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

1: Agarwal A, Vibha D, Srivastava AK, Shukla G, Prasad K. Guillain-Barre syndrome complicating chikungunya virus infection. J Neurovirol. 2017 Jun;23(3):504-507. doi: 10.1007/s13365-017-0516-1. Epub 2017 Feb 13. PubMed PMID: 28194661.

Chikungunya virus (CHIKV) is a mosquito-borne alphavirus which presents with symptoms of fever, rash, arthralgia, and occasional neurologic disease. While outbreaks have been earlier reported from India and other parts of the world, the recent outbreak in India witnessed more than 1000 cases. Various systemic and rarely neurological complications have been reported with CHIKV. We report two cases of Guillain-Barré syndrome (GBS) with CHIKV. GBS is a rare neurological complication which may occur after subsidence of fever and constitutional symptoms by several neurotropic viruses. We describe two cases of severe GBS which presented with rapidly progressive flaccid quadriparesis progressing to difficulty in swallowing and breathing. Both required mechanical ventilation and improved partly with plasmapharesis. The cases emphasize on (1) description of the rare complication in a setting of outbreak with CHIKV, (2) acute axonal as well as demyelinating neuropathy may occur with CHIKV, (3) accurate identification of this entity during outbreaks with dengue, both of which are vector borne and may present with similar complications.

DOI: 10.1007/s13365-017-0516-1
PMID: 28194661

2: Agarwal H, Sebastian LJ, Gaikwad SB, Garg A, Mishra NK. Vein of Galen aneurysmal malformation-clinical and angiographic spectrum with management perspective: an institutional experience. J Neurointerv Surg. 2017 Feb;9(2):159-164. doi: 10.1136/neurintsurg-2015-012137. Epub 2016 Feb 15. PubMed PMID: 26880722.

BACKGROUND AND PURPOSE: Vein of Galen aneurysmal malformation (VGAM) is a rare developmental intracranial vascular malformation. We analyzed the clinical presentations, imaging findings, angioarchitecture, management options, and outcome in a demographically heterogeneous set of VGAM patients.
METHODS: We retrospectively analyzed cases of VGAM from our departmental archive collected between 1988 and January 2015. Demographic, clinical, therapeutic, and follow-up details were obtained for each patient from the available records.
RESULTS: We identified 36 patients with VGAM including 6 neonates, 18 infants, 7 children aged 2-10 years, and 5 adults. Macrocrania was the commonest presenting feature. Type of fistulae was mural in 14 and choroidal in 18 patients while 4 had a thrombosed sac at presentation. In 3 cases the dilated venous sac had connection with the deep venous system. Bilateral jugular atresia and stenosis were seen in 9 and 6 patients, respectively. Giant venous sac (>4 cm) was significantly correlated with mural type (p=0.0001). Dural arterial recruitment was seen in 4 patients including 3 adults. Among the 23 patients treated by endovascular means, 14 had a good outcome, 5 had a poor outcome, and 4 died. A significant correlation was noted between jugular atresia and poor outcome (p=0.003).
CONCLUSIONS: We encountered a wide range of demographic, clinical, and angiographic features in VGAM. Mural type malformations were associated with giant venous sacs. Good outcome after embolization was seen in selected neonates and in most of the infants, children, and adults. Jugular atresia was significantly associated with poor outcome.

DOI: 10.1136/neurintsurg-2015-012137
PMID: 26880722 [Indexed for MEDLINE]

3: Agarwal KK, Parida GK, Tripathi M, Sahoo MK, Thakar A, Bal CS, Kumar R. FDG PET/CT in Carcinoma of the Tongue With Bilateral Adrenal Metastases. Clin Nucl

Med. 2017 Feb;42(2):123-124. doi: 10.1097/RLU.0000000000001521. PubMed PMID: 27997430.

Squamous cell carcinoma is the most common malignant neoplasm of the oral cavity, and it contributes approximately 90% of all oral malignancies. We present a case of a squamous cell carcinoma of the tongue with rare site of bilateral adrenal metastases on F-FDG PET/CT with response evaluation after chemotherapy.

DOI: 10.1097/RLU.0000000000001521
PMID: 27997430 [Indexed for MEDLINE]

4: Agarwal SK, Bhowmik D, Mahajan S, Bagchi S. Impact of type of calcineurin inhibitor on post-transplant tuberculosis: Single-center study from India. Transpl Infect Dis. 2017 Feb;19(1). doi: 10.1111/tid.12626. Epub 2016 Dec 16. PubMed PMID: 27775825.

INTRODUCTION: Tuberculosis (TB) is an important cause of morbidity and mortality in renal transplant recipients. Immunosuppressive drugs are one of the most important risk factor for post-transplant tuberculosis (PTTB). A paucity of data exists about the impact of the type of calcineurin inhibitor on PTTB.
METHODS: In this retrospective study, all adult patients on calcineurin inhibitor-based immunosuppression were included. Patients receiving TB chemoprophylaxis were excluded. Diabetes, duration of dialysis, hepatitis B and C, past treated TB, induction therapy, type of antimetabolite, acute rejection, new onset of diabetes after renal transplantation (RT) (NODAT) and cytomegalovirus (CMV) were analyzed in tacrolimus (Tac) and cyclosporine (CsA) groups. Primary outcome was incidence of TB and secondary outcomes were timeline of development of TB after RT and pattern of TB in the two groups.
RESULTS: Of the 1664 patients included, 582 patients received CsA-based immunosuppression while 1082 received Tac-based immunosuppression. Duration of dialysis, positive tuberculin skin test, use of induction, mycophenolate mofetil use, CMV infection, and NODAT were significantly more, and hepatitis B infection, past treated TB, and acute rejection episodes were significantly less in the Tac group. At the end of follow-up, incidence of TB in the Tac group was significantly less than in the CsA group (6.1% vs 19.9%, P<.001). Mean time for development of TB after RT was similar in both the groups and nodal and disseminated TB were more common in the Tac group.
CONCLUSION: In conclusion, our study shows that use of Tac as compared to CsA significantly decreases incidence of PTTB. Time of infection since transplant was similar in both the groups. However, nodal and disseminated TB were more common in the Tac group.

DOI: 10.1111/tid.12626
PMID: 27775825 [Indexed for MEDLINE]

5: Agnihotri V, Gupta A, Kumar R, Upadhyay AD, Dwivedi S, Kumar L, Dey S. Promising link of HLA-G polymorphism, tobacco consumption and risk of Head and Neck Squamous Cell Carcinoma (HNSCC) in North Indian population. Hum Immunol. 2017 Feb;78(2):172-178. doi: 10.1016/j.humimm.2016.12.007. Epub 2016 Dec 28. PubMed PMID: 28040535.

