals with chronic conditions reported worse health status than those without (67.4 vs 76.2): prevalence ratio, 1.8 (95% CI 1.61 to 2.04).
CONCLUSIONS: Our data demonstrate significantly lower HRQOL in key demographic groups and those with chronic conditions, which is consistent with previous studies. These data provide insights on inequalities in population health status, and potentially reveal unmet needs in the community to guide health policies.

DOI: 10.1136/bmjopen-2017-018424
PMCID: PMC5652573
PMID: 29038187 [Indexed for MEDLINE]

Conflict of interest statement: Competing interests: None declared.

179: Singh P, Makharia GK. Avoiding biopsy for initial diagnosis for celiac disease: are we there yet? Eur J Gastroenterol Hepatol. 2017 Oct;29(10):1189. doi: 10.1097/MEG.0000000000000938. PubMed PMID: 28877091.

180: Singh S, Mittal S, Bhari A, Bhari N. Lipoid proteinosis. BMJ Case Rep. 2017 Oct 20;2017. pii: bcr-2017-221632. doi: 10.1136/bcr-2017-221632. PubMed PMID: 29054897.

181: Singh S, Taneja N, Arava S, Bhari N. Nevus trichilemmocysticus. Int J Dermatol. 2017 Dec;56(12):1483-1486. doi: 10.1111/ijd.13786. Epub 2017 Oct 3. PubMed PMID: 28971476.

182: Singh S, Khandpur S, Arava S, Rath R, Ramam M, Singh M, Sharma VK, Kabra SK. Assessment of histopathological features of maculopapular viral exanthem and drug-induced exanthem. J Cutan Pathol. 2017 Dec;44(12):1038-1048. doi: 10.1111/cup.13047. Epub 2017 Oct 13. PubMed PMID: 28914958.

BACKGROUND: Viral infections and drug reactions are the commonest causes of exanthems in clinical practice. Clinically, their overlapping features may pose a diagnostic challenge. Hematologic, in vitro, and drug provocation tests are either unreliable or impractical.
METHODS: This was a descriptive, prospective study to assess and compare histopathological features of maculopapular viral and drug exanthem. Subjects fulfilling case definition of exanthems were included. Serum C-reactive protein (CRP) and absolute eosinophil count (AEC) were also studied.
RESULTS: Skin biopsy slides of 48 cases were evaluated and AEC and CRP were performed. Both median AEC and CRP were lower in viral exanthem compared with drug exanthem. On histopathological evaluation, features such as lymphocytic exocytosis, and dermal infiltrate of eosinophils, lymphocytes and histiocytes were seen in a significantly greater number of drug exanthems. Other findings such as focal spongiosis, acanthosis, keratinocyte necrosis, basal cell damage, papillary dermal edema and atypical lymphocytes in the dermis were also observed in higher though not statistically significant number of drug exanthem biopsies.
CONCLUSIONS: Certain histopathological features can help to differentiate between the two exanthems and this modality may be used in situations when there is clinical overlap and when drug rechallenge cannot be undertaken.

DOI: 10.1111/cup.13047
PMID: 28914958 [Indexed for MEDLINE]

183: 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.

184: Sinha R, Trikha A, Subramanian R. Microlaryngeal endotracheal tube for lung isolation in pediatric patient with significant tracheal narrowing. Saudi J Anaesth. 2017 Oct-Dec;11(4):490-493. doi: 10.4103/1658-354X.215427. PubMed PMID: 29033734; PubMed Central PMCID: PMC5637430.

A 15-year-old boy, weighing 45 kg, 160 cm height with large anterior mediastinal mass and significant tracheal narrowing was scheduled for thoracotomy and excision of the mass. He had a history of progressive dyspnea, inability to lie supine, and a right upper hemithorax mass 13 cm × 13 cm × 11 cm as evident on a computerized tomography with significant compression of the trachea and right

main stem bronchus. Inhalational induction was carried out using sevoflurane with 100% oxygen. After achieving adequate depth of anesthesia with the maintenance of spontaneous respiration with oxygen and sevoflurane (minimum alveolar concentration 1.7), left principal bronchus was intubated under fiber-optic bronchoscopy, with 5 mm cuffed microlaryngeal surgery tube. Excellent lung isolation was achieved. Selection of endotracheal tube for lung isolation and endobronchial intubation in the presence of significant tracheal narrowing are discussed.

DOI: 10.4103/1658-354X.215427
PMCID: PMC5637430
PMID: 29033734

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

185: Sinha R, Kumar KR, Anand RK, Ray BR. Unfavourable outcome after uneventful anaesthesia and surgery in a child with Hurler syndrome. Indian J Anaesth. 2017 Oct;61(10):853-855. doi: 10.4103/ija.IJA_392_17. PubMed PMID: 29242665; PubMed Central PMCID: PMC5664898.

186: Sirohi HV, Singh PK, Iqbal N, Sharma P, Singh AK, Kaur P, Sharma S, Singh TP. Design of anti-thyroid drugs: Binding studies and structure determination of the complex of lactoperoxidase with 2-mercaptoimidazole at 2.30 Ã… resolution. Proteins. 2017 Oct;85(10):1882-1890. doi: 10.1002/prot.25342. Epub 2017 Jul 21. PubMed PMID: 28653416.

Lactoperoxidase (LPO) belongs to mammalian heme peroxidase superfamily, which also includes myeloperoxidase (MPO), eosinophil peroxidase (EPO), and thyroid peroxidase (TPO). LPO catalyzes the oxidation of a number of substrates including thiocyanate while TPO catalyzes the biosynthesis of thyroid hormones. LPO is also been shown to catalyze the biosynthesis of thyroid hormones indicating similar functional and structural properties. The binding studies showed that 2-mercaptoimidazole (MZY) bound to LPO with a dissociation constant of 0.63 μM. The inhibition studies showed that the value of IC50 was 17 μM. The crystal structure of the complex of LPO with MZY showed that MZY bound to LPO in the substrate-binding site on the distal heme side. MZY was oriented in the substrate-binding site in such a way that the sulfur atom is at a distance of 2.58 Å from the heme iron. Previously, a similar compound, 3-amino-1,2,4-triazole (amitrole) was also shown to bind to LPO in the substrate-binding site on the distal heme side. The amino nitrogen atom of amitrole occupied the same position as that of sulfur atom in the present structure indicating a similar mode of binding. Recently, the structure of the complex of LPO with a potent antithyroid drug, 1-methylimidazole-2-thiol (methimazole, MMZ) was also determined. It showed that MMZ bound to LPO in the substrate-binding site on the distal heme side with 2 orientations. The position of methyl group was same in the 2 orientations while the positions of sulfur atom differed indicating a higher preference for a methyl group.

DOI: 10.1002/prot.25342
PMID: 28653416 [Indexed for MEDLINE]

187: Sondhi P, Mahajan R, Arava S. Annular itchy rash in a woman with chronic pancreatitis. Clin Exp Dermatol. 2017 Oct;42(7):811-813. doi: 10.1111/ced.13143. Epub 2017 Jun 7. PubMed PMID: 28590014.

188: Soni A, Jha SK. Smartphone based non-invasive salivary glucose biosensor. Anal Chim Acta. 2017 Dec 15;996:54-63. doi: 10.1016/j.aca.2017.10.003. Epub 2017 Oct 17. PubMed PMID: 29137708.

The present work deals with the development of a non-invasive optical glucose biosensor using saliva samples and a smartphone. The sensor was fabricated with a simple methodology by immobilization of Glucose oxidase enzyme along with a pH responsive dye on a filter paper based strip. The strip changes color upon reaction with glucose present in saliva and the color changes were detected using a smartphone camera through RGB profiling. This standalone biosensor showed good sensitivity and low interference while operating within 20 s response time. We used various means for improvements such as the use of slope method instead of differential response; use of a responsive pH indicator and made numerous tweaks in the smartphone app. Calibration with spiked saliva samples with slopes for (R + G + B) pixels revealed an exponentially increasing calibration curve with a linear detection range of 50-540 mg/dL, sensitivity of 0.0012 pixels sec-1/mg dL-1 and LOD of 24.6 mg/dL. The biosensor was clinically validated on both healthy and diabetic subjects divided into several categories based on sex, age, diabetic status etc. and correlation between blood and salivary glucose has been established for better standardization of the sensor. Correlation of 0.44 was obtained between blood and salivary glucose in healthy individuals whereas it was 0.64 and 0.94 in case of prediabetic and diabetic patients respectively. The developed biosensor has the potential to be used for mass diagnosis of diabetes especially in such areas where people remain prohibited from routine analysis due to high healthcare cost. Apart from that, a smartphone would be the only device the user needs for this measurement, along with a disposable low cost test strip.

DOI: 10.1016/j.aca.2017.10.003
PMID: 29137708 [Indexed for MEDLINE]

189: Sonika U, Saha S, Kedia S, Dash NR, Pal S, Das P, Ahuja V, Sahni P. Predictive factors for malignancy in undiagnosed isolated small bowel strictures. Intest Res. 2017 Oct;15(4):518-523. doi: 10.5217/ir.2017.15.4.518. Epub 2017 Oct 23. PubMed PMID: 29142520; PubMed Central PMCID: PMC5683983.

Background/Aims: Patients with small bowel strictures have varied etiologies, including malignancy. Little data are available on the demographic profiles and etiologies of small bowel strictures in patients who undergo surgery because of intestinal obstruction but do not have a definitive pre-operative diagnosis. Methods: Retrospective data were analyzed for all patients operated between January 2000 and October 2014 for small bowel strictures without mass lesions and a definite diagnosis after imaging and endoscopic examinations. Demographic parameters, imaging, endoscopic, and histological data were extracted from the medical records. Univariate and multivariate analyses were conducted to identify factors that could differentiate between intestinal tuberculosis (ITB) and Crohn's disease (CD) and between malignant and benign strictures. Results: Of the 7,425 reviewed medical records, 89 met the inclusion criteria. The most common site of strictures was the proximal small intestine (41.5%). The most common histological diagnoses in patients with small bowel strictures were ITB (26.9%), CD (23.5%), non-specific strictures (20.2%), malignancy (15.5%), ischemia (10.1%), and other complications (3.4%). Patients with malignant strictures were older than patients with benign etiologies (47.6±15.9 years vs. 37.4±16.4 years, P=0.03) and age >50 years had a specificity for malignant

etiology of 80%. Only 7.1% of the patients with malignant strictures had more than 1 stricture and 64% had proximally located strictures. Diarrhea was the only factor that predicted the diagnosis of CD 6.5 (95% confidence interval, 1.10-38.25; P=0.038) compared with the diagnosis of ITB.
Conclusions: Malignancy was the cause of small bowel strictures in approximately 16% patients, especially among older patients with a single stricture in the proximal location. Empirical therapy should be avoided and the threshold for surgical resection is low in these patients.