Human leukocyte antigen (HLA-G) is a potent immune-tolerant molecule and has a critical role in various pathological conditions of cancer. The aim of the study was to analyze the association of HLA-G polymorphism as a risk factor in Head and Neck Squamous Cell Carcinoma (HNSCC). The HLA-G polymorphism at 3'UTR 14bp INDEL (rs371194629) and +3142G/C (rs1063320) were studied in 383 HNSCC patients and 383 ethnically similar-aged healthy controls in North Indian population. The genotyping study of two polymorphisms of HLA-G was documented using DNA-PAGE and RFLP-PCR method. 14bp INDEL Del/Ins, Ins/Ins genotype and Ins allele were more pronounced in HNSCC patients in compared to controls. Whereas, +3142 C/C genotype and C allele were associated with risk factors in HNSCC. Furthermore, the dual

effect of polymorphisms; both variants (Del/Ins-Ins/Ins & G/C-C/C) carrying loci was significantly (OR=2.78) associated with the disease compared to one variant (Del/Del-G/C or Del/Del-C/C or Ins/Ins-G/G). Moreover, both polymorphisms showed promising link in terms of tobacco influence on HNSCC risk. It can be concluded that this study first time reports that C/C, Del/Ins and Ins/Ins genotype as well as C and Ins allele could be major risk factors with strong impact of tobacco for HNSCC in North Indian population.

DOI: 10.1016/j.humimm.2016.12.007
PMID: 28040535 [Indexed for MEDLINE]

6: Alvarez A, Goudra BG, Singh PM. Enhanced recovery after bariatric surgery. Curr Opin Anaesthesiol. 2017 Feb;30(1):133-139. doi: 10.1097/ACO.0000000000000404. PubMed PMID: 27820740.

PURPOSE OF REVIEW: Enhanced recovery after surgery (ERAS) methodology has demonstrated consistent benefits in patients undergoing colorectal, urological and thoracic surgeries. Principles of these protocols and their advantages are expected to extend into other surgical specialties such as bariatric surgery. In this review, we summarize the components of ERAS protocols for bariatric surgery and present the evidence on the emerging role of ERAS principles in obese patients.
RECENT FINDINGS: Many recent trials have evaluated ERAS protocols for bariatric surgery. Most of these protocols originate from modifications within the individual hospital-based conventional perioperative care strategies. Studies demonstrate that 'ERAS based' care requires evidence-based modifications in all preoperative, intraoperative and postoperative phase. Despite a lack of standardization in protocols at present, benefits such as decreased length of hospital stay, rapid patient turnover, shorter operating room times and lower healthcare costs have been well demonstrated repeatedly.
SUMMARY: ERAS for bariatric surgery is in its early phase. Nevertheless, literature supports its role in improving perioperative outcomes compared with conventional care in this scenario. Evidence-based protocols, multidisciplinary teamwork and meticulous audit seem to be the key factors for success in ERAS methodology.

DOI: 10.1097/ACO.0000000000000404
PMID: 27820740

7: Arora MK, Singh PM. Enhanced Recovery for Major Abdominopelvic Surgery, 1st Edition. Anesth Analg. 2017 Feb 1. doi: 10.1213/ANE.0000000000001819. [Epub ahead of print] PubMed PMID: 28151817.

8: Banerjee A, Kumari C, Jhajhria SK. Variation in the Branching Pattern of Third Part of Axillary Artery- A Case Report. J Clin Diagn Res. 2017 Feb;11(2):AD03-AD04. doi: 10.7860/JCDR/2017/21605.9245. Epub 2017 Feb 1. PubMed PMID: 28384847; PubMed Central PMCID: PMC5376810.

Anatomical variation of the branching pattern of axillary artery is very common. The knowledge of this variation is often useful during different surgical and interventional procedures. Variations include typically of Lateral Thoracic Artery (LTA) and Posterior Circumflex Humeral Artery (PCHA). The present case has been reported to document the variation of LTA and PCHA. The axilla of a 65-year-old embalmed female cadaver was routinely dissected for educational purpose in the Department of Anatomy, AIIMS, New Delhi, India. Cunnighams Manual of Dissection was followed during the whole dissection procedure. We found that the third part of axillary artery gave rise to a common trunk which divided into PCHA and LTA. The PCHA curved backwards around the humeral neck and made anastomosis with the anterior circumflex humeral artery. The LTA supplied serratus anterior and the pectoral muscles and made anastomosis with intercostal

arteries. The axillary nerve accompanied PCHA while the thoracodorsal nerve accompanied LTA. The rare anatomical variation of the branching pattern of axillary artery is assumed to be helpful in the surgical procedures and various therapeutic interventions of the upper limb.

DOI: 10.7860/JCDR/2017/21605.9245
PMCID: PMC5376810
PMID: 28384847

9: Baranwal AK, Bhat DK, Goswami S, Agarwal SK, Kaur G, Kaur J, Mehra N. Comparative analysis of Luminex-based donor-specific antibody mean fluorescence intensity values with complement-dependent cytotoxicity & flow crossmatch results in live donor renal transplantation. Indian J Med Res. 2017 Feb;145(2):222-228. doi: 10.4103/ijmr.IJMR_222_16. PubMed PMID: 28639599; PubMed Central PMCID: PMC5501055.

BACKGROUND & OBJECTIVES: Antibodies specific to donor human leucocyte antigen (HLA) play a critical role in graft rejection and graft loss. In recent years, techniques for their detection have evolved significantly providing an ever-increasing degree of sensitivity and specificity, from the conventional cell-based assays to the advanced solid-phase system based on the Luminex platform. Consensus is still evolving on the routine employment of all these methods, either stand alone or in combination. The objective of this study was to explore the near-accurate mean fluorescence intensity (MFI) cut-off values detected on Luminex platform predicting the strength of cell-based crossmatch results.
METHODS: Serum samples from 116 primary renal transplant recipients awaiting transplantation were tested for the presence of antidonor antibodies by the complement-dependent cytotoxicity (CDC) and flow crossmatch (FCXM) methods with their corresponding donors as well as for HLA-donor-specific antibodies (DSA) detection using a sensitive single antigen bead (SAB) assay.
RESULTS: None of the patients having HLA Class I DSA with MFI values <1000 showed positivity for T-cell FCXM or CDC crossmatch, while in the group having MFI values between 1000 and 3000, 54 per cent showed positivity for the FCXM but none by the CDC method. However, in the group having MFI values >3000, 95 per cent of cases were positive for FCXM. Further, those groups with MFI values between 3000 and 5000, only 36 per cent were positive for CDC crossmatch, while 90 per cent showed positivity in the group with MFI >7000.
INTERPRETATION & CONCLUSIONS: A cut-off MFI value of 3000 for Luminex SAB-based assay was found to significantly correlate with the FCXM positivity while a MFI value of 7000 and above predicted a positive CDC crossmatch. MFI cut-off value obtained as a surrogate marker for CDC and FCXM tests will help in resolving the limitations of different cell-based techniques.