DOI: 10.5217/ir.2017.15.4.518
PMCID: PMC5683983
PMID: 29142520

Conflict of interest statement: Conflict of interest: None.

190: Sonny A, Sessler DI, You J, Kashy BK, Sarwar S, Singh AK, Sale S, Alfirevic A, Duncan AE. The response to Trendelenburg position is minimally affected by underlying hemodynamic conditions in patients with aortic stenosis. J Anesth. 2017 Oct;31(5):692-702. doi: 10.1007/s00540-017-2384-5. Epub 2017 Jul 13. PubMed PMID: 28707021.

PURPOSE: Trendelenburg positioning is commonly used to temporarily treat intraoperative hypotension. The Trendelenburg position improves cardiac output in normovolemic or anesthetized patients, but not hypovolemic or non-anesthetized patients. Therefore, the response to Trendelenburg positioning may vary depending on patient population or hemodynamic conditions. We thus tested the hypothesis that the effectiveness of the Trendelenburg position, as indicated by an increase in cardiac output, improves after replacement of a stenotic aortic valve. Secondarily, we evaluated whether measurements of left ventricular preload, systolic function, or afterload were associated with the response to Trendelenburg positioning.
METHODS: This study is a secondary analysis of a clinical trial which included patients having aortic valve replacement (AVR) who were monitored with pulmonary artery catheters (NCT01187329). We examined changes in thermodilution cardiac output with Trendelenburg positioning before and after AVR. We also examined whether echocardiographic and hemodynamic measurements of preload, afterload, and systolic function were associated with changes in cardiac output during Trendelenburg positioning.
RESULTS: Thirty-seven patients were included. The median [IQR] cardiac output change with Trendelenburg positioning was -3% [-10%, 5%] before AVR versus +4% [-4%, 15%] after AVR. Estimated median difference in cardiac output with Trendelenburg was 5% (95% CI 1, 15%, P = 0.04) greater after AVR. The response to Trendelenburg positioning was largely independent of hemodynamic conditions.
CONCLUSION: The response to Trendelenburg positioning improved following AVR, but by a clinically unimportant amount. The response to Trendelenburg positioning was independent of hemodynamic conditions.

DOI: 10.1007/s00540-017-2384-5
PMID: 28707021 [Indexed for MEDLINE]

191: Sood M, Chadda RK, Kallivayalil RA. Primary prevention in psychiatry in general hospitals in South Asia. Indian J Psychiatry. 2017 Oct-Dec;59(4):510-514. doi: 10.4103/psychiatry.IndianJPsychiatry_180_17. PubMed PMID: 29497199; PubMed Central PMCID: PMC5806336.

The focus of primary prevention is on reducing the disease incidence. Primary prevention in mental health has been given minimal priority in low-resource

settings with no significant investments. General hospitals are one of the main providers of mental health services in South Asia. This paper focuses on primary prevention activities, which can be undertaken in a general hospital in South Asia with abysmally low-mental health resources. For implementing primary prevention in psychiatry, a general hospital may be conceptualized as a population unit, located in a well-populated area with easy accessibility where different kinds of communities, for example, students and resident doctors, consultants, patients and their caregivers, and paramedical, nursing, administrative and other supportive staff, coexist and have varied functions. All the functional components of the general hospital psychiatric units (GHPUs) offer scope for introducing primary preventive psychiatry services. Psychiatrists in GHPUs can lead efforts for primary prevention in mental health in the hospital by employing strategies in the framework of universal, selective, and indicated prevention. The preventive strategies could be targeted at the patients visiting the hospital for various health services and their caregivers, employees, and the trainees. Similar principles can be employed in teaching and training.

DOI: 10.4103/psychiatry.IndianJPsychiatry_180_17
PMCID: PMC5806336
PMID: 29497199

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

192: Srivastava A, Suhani. Mammographic Screening or Breast Cancer Awareness? Time to Ponder. Indian J Surg. 2017 Oct;79(5):446-449. doi: 10.1007/s12262-017-1672-5. Epub 2017 Jul 11. Review. PubMed PMID: 29089707; PubMed Central PMCID: PMC5653586.

Breast cancer in India is becoming the leading cause of cancer-related mortality in urban women. In developed countries, the mortality from breast cancer has decreased in the past few years attributable to better awareness of disease, screening programs, early detection and more effective treatment available. Although widely used, the screening programs running in the western countries have been a point of criticism in the recent years as they lead to increased healthcare cost and detection of otherwise benign and clinically insignificant breast lesion (both benign and malignant). Also in a developing country like ours where the awareness about breast cancer among the ladies is itself poor, whether screening is feasible and cost-effective is a matter of ongoing debate. We conducted this literature review to ascertain the importance of breast cancer awareness, breast self-examination, and clinical breast examination as effective screening tools in a resource deficient country like India.

DOI: 10.1007/s12262-017-1672-5
PMCID: PMC5653586 [Available on 2018-10-01]
PMID: 29089707

193: Srivastava A, Srivastava A, Pandey RM. Was RA Fisher Right? Indian J Surg. 2017 Oct;79(5):444-445. doi: 10.1007/s12262-017-1679-y. Epub 2017 Aug 19. Review. PubMed PMID: 29089706; PubMed Central PMCID: PMC5653589.