DOI: 10.4103/ijmr.IJMR_222_16
PMCID: PMC5501055
PMID: 28639599

10: Baranwal AK, Mehra NK. Major Histocompatibility Complex Class I Chain-Related A (MICA) Molecules: Relevance in Solid Organ Transplantation. Front Immunol. 2017 Feb 28;8:182. doi: 10.3389/fimmu.2017.00182. eCollection 2017. Review. PubMed PMID: 28293239; PubMed Central PMCID: PMC5329007.

An ever growing number of reports on graft rejection and/or failure even with good HLA matches have highlighted an important role of non-HLA antigens in influencing allograft immunity. The list of non-HLA antigens that have been implicated in graft rejection in different types of organ transplantation has already grown long. Of these, the Major Histocompatibility Complex class I chain-related molecule A (MICA) is one of the most polymorphic and extensively studied non-HLA antigenic targets especially in the kidney transplantation. Humoral response to MICA antigens has repeatedly been associated with lower graft survival and an increased risk of acute and chronic rejection following kidney

and liver transplantation with few studies showing conflicting results. Although there are clear indications of MICA antibodies being associated with adverse graft outcome, a definitive consensus on this relationship has not been arrived yet. Furthermore, only a few studies have dealt with the impact of MICA donor-specific antibodies as compared to those that are not donor specific on graft outcome. In addition to the membrane bound form, a soluble isoform of MICA (sMICA), which has the potential to engage the natural killer cell-activating receptor NKG2D resulting in endocytosis and degradation of receptor-ligand interaction complex leading to suppression of NKG2D-mediated host innate immunity, has been a subject of intense discussion. Most studies on sMICA have been directed toward understanding their influence on tumor growth, with limited literature focusing its role in transplant biology. Furthermore, a unique dimorphism (methionine to valine) at position 129 in the α2 domain categorizes MICA alleles into strong (MICA-129 met) and weak (MICA-129 val) binders of NKG2D receptor depending on whether they have methionine or valine at this position. Although the implications of MICA 129 dimorphism have been highlighted in hematopoietic stem cell transplantation, its role in solid organ transplantation is yet to be explored. This review summarizes the currently available information on MICA antibodies, soluble MICA, and MICA-129 dimorphism in a setting of solid organ transplantation.

DOI: 10.3389/fimmu.2017.00182
PMCID: PMC5329007
PMID: 28293239

11: Batra A, Kashyap S, Singh L, Bakhshi S. Expression of FOXO3a and Correlation With Histopathologic Features in Retinoblastoma. Appl Immunohistochem Mol Morphol. 2017 Feb;25(2):95-99. doi: 10.1097/PAI.0000000000000278. PubMed PMID: 26574636.

Forkhead box (FOX) transcription factors are a class of highly conserved proteins, which serve critical cellular functions including cell cycle regulation. The downstream mechanisms of cell cycle regulation involve preservation of retinoblastoma protein function. Its deactivation by phosphorylation and translocation from nucleus to cytoplasm leads to cell proliferation. FOXO3a has been found to be dysregulated in few cancers. However, no study has been reported on role of FOXO3a in retinoblastoma. We assessed the expression of FOXO3a in sections of archived tissue blocks of enucleated/exenterated specimens of retinoblastoma by immunohistochemistry. The histopathologic features were reviewed and correlated with its expression. Effect of FOXO3a expression on survival was assessed. FOXO3a expression was assessed in 100 sections. Six samples did not contain any viable tissue. Retrospective data of 94 patients revealed that median age at presentation was 36 months with male:female ratio of 1.9:1. Fifty-one percent of patients were International Retinoblastoma Staging System stage 1. Of the 94 sections, 68 (72%) showed cytoplasmic expression. Choroidal invasion was associated with cytoplasmic FOXO3a (P=0.04). A trend was also noted in optic nerve cut end involvement (P=0.07). No other histopathologic features were found to be associated with FOXO3a expression. The overall survival and progression-free survival were not found to be affected by FOXO3a expression. Cytoplasmic expression of FOXO3a is frequently found in retinoblastoma and may be involved in pathogenesis. Activation by relocation of FOXO3a to nucleus may activate nonmutated retinoblastoma and may be a potential target of treatment in retinoblastoma.

DOI: 10.1097/PAI.0000000000000278
PMID: 26574636 [Indexed for MEDLINE]

12: Bhari N, Gupta S. Tacrolimus 0.1% ointment applied under occlusion using cling film clears chronic actinic dermatitis resistant to systemic treatment. Int J Dermatol. 2017 Jun;56(6):e139-e141. doi: 10.1111/ijd.13557. Epub 2017 Feb 27. PubMed PMID: 28239836.

13: Bhari N, Sahni K, Dev T, Sharma VK. Symmetrical drug-related intertriginous and flexural erythema (Baboon syndrome) induced by simultaneous exposure to oral and topical terbinafine. Int J Dermatol. 2017 Aug;56(8):e168-e170. doi: 10.1111/ijd.13581. Epub 2017 Feb 27. PubMed PMID: 28244137.

14: Bopanna S, Ananthakrishnan AN, Kedia S, Yajnik V, Ahuja V. Risk of colorectal cancer in Asian patients with ulcerative colitis: a systematic review and meta-analysis. Lancet Gastroenterol Hepatol. 2017 Apr;2(4):269-276. doi: 10.1016/S2468-1253(17)30004-3. Epub 2017 Feb 21. PubMed PMID: 28404156.

BACKGROUND: The increased risk of colorectal cancer in ulcerative colitis is well known. The risk of sporadic colorectal cancer in Asian populations is considered low and risk estimates of colorectal cancer related to ulcerative colitis from Asia vary. This meta-analysis is an Asian perspective on the risk of colorectal cancer related to ulcerative colitis.
METHODS: We searched PubMed and Embase for terms related to colorectal cancer in ulcerative colitis from inception to July 1, 2016. The search for published articles was done by country for all countries in Asia. We included studies with information on the prevalence and cumulative risk of colorectal cancer at various timepoints. A random-effects meta-analysis was done to calculate the pooled prevalence as well as a cumulative risk at 10 years, 20 years, and 30 years of disease.
FINDINGS: Our search identified 2575 articles; of which 44 were eligible for inclusion. Our analysis included a total of 31 287 patients with ulcerative colitis with a total of 293 reported colorectal cancers. Using pooled prevalence estimates from various studies, the overall prevalence was 0·85% (95% CI 0·65-1·04). The risks for colorectal cancer were 0·02% (95% CI 0·00-0·04) at 10 years, 4·81% (3·26-6·36) at 20 years, and 13·91% (7·09-20·72) at 30 years. Subgroup analysis by stratifying the studies according to region or period of the study did not reveal any significant differences.
INTERPRETATION: We found the risk of colorectal cancer in Asian patients with ulcerative colitis was similar to recent estimates in Europe and North America. Adherence to screening is therefore necessary. Larger population-based, prospective studies are required for better estimates of the risk.
FUNDING: Indo-US Science and Technology Forum.

DOI: 10.1016/S2468-1253(17)30004-3
PMID: 28404156

15: Chaudhari RM, Ramanujam B, Appukuttan R, Sharma A, Kunwar Y, Tejaniya G, Garg A, Padma MV, Tripathi M, Bal C, Dash D, Chandra SP, Tripathi M. Utility of a questionnaire tool (QUARAS) for localizing and lateralizing seizures in the epilepsy monitoring unit (EMU). Clin Neurol Neurosurg. 2017 Feb;153:64-66. doi: 10.1016/j.clineuro.2016.12.012. Epub 2016 Dec 22. PubMed PMID: 28043024.

OBJECTIVES: An accurate description of the seizure semiology improves the recognition of the ictal onset zone and helps in hypothesizing the possible epileptogenic zone (EZ). Semiology based on a reliable description of seizures may be as good as investigative modalities, as has been shown by numerous studies. The main objective of this study was to apply a questionnaire-tool for auras and semiology (QUARAS) in refractory epilepsy cohort and compare its yield to that of standard history-taking.
METHODS: A drug refractory epilepsy cohort of 139 subjects was selected, based on inclusion and exclusion criteria. All subjects underwent routine history-taking, and a structured interview with QUARAS (in Hindi language) about 3-6 months later when they were admitted for pre-surgical work-up (Video-EEG, MRI, SPECT and PET), by an epilepsy nurse. Seizures were localised and lateralised at the each step separately, in a blinded manner; concordance with the final hypothesis was checked, after the epilepsy-surgery case-conference, and statistical significance of the difference calculated.

RESULTS: Auras were reported in significantly more number of patients after administration of QUARAS ($p<0.001$); there was also higher concordance between the final hypothesis and the localization and lateralization based on QUARAS than an unstructured history ($p<0.001$).
CONCLUSION: Administering a structured questionnaire in the native language of patients by trained personnel leads to better localisation and lateralisation and may help arrive at a hypothesis about the EZ.

DOI: 10.1016/j.clineuro.2016.12.012
PMID: 28043024 [Indexed for MEDLINE]

16: Chowdhury T, Bindu B, Singh GP, Schaller B. Sleep Disorders: Is the Trigemino-Cardiac Reflex a Missing Link? Front Neurol. 2017 Feb 27;8:63. doi: 10.3389/fneur.2017.00063. eCollection 2017. Review. PubMed PMID: 28289401; PubMed Central PMCID: PMC5326750.

Trigeminal innervated areas in face, nasolacrimal, and nasal mucosa can produce a wide array of cardiorespiratory manifestations that include apnea, bradypnea, bradycardia, hypotension, and arrhythmias. This reflex is a well-known entity called "trigemino-cardiac reflex" (TCR). The role of TCR is investigated in various pathophysiological conditions especially in neurosurgical, but also skull base surgery procedures. Additionally, its significance in various sleep-related disorders has also been highlighted recently. Though, the role of diving reflex, a subtype of TCR, has been extensively investigated in sudden infant death syndrome. The data related to other sleep disorders including obstructive sleep apnea, bruxism is very limited and thus, this mini review aims to investigate the possible role and correlation of TCR in causing such sleep abnormalities.

DOI: 10.3389/fneur.2017.00063
PMCID: PMC5326750
PMID: 28289401

17: Dada T, Midha N, Shah P, Sidhu T, Angmo D, Sihota R. Innovations in glaucoma surgery from Dr. Rajendra Prasad Centre for Ophthalmic Sciences. Indian J Ophthalmol. 2017 Feb;65(2):103-108. doi: 10.4103/ijo.IJO_865_16. Review. PubMed PMID: 28345564; PubMed Central PMCID: PMC5381287.

Trabeculectomy surgery is the current standard of care in glaucoma for achieving a low target intraocular pressure if medical therapy is not adequate. Augmentation of trabeculectomy with antimetabolites brought a revolutionary change in the long-term success rates of trabeculectomy, but along with it came a plethora of complications. There still is a big window for therapeutic innovations on this subject. The foremost target for these innovations is to modulate the wound healing response after glaucoma drainage surgery. Achieving the desired balance between long-term success of filtering blebs versus early failure due to scarring of blebs and hypotony due to dysfunctional filtering blebs poses a unique challenge to the ophthalmologists. Alternatives to trabeculectomy such as glaucoma drainage devices and minimally invasive glaucoma surgeries cannot solve the problem of glaucoma blindness in our country, mainly due to their unpredictable results and unfavorable cost-benefit ratio. In this article, we present a summary of our innovations in glaucoma surgery to advance patient care by making it more effective, safer, and economical.

DOI: 10.4103/ijo.IJO_865_16
PMCID: PMC5381287
PMID: 28345564 [Indexed for MEDLINE]

18: Dadhwal V, Sharma A, Khoiwal K. Juvenile Cystic Adenomyoma Mimicking a Uterine Anomaly: a Report of Two Cases. Eurasian J Med. 2017 Feb;49(1):59-61. doi: 10.5152/eurasianjmed.2017.17028. PubMed PMID: 28416935; PubMed Central PMCID: PMC5389496.