Randomized controlled trials have become the most respected scientific tool to measure the effectiveness of a medical therapy. The design, conduct and analysis of randomized controlled trials were developed by Sir Ronald A. Fisher, a mathematician in Great Britain. Fisher propounded that the process of randomization would equally distribute all the known and even unknown covariates in the two or more comparison groups, so that any difference observed could be ascribed to treatment effect. Today, we observe that in many situations, this

prediction of Fisher does not stand true; hence, adaptive randomization schedules have been designed to adjust for major imbalance in important covariates. Present essay unravels some weaknesses inherent in Fisherian concept of randomized controlled trial.

DOI: 10.1007/s12262-017-1679-y
PMCID: PMC5653589 [Available on 2018-10-01]
PMID: 29089706

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

Glioblastoma (GBM) is characterized by the presence of hypoxia, stemness and local invasiveness. We have earlier demonstrated that FAT1 promotes invasiveness, inflammation and upregulates HIF-1α expression and its signaling in hypoxic GBM. Here, we have identified the role of FAT1 in regulating EMT (epithelial-mesenchymal transition) and stemness characteristics in GBM. The expression of FAT1, EMT (Snail/LOX/Vimentin/N-cad), stemness (SOX2/OCT4/Nestin/REST) and hypoxia markers (HIF-1α/VEGF/PGK1/CA9) was upregulated in ≥39% of GBM tumors (n = 31) with significant positive correlation ($p \leq 0.05$) of the expression of FAT1 with LOX/Vimentin/SOX2/HIF-1α/PGK1/VEGF/CA9. Furthermore, positive correlation ($p \leq 0.01$) of FAT1 with Vimentin/N-cad/SOX2/REST/HIF-1α has been observed in TCGA GBM-dataset (n = 430). Analysis of cells (U87MG/A172) exposed to severe hypoxia (0.2%O_2) revealed elevated mRNA expression of FAT1, EMT (Snail/LOX/Vimentin/N-cad), stemness (SOX2/OCT4/Nestin/REST) and hypoxia markers (HIF-1α/PGK1/VEGF/CA9) as compared to their normoxic (20%O_2) counterparts. FAT1 knockdown in U87MG/A172 maintained in severe hypoxia and in normoxic primary glioma cultures led to significant reduction of EMT/stemness markers as compared to controls. HIF-1α knockdown in U87MG cells markedly reduced the expression of all the EMT/stemness markers studied except for Nestin and SOX2 which were more under the influence of FAT1. This indicates FAT1 has a novel regulatory effect on EMT/stemness markers both via or independent of HIF-1α. The functional relevance of our study was corroborated by significant reduction in the number of soft-agar colonies formed in hypoxic-siFAT1 treated U87MG cells. Hence, our study for the first time reveals FAT1 as a novel regulator of EMT/stemness in hypoxic GBM and suggests FAT1 as a potential therapeutic candidate.

DOI: 10.1002/ijc.31092
PMID: 28994107

195: Srivastava S, Ramanujam B, Ihtisham K, Tripathi M. Cutaneous Adverse Drug Reactions to Lamotrigine and Human Leukocyte Antigen Typing in North Indian Patients: A Case Series. Ann Indian Acad Neurol. 2017 Oct-Dec;20(4):408-410. doi: 10.4103/aian.AIAN_234_17. PubMed PMID: 29184346; PubMed Central PMCID: PMC5682747.

Cutaneous adverse drug reaction (cADR) has limited epidemiological data in India. The older antiepileptic drugs, i.e., carbamazepine, phenytoin, valproic acid, phenobarbitone, etc., induce severe cADRs that have a strong associated with human leukocyte antigen (HLA)-related genetic risk factors. There is also evidence of association of certain HLA alleles with lamotrigine (LTG)-induced cADRs, but this has not been reported in the Indian population. Here, we report

case series of three patients with LTG-induced "Stevens-Johnson syndrome (SJS)." Their HLA-B typing was also performed which showed the presence of HLA-B*15:02 in one case with SJS.

DOI: 10.4103/aian.AIAN_234_17
PMCID: PMC5682747
PMID: 29184346

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

196: Subramanian K, Sarkar S, Kattimani S. Bipolar disorder in Asia: Illness course and contributing factors. Asian J Psychiatr. 2017 Oct;29:16-29. doi: 10.1016/j.ajp.2017.04.009. Epub 2017 Apr 19. Review. PubMed PMID: 29061417.

BACKGROUND: Epidemiological studies analysing the course of Bipolar Disorder (BD) are relatively rare in the Asian context, contributing to the uncertainty regarding the prevalent course patterns and factors influencing such patterns. The current review identifies the regional characteristics of BD course patterns and the associated factors.
METHODS: A review of the existing literature was done using 'PubMed' and 'Cochrane' databases which yielded 145 studies including those from all 48 Asian countries. Relevant discussions from the Western literature were incorporated.
RESULTS: Regional and cross-national studies reveal a mania-predominant course in BD in Asian countries. Prolonged depressive episodes and comorbid anxiety disorders worsen the course of BD-II. Certain risk factors such as the young age of onset and greater episode frequency are useful predictors of bipolar diatheses. Substance use disorder comorbidity is more prevalent in males whereas depression and suicidal behaviours are more frequent in females with BD. Comorbid anxiety and personality disorders also encumber the illness course. Logistic reasons and ignorance of side-effects were specifically associated with poor adherence. An 'eveningness' chronotype and poor sleep quality were associated with frequent recurrences. Seasonal patterns vary among men and women, especially for depressive episodes.
LIMITATIONS: The effects of treatment and childhood BD course features were not discussed.
CONCLUSIONS: There are region-specific characteristics in bipolar illness course and factors influencing such course patterns compared to the rest of the World. Future research from Asia shall attempt to study the neurobiological underpinnings of such characteristics and plan appropriate strategies to address the same.