Juvenile cystic adenomyoma is a rare form of adenomyosis and described as a new type of mullerian anomaly in literature. We are presenting two cases of juvenile cystic adenomyoma which were misdiagnosed preoperatively as unicornuate uterus with haematometra in a non-communicating rudimentary horn. The mainstay of treatment is complete resection of lesion.

Publisher: Jüvenil kistik adenomiyom nadir bir adenomiyoz şeklidir ve literatürde yeni bir müllerian anomali türü olarak tanımlanmaktır. Bu çalışmada ameliyat öncesinde nonkominike rüdimenter hornda hematometralı unikornuat uterus olarak yanlış tanı konulan jüvenil kistik adenomiyomlu iki vaka sunulmaktadır. Tedavinin temeli lezyonun tamamının rezeksiyonudur.
DOI: 10.5152/eurasianjmed.2017.17028
PMCID: PMC5389496
PMID: 28416935

Conflict of interest statement: Conflict of Interest: No conflict of interest was declared by the authors.

19: Dahiya N, Bachani D, Acharya AS, Sharma DN, Gupta S, Haresh KP. Socio-Demographic, Reproductive and Clinical Profile of Women Diagnosed with Advanced Cervical Cancer in a Tertiary Care Institute of Delhi. J Obstet Gynaecol India. 2017 Feb;67(1):53-60. doi: 10.1007/s13224-016-0907-x. Epub 2016 Jun 13. PubMed PMID: 28242969; PubMed Central PMCID: PMC5306097.

INTRODUCTION: Cervical cancer is one of the leading cancers among Indian women with estimated 123,000 new cases and 67,477 deaths in 2012. Cervical cancer is a multi-etiological disease. Factors such as low socioeconomic status, tobacco use, sexual and reproductive factors, HIV and other sexually transmitted diseases and long-term oral contraceptive use have been suggested as determinants. Assessment of socio-demographic profile and reproductive history gives a better picture of the determinants of cervical carcinoma in low-resource settings.
METHODS: This hospital-based cross-sectional study was undertaken at a tertiary healthcare institute at New Delhi, India. Sixty-seven newly diagnosed women with advanced cervical cancer (stage 2B-4B), who were undertaking radio- and/or chemotherapy, were included to assess their socio-demographic, reproductive and clinical profile.
RESULTS: The mean age of women at the time of detection of cervical cancer was 52.28 ± 11.29 years (range 30-75 years). More than 60 % of patients were illiterate and belonged to middle socioeconomic status. Thirty-nine percentage of the study subjects had their first sexual experience before 15 years of age. Nearly 54 % women had 5 or more pregnancies. Nearly 73 % of women had all deliveries at home. Majority (69 %) of women had symptoms suggestive of reproductive tract infection. Among them, unusual discharge from vagina (73.13 %) followed by bleeding after menopause (55.10 %) and pain in abdomen (44.77 %) were the most common presenting complaints. Pallor was present in nearly two-third (63.93 %) study subjects. More than half (56.72 %) study subjects had moderate anemia, and 7.46 % had severe anemia before treatment. Mean hemoglobin level of the study subjects was 10.35 ± 1.72 gm% before treatment and 9.69 ± 1.29 gm% after treatment. This difference was statistically significant. Around 97 % of the study subjects had squamous cell carcinoma of the cervix. Majority (53.73 %) of the study subjects were in stage 3B of cervical cancer. Combination of radiotherapy and chemotherapy was the most common (77.67 %) modality of treatment.
CONCLUSIONS AND RECOMMENDATIONS: Illiteracy, low socioeconomic status, early sexual debut, high fertility, home delivery, reproductive tract infections, use of insanitary clothes during menstruation and anemia were observed in majority of women with advanced cancer cervix. Presence of these factors indicates possible risk of cervical cancer and should be kept in mind when women seek health services. Early diagnosis through high risk or opportunistic screening and timely management of cervical cancer needs to be ensured for better outcomes.

DOI: 10.1007/s13224-016-0907-x

PMCID: PMC5306097 [Available on 2018-02-01]
PMID: 28242969

20: 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 antigen processing gene PSMB8 coding for Low Molecular Mass Protease 7 (LMP7) with Vitiligo in North India: case-control study. Br J Dermatol. 2017 Feb 16. doi: 10.1111/bjd.15391. [Epub ahead of print] PubMed PMID: 28207947.

BACKGROUND: Vitiligo is a multifactorial, autoimmune, depigmenting disorder of the skin where aberrant presentation of auto antigens may have a role to play.
OBJECTIVES: To study the association of antigen processing genes, PSMB8 and PSMB9 with vitiligo.
METHODS: 1320 vitiligo cases (1050 generalized and 270 localized) and 752 normal healthy controls were studied for PSMB9 exon 3 G/A SNP, PSMB8 exon 2 C/A SNP and PSMB8 Intron 6 G/T at 37360 site using PCR-RFLP. Real time PCR was used for transcriptional expression of PSMB8 and cytokines. Expressions of ubiquitinated proteins and phosphorylated-p38 (P-p38) were studied by western blotting.
RESULTS: Significant increase in PSMB8 exon 2 allele A ($p < 2.07x10(-16)$, Odds Ratio (OR) =1.93) and genotypes AA ($p< 1.03X10(-6)$, OR=2.51) and AC ($p< 1.29X10(-6)$, OR=1.63) were observed in vitiligo. IFN-γ stimulation induced lower expression of PSMB8 in PBMCs of cases compared with controls suggesting impaired antigen processing which was confirmed by accumulation of ubiquitinated proteins in both lesional and non-lesional skin of vitiligo patients. Expression of pro-inflammatory cytokines, IL-6, IL-1β and IL-8 was higher in the lesional skin. P-p38 expression was variable but correlated with the amount of ubiquitinated proteins in the lesional and non-lesional skin, suggesting that the inflammatory cytokine responses in the lesional skin could be a result of both P-p38 and P-p38 independent pathways.
CONCLUSIONS: PSMB8 exon 2 SNP is significantly associated with vitiligo. Accumulation of ubiquitinated proteins in skin of vitiligo cases suggests their aberrant processing which may be promoting the development of the disease. This article is protected by copyright. All rights reserved.

DOI: 10.1111/bjd.15391
PMID: 28207947

21: Das S, Maras JS, Hussain MS, Sharma S, David P, Sukriti S, Shasthry SM, Maiwall R, Trehanpati N, Singh TP, Sarin SK. Hyperoxidized albumin modulates neutrophils to induce oxidative stress and inflammation in severe alcoholic hepatitis. Hepatology. 2017 Feb;65(2):631-646. doi: 10.1002/hep.28897. Epub 2016 Dec 19. PubMed PMID: 27775820.

Albumin is a potent scavenger of reactive oxygen species (ROS). However, modifications in albumin structure may reduce its antioxidant properties and modulate its immune-regulatory functions. We examined alterations in circulating albumin in severe alcoholic hepatitis (SAH) patients and their contribution to neutrophil activation, intracellular stress, and alteration in associated molecular pathways. Albumin modifications and plasma oxidative stress were assessed in SAH patients (n = 90), alcoholic cirrhosis patients (n = 60), and healthy controls (n = 30) using liquid chromatography/mass spectrometry and spectrophotometry. Activation and intracellular ROS were measured in healthy neutrophils after treatment with purified albumin from the study groups. Gene expression of SAH neutrophils was analyzed and compared to gene expression from healthy neutrophils after stimulation with purified albumin from SAH patient plasma. SAH-albumin showed the highest albumin oxidative state ($P < 0.05$) and prominent alteration as human nonmercaptalbumin 2 ($P < 0.05$). Plasma oxidative stress (advanced oxidative protein product) was higher in SAH versus alcoholic cirrhosis patients and healthy controls ($P < 0.05$). Neutrophil gelatinase-associated lipocalin, myeloperoxidase, and intracellular ROS levels

were highest in SAH-albumin-treated neutrophils (P < 0.05). Genes associated with neutrophil activation, ROS production, intracellular antioxidation, and leukocyte migration plus genes for proinflammatory cytokines and various toll-like receptors were overexpressed in SAH neutrophils compared to healthy neutrophils (P < 0.05). Expression of the above-mentioned genes in SAH-albumin-stimulated healthy neutrophils was comparable with SAH patient neutrophils, except for genes associated with apoptosis, endoplasmic reticulum stress, and autophagy (P < 0.05).CONCLUSIONS: In patients with SAH, there is a significant increase in albumin oxidation, and albumin acts as a pro-oxidant; this promotes oxidative stress and inflammation in SAH patients through activation of neutrophils. (Hepatology 2017;65:631-646).

DOI: 10.1002/hep.28897
PMID: 27775820 [Indexed for MEDLINE]

22: Dash C, Singla R. Letter to the Editor: Whole-brain CT perfusion and subarachnoid hemorrhage. J Neurosurg. 2017 Feb;126(2):657-658. doi: 10.3171/2016.7.JNS161860. Epub 2016 Nov 25. PubMed PMID: 27885949.

23: Datta PK, Sinha R, Ray BR, Jambunathan V, Kundu R. Anesthesia maintenance with 'induction dose only' sevoflurane during pediatric ophthalmic examination: comparison with standard low-flow technique through a randomized controlled trial. Paediatr Anaesth. 2017 Feb;27(2):162-169. doi: 10.1111/pan.13040. Epub 2016 Nov 30. PubMed PMID: 27900813.

BACKGROUND: Sevoflurane is preferred for pediatric day care procedures. However, financial and environmental costs remain major limitations. Induction dose of sevoflurane could itself be sufficient for maintaining anesthesia with low fresh gas flow during short noninvasive procedures.
METHODS: Fifty children, aged 1-5 years, scheduled for ophthalmic examination under anesthesia, were randomized into two groups. All children were induced with 8% sevoflurane in O2 : N2 O (40 : 60). In the Group S, anesthesia was maintained with 2% sevoflurane at 1 l·min(-1) fresh gas flow [O2 : N2 O = 50 : 50]. In Group L, the sevoflurane vaporizer was turned off and fresh gas flow was reduced to 0.5 l·min(-1) [O2 : N2 O = 50 : 50]. HR, BP, MAC, BIS, total sevoflurane consumption, ocular deviation, body movement, time to laryngeal mask airway removal (TWO), and airway complications were compared between the groups. Rescue propofol bolus was used, if needed.
RESULTS: Median duration of examination was 14 min (IQR = 9-17) in Group S and 15 min (IQR = 10-17) in Group L. Sevoflurane consumption was lower in the Group L (7 ml) compared to Group S (9 ml) [median difference = 2 ml, P < 0.001, 95% CI = 0.96-3.04]. TWO was lower in Group L (86 s) compared to Group S (131 s) [median difference = 45 s, P = 0.002, 95% CI = 19.85-70.15]. There was no difference in hemodynamic parameters, incidence of ocular deviation, movement or airway complications, and need for rescue propofol.
CONCLUSION: Induction dose of sevoflurane is, in itself, adequate for maintaining anesthesia for short noninvasive ophthalmic examinations lasting approximately 15 min. This method significantly reduces sevoflurane consumption and cost.

DOI: 10.1111/pan.13040
PMID: 27900813

24: Dhiman R, Sharma M, Sethi A, Sharma S, Kumar A, Saxena R. A rare case of Bruns syndrome with bilateral superior oblique palsy and dorsal midbrain syndrome. J AAPOS. 2017 Apr;21(2):167-170. doi: 10.1016/j.jaapos.2016.11.024. Epub 2017 Feb 16. PubMed PMID: 28213087.

We report a case of an 11-year-old boy referred for evaluation of esotropia

associated with a 4-year history of intermittent headaches and vomiting triggered by sudden movements, such as sneezing and coughing. Magnetic resonance imaging (MRI) performed 3 years previously was reported to be normal. A thorough clinical examination revealed the clinical features of Dorsal midbrain syndrome with Bruns syndrome and bilateral superior oblique palsy. Advanced MRI sequences revealed a freely mobile intraventricular cysticercus causing obstructive panhydrocephalus.

DOI: 10.1016/j.jaapos.2016.11.024
PMID: 28213087

25: Dhingra K, Vandana KL. Effectiveness of Azadirachta indica (neem) mouthrinse in plaque and gingivitis control: a systematic review. Int J Dent Hyg. 2017 Feb;15(1):4-15. doi: 10.1111/idh.12191. Epub 2016 Feb 15. Review. PubMed PMID: 26876277.