DOI: 10.1016/j.ajp.2017.04.009
PMID: 29061417 [Indexed for MEDLINE]

197: Suresh R, Wig N, Panda PK, Jyotsna VP, Chaturvedi PK, Pandey RM. Serum Cortisol Level in Indian Patients with Severe Sepsis/Septic Shock. J Emerg Trauma Shock. 2017 Oct-Dec;10(4):194-198. doi: 10.4103/JETS.JETS_123_16. PubMed PMID: 29097858; PubMed Central PMCID: PMC5663138.

Background: The relationship between cortisol level and sepsis is not known in Indian patients of severe sepsis/septic shock.
Aims: The study was done to determine the optimal range of cortisol levels, defining the adrenocortical response, and predicting the mortality, if possible, in the above type of patients.
Settings and Designs: The study was a single-centered prospective cohort study,

conducted in a tertiary referral center, North India.
Materials and Methods: Sixty patients with severe sepsis (n = 30) and septic shock (n = 30) were recruited. Basal and postcosyntropin (1 μg)-stimulated cortisol levels were measured, and all patients were closely monitored with daily assessments of clinical and laboratory variables. Western diagnostic criteria were followed for defining adrenal insufficiency (AI). The end point was the survival assessed at day 28 or death, whichever came earlier.
Results: The mean basal (T0) and poststimulation (T30) cortisol levels were 31.77 ± 15.9 μg/dL and 37.58 ± 17.31 μg/dL, respectively. In all sepsis patients, 48.33% qualified as AI at T0 ≤ 24 μg/dL, 61.67% at delta cortisol (Δ = T30-T0) ≤7 μg/dL, and 78.33% at Δ ≤9 μg/dL. Using receiver operating characteristic curve, the area under the curve (AUC) was 0.4954, signifying poor prediction to death.
Conclusions: Indians have completely different characteristics of cortisol levels in sepsis patients, in comparison to the Western data. They have higher range of basal cortisol levels, higher percentage of AI, and an inability to predict mortality with the cortisol levels. Hence, there is requirement of an international study to confirm the dichotomy of the results.

DOI: 10.4103/JETS.JETS_123_16
PMCID: PMC5663138
PMID: 29097858

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

198: Swain R, Bakshi MS, Dhaka S, Singh KK, Sikary AK. Self-Strangulation Turning into Partial Hanging for a Suicide Victim. J Forensic Sci. 2018 Jul;63(4):1309-1311. doi: 10.1111/1556-4029.13680. Epub 2017 Oct 30. PubMed PMID: 29084359.

Hanging is the most common asphyxial method of suicide, whereas suicide by strangulation is unusual. Here, we are reporting a particular methodology of the asphyxial method of suicide in which a case of self-strangulation culminated into partial hanging. A 30-year-old male wrapped one end of the cable wire around his neck. He then passed the other end over a curtain rod and tied that end around the right hand. He pulled the hand down, using the curtain rod as a fulcrum, to tighten the noose around the neck in an attempt to strangulate himself. However, he lost consciousness during the process and the body slipped down, pulling the right hand up which got stuck at the curtain rod. This led the body hanged in the kneeling position. This bizarre scenario raised suspicion of homicide but the crime scene, autopsy and victim characteristics were in favor of suicide.

DOI: 10.1111/1556-4029.13680
PMID: 29084359

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

200: Talwar S, Kapoor PM, Singh S, Das D, Sharma KP, Airam B. Pulmonary valve reconstruction during conduit revision: Technique and transesophageal echocardiography imaging. Ann Card Anaesth. 2017 Oct-Dec;20(4):442-443. doi: 10.4103/aca.ACA_55_17. PubMed PMID: 28994681; PubMed Central PMCID: PMC5661315.

Transesophageal echocardiography can be a useful adjunct in assessing the quality of repair in patients undergoing novel methods of reconstruction of the right

ventricular outflow. We present one such patient here.

DOI: 10.4103/aca.ACA_55_17
PMCID: PMC5661315
PMID: 28994681 [Indexed for MEDLINE]

201: 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 [Indexed for MEDLINE]

202: 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 ($P\leq0.0001$). 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]

203: Tarique M, Naqvi RA, Ali R, Khanna N, Rao DN. CD4(+) TCRÎ³Î´(+) FoxP3(+) cells: An unidentified population of immunosuppressive cells towards disease progression leprosy patients. Exp Dermatol. 2017 Oct;26(10):946-948. doi: 10.1111/exd.13302. Epub 2017 Apr 2. PubMed PMID: 28109171.