OBJECTIVES: The aim of this systematic review was to evaluate the effectiveness of Azadirachta indica (neem)-based herbal mouthrinse in improving plaque control and gingival health.
METHODS: Literature search was accomplished using electronic databases (PubMed, Cochrane Central Register of Controlled Trials and EMBASE) and manual searching, up to February 2015, for randomized controlled trials (RCTs) presenting clinical data for efficacy of neem mouthrinses when used alone or as an adjunct to mechanical oral hygiene as compared to chlorhexidine mouthrinses for controlling plaque and gingival inflammation in patients with gingivitis.
RESULTS: Of the total 206 articles searched, three randomized controlled trials evaluating neem-based herbal mouthrinses were included. Due to marked heterogeneity observed in study characteristics, meta-analysis was not performed. These studies reported that neem mouthrinse was as effective as chlorhexidine mouthrinse when used as an adjunct to toothbrushing in reducing plaque and gingival inflammation in gingivitis patients. However, the quality of reporting and evidence along with methods of studies was generally flawed with unclear risk of bias.
CONCLUSION: Despite the promising results shown in existing randomized controlled trials, the evidence concerning the clinical use of neem mouthrinses is lacking and needs further reinforcement with high-quality randomized controlled trials based on the reporting guidelines of herbal CONSORT statement.

DOI: 10.1111/idh.12191
PMID: 26876277

26: Dhingra R, Kedia S, Venigalla PM, Kumar S, Singh N, Bopanna S, Singla V, Choudhury BN, Verma P, Tiwari V, Datta Gupta S, Makharia G, Ahuja V. Evaluating clinical, dietary and psychological risk factors for relapse of ulcerative colitis in clinical, endoscopic and histological remission. J Gastroenterol Hepatol. 2017 Feb 21. doi: 10.1111/jgh.13770. [Epub ahead of print] PubMed PMID: 28220959.

BACKGROUND: 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.
AIM: 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-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 NSAIDs use and any other factor which the patient felt important, and compliance with

medications was obtained.
RESULTS: 97 patients(59 males, mean age 39+11.9years) were followed up for a mean duration of 9+2.3months. 18(18.6%) relapsed with the median time to relapse being 3.5months. On univariate analysis more relapsers had significantly higher NSAIDs use within 15days of relapse, respiratory tract infection within 4weeks, use of steroids more than once in past, higher consumption of calcium, riboflavin, 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 9months in patients with UC in clinical, endoscopic and histological remission, independent predictors of relapse were history of NSAIDs use within 15days of relapse and higher intake of Vitamin A.

DOI: 10.1111/jgh.13770
PMID: 28220959

27: Dogra PN, Singh P, Nayyar R, Yadav S. Sexual Dysfunction After Urethroplasty. Urol Clin North Am. 2017 Feb;44(1):49-56. doi: 10.1016/j.ucl.2016.08.013. Review. PubMed PMID: 27908371.

Posturethroplasty sexual dysfunction (SD) is multifactorial and its true incidence is unknown. Even with the current evidence suggesting that it is uncommon, de novo SD causes dissatisfaction even after a successful surgery. Posterior urethroplasty carries the highest chance of SD, mostly attributable to the pelvic fracture itself rather than the urethroplasty. With anterior urethroplasty, transecting bulbar urethroplasty leads to greater SD compared with penile or nontransecting bulbar urethroplasty. Most patients with posturethroplasty SD recover within 6 months after surgery.

DOI: 10.1016/j.ucl.2016.08.013
PMID: 27908371 [Indexed for MEDLINE]

28: Dubey S, Tardy V, Chowdhury MR, Gupta N, Jain V, Deka D, Sharma P, Morel Y, Kabra M. Prenatal diagnosis of steroid 21-hydroxylase-deficient congenital adrenal hyperplasia: Experience from a tertiary care centre in India. Indian J Med Res. 2017 Feb;145(2):194-202. doi: 10.4103/ijmr.IJMR_329_16. PubMed PMID: 28639595; PubMed Central PMCID: PMC5501051.

BACKGROUND & OBJECTIVES: Congenital adrenal hyperplasia (CAH) is an autosomal recessive disorder with a wide range of clinical manifestations. The disease is attributed to mutations in CYP21A2 gene encoding 21-hydroxylase enzyme. In view of severe phenotype in salt-losing cases, issues related to genital ambiguity in girls and precocity in boys, most families opt for prenatal testing and termination of affected foetus. CAH can be diagnosed in utero through direct molecular analysis of CYP21A2 gene, using DNA extracted from foetal tissues or cells obtained from chorionic villus sampling or amniocentesis. The objective of this study was to evaluate the feasibility and accuracy of prenatal diagnosis (PND) using sequencing and multiplex ligation probe amplification (MLPA) methods in families at risk for CAH.
METHODS: Fifteen pregnant women at risk of having an affected offspring with CAH were included in this study. Ten families had previous affected children with salt-wasting/simple virilising form of CAH and five families did not have live children but had a high index of suspicion for CAH in previous children based on history or records. Mutation analysis was carried out by Sanger sequencing and MLPA method.
RESULTS: Seven different mutations were identified in 15 families. Deletions and

I2g mutation were the most common. Of the 15 foetuses analyzed, nine were unaffected while six were affected. Unaffected foetuses were delivered, they were clinically normal and their genotype was found to be concordant to the prenatal report. All except two families reported in the second trimester. None of the couples opted for prenatal treatment.
INTERPRETATION & CONCLUSIONS: Our preliminary findings show that PND by direct mutation analysis along with MLPA is a feasible strategy that can be offered to families at risk.

DOI: 10.4103/ijmr.IJMR_329_16
PMCID: PMC5501051
PMID: 28639595

29: Elli L, Branchi F, Sidhu R, Guandalini S, Assiri A, Rinawi F, Shamir R, Das P, Makharia GK. Small bowel villous atrophy: celiac disease and beyond. Expert Rev Gastroenterol Hepatol. 2017 Feb;11(2):125-138. doi: 10.1080/17474124.2017.1274231. Epub 2016 Dec 29. Review. PubMed PMID: 28000520.

INTRODUCTION: Small bowel villous atrophy can represent a diagnostic challenge for gastroenterologists and pathologists. In Western countries small bowel atrophy and mild non-atrophic alterations are frequently caused by celiac disease. However, other pathology can mimic celiac disease microscopically, widening the differential diagnosis. The several novelties on this topic and the introduction of the device-assisted enteroscopy in the diagnostic flowchart make an update of the literature necessary. Areas covered: In this review, a description of the different clinical scenarios when facing with small bowel mucosal damage, particularly small bowel atrophy, is described. The published literature on this subject has been summarized and reviewed. Expert commentary: When an intestinal mucosal alteration is histologically demonstrated, the pathology report forms part of a more complex workup including serological data, clinical presentation and clinical history. A multidisciplinary team, including pathologists and enteroscopy-devoted endoscopists, is frequently required to manage patients with small bowel alterations, especially in cases of severe malabsorption syndrome.