This study, for the first time, reveals the role of M. leprae-specific CD4+ TCRγδ+ FoxP3+ cells in the progression and pathogenesis of leprosy. Co-culture with CD4+ CD25- cells suggested the immunosuppressive nature of CD4+ TCRγδ+ cells in dose-dependent manner. Isolation of CD4+ TCRγδ+ cells from leprosy patients and then culture in presence of M. leprae cell wall antigens (MLCwA) along with TGF β, IPP and IL-2 suggested that these cells are M. leprae specific. TGF-β-mediated SMAD3 signalling was turned out to be major factor towards the expression of FoxP3 in these cells. SMAD3 silencing during induction of these cells barely showed the induction of FoxP3. High density of SMAD3 binding at TGFβRII in CD4+ TCRγδ+ FoxP3+ furthermore suggested the TGF-β-directed SMAD3 signalling in these cells. Taken together the above data, we can conclude that CD4+ TCRγδ+ FoxP3+ cells possess the potential to track the severity of the disease in leprosy patients.

DOI: 10.1111/exd.13302
PMID: 28109171

204: Tiwari V, Gamanagatti S, Mittal R, Nag H, Khan SA. Correlation between MRI and hip arthroscopy in children with Legg-Calve-Perthes disease. Musculoskelet Surg. 2017 Oct 12. doi: 10.1007/s12306-017-0513-9. [Epub ahead of print] PubMed PMID: 29027115.

BACKGROUND: Most of the information available about Legg-Calve-Perthes disease (LCPD) at present is gained through imaging modalities including plain radiographs and magnetic resonance imaging (MRI). But the accuracy of MRI in this disease and its predictive value to reveal various intra-articular pathologies is not known. We correlated the findings of MRI with those seen on hip arthroscopy in children with active stage of LCPD.
METHODS: We conducted a prospective observational study in which MRI findings were correlated with corresponding findings on hip arthroscopy in a cohort of 25 patients of active LCPD below 12 years of age. The parameters noted on MRI included status of ligamentum teres, status of the labrum, synovial effusion if any, condition of the femoral and acetabular articular cartilage including chondral flaps, chondral indentation and intra-articular loose bodies. The indication of performing hip arthroscopy was persistent severe hip pain (Wong-Baker FACES pain scale ≥ 3) after 6 months of conservative management. Sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) were calculated for MRI considering arthroscopy as a gold standard.
RESULTS: Synovial effusion was seen in a large number of patients on both MRI (17) and hip arthroscopy (24). The sensitivity (95% confidence interval) of MRI was found to be low, especially with respect to labral tears [25% (0.63-80.6)] and intra-articular loose bodies [20% (0.51-71.6)]. NPV for synovial effusion was also found to be low [12.5% (0.32-52.7)], although specificity and PPV of MRI were found to be good for all the parameters.
CONCLUSIONS: MRI cannot be completely relied upon for identifying all the intra-articular pathologies in children with LCPD, although it has a good complimentary role. In patients with severe persistent pain with suspicion for joint changes, hip arthroscopy can provide a safe and efficient procedure (better than MRI) for eliciting the associated joint pathology.

DOI: 10.1007/s12306-017-0513-9
PMID: 29027115

205: Tomar A, Vasisth S, Khan SI, Malik S, Nag TC, Arya DS, Bhatia J. Galangin ameliorates cisplatin induced nephrotoxicity in vivo by modulation of oxidative stress, apoptosis and inflammation through interplay of MAPK signaling cascade. Phytomedicine. 2017 Oct 15;34:154-161. doi: 10.1016/j.phymed.2017.05.007. Epub 2017 Jun 15. PubMed PMID: 28899498.

BACKGROUND AND PURPOSE: Cisplatin is a widely used chemotherapeutic agent but now-a-days its usage is limited in clinical chemotherapy because of its severe nephrotoxic effect on renal tissues. Galangin, a flavonoid obtained from ginger family has been demonstrated to have antioxidant, anti-apoptotic and anti-inflammatory properties. This study is aimed to investigate the possible ameliorative effect of galangin in a rodent model of cisplatin-induced nephrotoxicity.
MATERIAL AND METHODS: Adult male albino wistar rats were divided into six groups (n=6) viz normal, cisplatin-control, galangin (25, 50 and 100mg/kg p.o.) and per se (100mg/kg galangin, p.o.). Galangin was administrated orally to the rats for a period of 10 days. On the 7th day of the treatment, nephrotoxicity was induced in all the groups by a single dose of cisplatin (8mg/kg, i.p.) (except normal and per se group). On the 11th day, the rats were anaesthetized and blood was withdrawn via direct heart puncture for biochemical estimation. Rats were sacrificed and kidneys were isolated and preserved for evaluation of histopathological, ultra structural immunohistochemical studies and western blot analysis.
RESULTS: Cisplatin significantly impaired renal function and increased oxidative stress and inflammation. It also increased expression of pro-apoptotic proteins Bax and caspase-3 and decreased the expression of the anti-apoptotic protein Bcl-2. Histological and ultrastructural findings were also supportive of renal tubular damage. Pretreatment with galangin (100mg/kg p.o.) preserved renal function, morphology, suppressed oxidative stress, inflammation and the activation of apoptotic pathways. TUNEL assay showed decreased DNA fragmentation on galangin pre-treatment. Furthermore, galangin (100mg/kg) pre-treatment also reduced the expression of NFκB along with proteins MAPK pathway i.e. p38, JNK and ERK1/2.
CONCLUSION: In conclusion, Galangin (100mg/kg, p.o.) significantly ameliorated cisplatin induced nephrotoxicity by suppressing MAPK induced inflammation and apoptosis.

DOI: 10.1016/j.phymed.2017.05.007
PMID: 28899498 [Indexed for MEDLINE]

206: ---

207: Trikha V, Singh V, Choudhury B, Das S. Retrospective analysis of proximal humeral fracture-dislocations managed with locked plates. J Shoulder Elbow Surg. 2017 Oct;26(10):e293-e299. doi: 10.1016/j.jse.2017.03.035. Epub 2017 May 15. PubMed PMID: 28522075.

BACKGROUND: Fracture-dislocation is the extreme variant of injury to the proximal humerus that occurs more commonly in young adults as a result of high-velocity trauma. We evaluated the functional and radiologic outcome of fixation of proximal humeral fracture-dislocations with locked plates.
METHODS: This was a retrospective review of 33 proximal humeral

fracture-dislocations in 29 patients with a mean age of 35 years (range, 19-60 years) treated by open reduction and internal fixation with locked plates between January 2009 and December 2013. The fracture-dislocation in 85% was the result of high-energy trauma resulting in 3- or 4-part fracture-dislocation. The fracture-dislocation was anterior in 27 and posterior in 6.
RESULTS: The average delay from injury to surgery was 7 days (range, 1-35 days), with a mean follow-up of 40 months (range, 24-66 months). All of the fractures united at an average of 15 weeks after surgery. At the final follow-up, the mean forward flexion was 129° (range, 100°-160°), and mean abduction was 128° (range, 100°-150°). The mean Constant score at the final follow-up was 78 points (range, 68-88 points). One case of complete osteonecrosis of the humeral head and 1 case of partial osteonecrosis of the humeral head were noted. Two cases of screw perforation of the humeral head were seen, with subsequent restricted range of motion improving after removal of the offending screws.
CONCLUSIONS: Most young patients with 3- and 4-part proximal humeral fracture-dislocations can achieve good functional outcome after fixation with locked plates.

DOI: 10.1016/j.jse.2017.03.035
PMID: 28522075 [Indexed for MEDLINE]

208: Tripathy S, Parida GK, Roy SG, Singhal A, Mallick SR, Tripathi M, Shamim SA. Fluorodeoxyglucose Positron Emission Tomography-Computed Tomography in Disseminated Cryptococcosis. Indian J Nucl Med. 2017 Oct-Dec;32(4):377-379. doi: 10.4103/ijnm.IJNM_75_17. PubMed PMID: 29142368; PubMed Central PMCID: PMC5672772.

Disseminated cryptococcosis without pulmonary involvement is a very rare phenomenon. Patterns of organ involvement in cryptococcosis resemble various other infective conditions as well as malignant conditions on fluorodeoxyglucose positron emission tomography-computed tomography. We present a case of a 43-year-old male patient who had disseminated cryptococcosis. The rarity of the case being noninvolvement of lungs and meninges and resembling more like lymphoma due to the diffuse involvement of the lymph nodes on both sides of the diaphragm.

DOI: 10.4103/ijnm.IJNM_75_17
PMCID: PMC5672772
PMID: 29142368

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

209: 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. Review. 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 [Indexed for MEDLINE]

210: Verma S, Das P, Kumar VL. Chemoprevention by artesunate in a preclinical model of colorectal cancer involves down regulation of Î²-catenin, suppression of angiogenesis, cellular proliferation and induction of apoptosis. Chem Biol Interact. 2017 Dec 25;278:84-91. doi: 10.1016/j.cbi.2017.10.011. Epub 2017 Oct 12. PubMed PMID: 29031619.

Use of anti-inflammatory drugs is well known to decrease the risk of colorectal cancer, one of the most common causes of cancer related mortality. In view of anti-inflammatory property of artesunate reported in various experimental models, the present study was carried out to evaluate its efficacy in rat model where colon carcinogenesis was induced by 1, 2 dimethylhydrazine (DMH). A time course study revealed that two injections of DMH given at an interval of one week resulted in appearance of multiple plaque lesions and aberrant crypt foci in the colon with a peak effect occurring at the end of 8 weeks. An efficacy study carried out with daily oral administration of artesunate (50 and 150 mg/kg) and aspirin (60 mg/kg) showed a marked reduction in pre-neoplastic changes with a significant decrease in the number of aberrant crypt foci, crypt multiplicity and restoration of histoarchitecture. Both the drugs down regulated β-catenin signaling, reduced the levels of angiogenic markers like VEGF, MMP-9 and inhibited cellular proliferation. The anti-cancer effect of these drugs was concomitant with the pro-apoptotic effect as revealed by increased DNA fragmentation, TUNEL positivity and Bax/Bcl2 immunoreactivity. This is the first study to evaluate the inhibitory effect of artesunate on pre-neoplastic changes in colon where its chemopreventive effect was found to be comparable to that of aspirin. Our study strengthens the previous findings and shows that it has a preventive and therapeutic potential in the treatment of colon cancer.

DOI: 10.1016/j.cbi.2017.10.011
PMID: 29031619 [Indexed for MEDLINE]

211: Vinod KS, Gupta N, Sahu H, Wig N. Late Presentation of Post Diphtheritic Myocarditis in a 15-year Male. JNMA J Nepal Med Assoc. 2017 Oct-Dec;56(208):475-477. PubMed PMID: 29453484.

A 15-year old male patient presented to us with dyspnoea for four days. He had a history of fever, pseudo-membranous tonsillitis and cervical adenopathy twenty-five days prior to the presentation. On examination and laboratory investigations, he had features suggestive of myocarditis with biventricular failure. There was no reliable history of immunisation and he had a positive history of contact. He was planned for anti-diphtheria toxin but before the anti-toxin could be initiated, the patient succumbed to refractory cardiogenic shock. This was a rare case of late onset diphtheritic myocarditis in an unimmunised adult. With the advent of universal immunisation, there has been a significant decline in the incidence but there is still some road to cover.

PMID: 29453484

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

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

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

213: Yadav DK, Khanna K, Jain V, Samie AU. Caecal volvulus with intestinal malrotation: need for caecopexy? BMJ Case Rep. 2017 Oct 15;2017. pii: bcr-2017-222247. doi: 10.1136/bcr-2017-222247. PubMed PMID: 29038196.

214: Yadav DP, Kedia S, Madhusudhan KS, Bopanna S, Goyal S, Jain S, Vikram NK, Sharma R, Makharia GK, Ahuja V. Body Composition in Crohn's Disease and Ulcerative Colitis: Correlation with Disease Severity and Duration. Can J Gastroenterol Hepatol. 2017;2017:1215035. doi: 10.1155/2017/1215035. Epub 2017 Oct 31. PubMed PMID: 29226115; PubMed Central PMCID: PMC5684551.

Background: Results on body composition in Crohn's disease (CD) and ulcerative colitis (UC) have been heterogeneous and are lacking from Asia. Present study assessed body composition in CD/UC and correlated it with disease severity/duration.
Methods: Patients of CD/UC following between Dec 2014 and Dec 2015 who consented for bioimpedance analysis for body fat measurement were included. Lean mass and fat-free mass index (FFMI) were calculated with standard formulae. Visceral fat area (VFA), subcutaneous fat area (SCA), and visceral to subcutaneous fat ratio (VF/SC) were evaluated in CD patients on abdominal CT.
Results: Lean mass in CD (n = 44, mean age: 41.2 ± 15.8 years, 73% males) was significantly lower than UC (n = 53, mean age: 33.2 ± 11.2 years, 68% males; 44.2 ± 7.8 versus 48.3 ± 8.4 Kg, p = 0.01). In both UC/CD, disease severity was

associated with nonsignificant decline in BMI (UC: 22.1 ± 4.9 versus 20.2 ± 3.2 versus 19.9 ± 3.2 kg/m2, p = 0.23; CD: 22.1 ± 4.2 versus 19.9 ± 2.3 versus 19.7 ± 4.2 kg/m2, p = 0.18) and fat mass (UC: 10.9 ± 8.9 versus 8.1 ± 5.9 versus 5.7 ± 3.6 kg, p = 0.14; CD: 11.2 ± 7 versus 7.9 ± 4.4 versus 7.2 ± 5.9 kg, p = 0.16), and disease duration was associated with significant decline in FFMI (p < 0.05). In CD, disease severity was associated with nonsignificant decline in SCA and increase in VF/SC.
Conclusions: CD patients have lower lean mass than UC. Body fat decreases with increasing disease severity and fat-free mass decreases with increasing disease duration in both UC/CD.

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PMID: 29226115

215: Yenamandra VK, Shamsudheen KV, Madhumita RC, Rijith J, Ankit V, Scaria V, Sridhar S, Kabra M, Sharma VK, Sethuraman G. Autosomal recessive epidermolysis bullosa simplex: report of three cases from India. Clin Exp Dermatol. 2017 Oct;42(7):800-803. doi: 10.1111/ced.13182. PubMed PMID: 28925504.

216: Yenamandra VK, Bhari N, Ray SB, Sreenivas V, Dinda AK, Scaria V, Sharma VK, Sethuraman G. Diagnosis of Inherited Epidermolysis Bullosa in Resource-Limited Settings: Immunohistochemistry Revisited. Dermatology. 2017;233(4):326-332. doi: 10.1159/000478856. Epub 2017 Oct 26. PubMed PMID: 29069641.

BACKGROUND: Immunofluorescence (IFM) antigen mapping is the most commonly used technique to diagnose and differentiate epidermolysis bullosa (EB). In India, IFM is limited to few research laboratories and is not readily available, making the diagnosis largely clinical and often inaccurate. Ob jective of the Study: To examine the diagnostic usefulness of immunohistochemistry (IHC) as compared to IFM in resource-limited settings.
METHODS: Forty-four consecutive EB patients were included in this study. IHC and IFM were performed on 7-µm frozen tissue sections using standard laboratory protocols with a limited panel of antibodies. The kappa coefficient of agreement was calculated with genetic analysis as the gold standard.
RESULTS: IFM and IHC accurately identified the subtype of EB in 80.9% (p < 0.001) of the cases, when a clear blister cavity was evident on biopsy. The sensitivities and specificities of IHC and IFM for diagnosing EB simplex, junctional EB, and dystrophic EB were 100, 100, and 60% and 82.4, 100, and 100%, respectively. IHC was equally effective (p < 0.001) in establishing the type of EB as IFM.
CONCLUSIONS: IHC staining and its interpretation were simple and comparable to IFM. IHC had an advantage of showing subtle changes in the epidermal architecture that could not be appreciated on IFM and hence can be considered useful in resource-limited settings.

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PMID: 29069641

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

Triple-negative breast cancer (TNBC) represents the highly aggressive subgroup of

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

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PMID: 28986287

218: 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; PubMed Central PMCID: PMC5844224.

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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