DOI: 10.1080/17474124.2017.1274231
PMID: 28000520 [Indexed for MEDLINE]

30: Faiq MA, Dada T. Diabetes Type 4: A Paradigm Shift in the Understanding of Glaucoma, the Brain Specific Diabetes and the Candidature of Insulin as a Therapeutic Agent. Curr Mol Med. 2017 Feb 6. doi: 10.2174/1566524017666170206153415. [Epub ahead of print] PubMed PMID: 28176628.

The present analytical anecdote aims at construing the probable mechanism and ensuing applications of the "Brain Diabetes Hypothesis of Glaucoma" proposed by our research group in early 2014. Here we go a step further to look into many important mechanisms that serve to bridge conceptual gaps to fill up the mosaic of a picture revealing that glaucoma indeed is brain specific diabetes and more appropriately "Diabetes Type 4". Based on this conceptual substance, we weave a novel idea of insulin being a potential remedy for glaucoma. This analysis synthesizes upon the published literature on brain changes in glaucoma, possibility of isolated brain diabetes, insulin signaling glitches in glaucoma pathology, mitochondrial dysfunction and insulin resistance in glaucomatous eyes, insulin mediated regulation of intraocular pressure and its dysregulation in mitochondrial dysfunction. We also look into the role of amyloidopathy and taupathy in glaucoma pathogenesis vis-à-vis insulin signaling. At every step, the discussion reveals that insulin and other allied moieties are a sure promise for glaucoma treatment and management. In this article, we aim at synthesizing a persuasive and all-inclusive picture of glaucoma etiopathomechanism centered on "insulin-hypofunctionality" in the central nervous system (i.e. brain specific diabetes). We start with considering the possibility of neurodegenerative diabetes that exists independent of the peripheral diabetes. Once that condition is met, then a metabolic conglomeration of this brain specific diabetes is

deliberated upon leading us to understand the development of retinal ganglion cell apoptosis, intraocular pressure elevation, optic cupping and mitochondrial dysfunction. All these are the hallmarks and sufficient conditions to satisfy the diagnostic criteria for glaucoma. Immediate application of this analysis points towards glaucoma therapy centered upon improving what we have termed insulin-hypofunctionality.

DOI: 10.2174/1566524017666170206153415
PMID: 28176628

31: Ganesan P, Kumar L. Chronic Myeloid Leukemia in India. J Glob Oncol. 2016 Jul 20;3(1):64-71. doi: 10.1200/JGO.2015.002667. eCollection 2017 Feb. Review. PubMed PMID: 28717743; PubMed Central PMCID: PMC5493229.

BACKGROUND: In the last decade, the use of imatinib has brought a paradigm shift in the management of chronic myeloid leukemia (CML). In India, imatinib has been available for more than a decade and has been made accessible to all segments of the population because of patient assistance programs and cheaper generic versions. Despite improvements in survival, there are unique challenges in the Indian context.
METHODS: We reviewed published data pertaining to CML in India for the period of 1990 to 2016, using PubMed advanced search with the terms chronic myeloid leukemia and India, and included studies that reported on epidemiology, monitoring for therapy, treatment outcomes, and resistance. Additionally, the references in retrieved articles were also reviewed.
RESULTS: Thirty-seven studies were identified. The incidence of CML may be slightly lower in India than in the West, but there was only a single article reporting population-based data. Indian patients presented with more advanced disease. Most centers have access to imatinib as first-line therapy, but there is limited availability of molecular monitoring and second-line therapy. Most of the outcome data were retrospective but seemed comparable with that reported in Western centers. Drug adherence was impaired in at least one third of patients and contributed to poor survival.
CONCLUSION: Focused prospective studies and cooperative studies might improve the quality of data available. Future studies should focus on adherence, its effects on outcomes, and methods to address this problem.

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PMCID: PMC5493229
PMID: 28717743

Conflict of interest statement: Authors’ disclosures of potential conflicts of interest and contributions are found at the end of this article.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. Prasanth GanesanNo relationship to discloseLalit KumarNo relationship to disclose

32: Garg B, Dixit V, Batra S, Malhotra R, Sharan A. Non-surgical management of acute osteoporotic vertebral compression fracture: A review. J Clin Orthop Trauma. 2017 Apr-Jun;8(2):131-138. doi: 10.1016/j.jcot.2017.02.001. Epub 2017 Feb 7. Review. PubMed PMID: 28720988; PubMed Central PMCID: PMC5498748.

Osteoporosis is a major public health problem. Last decade has seen rise in osteoporotic vertebral fractures. Pragmatic management of osteoporotic VCF is challenging to the surgeons. In clinical settings, the situation becomes more complex when it comes to managing painful osteoporotic vertebral compression

fractures (VCFs) due to various co-morbid factors that may limit aggressive interventions. Patients with Osteoporotic vertebral fractures are often characterized by general/relative immobility and physical frailty. Osteoporotic VCF not only affects the quality of life (e.g. pain) but also decreases the lifespan of the individual. The present review critically evaluates the currently prevailing non-surgical management modalities (conservative) offered in acute symptomatic osteoporotic VCFs that occur either within (0-5 days) of any incident event or present with the onset of symptoms such as pain.

DOI: 10.1016/j.jcot.2017.02.001
PMCID: PMC5498748 [Available on 2018-04-01]
PMID: 28720988

33: Garg R, Pandit A. Absent Lung Deflation Because of Blockade Using an Endobronchial Blocker. Turk J Anaesthesiol Reanim. 2017 Jun;45(3):172-173. doi: 10.5152/TJAR.2017.60566. Epub 2017 Feb 1. PubMed PMID: 28752009; PubMed Central PMCID: PMC5512397.

One-lung ventilation is required for various thoracic procedures. In addition, various strategies such as the use of double-lumen tube, uninvent tubes, and endobronchial blocker have been used for performing one-lung ventilation. Each of these techniques has its advantages and limitations. Certain factors for failure of endobronchial blocker to provide lung deflation has been described in literature. We report a different aetiology of failure of lung deflation, although the endobronchial blocker was appropriately placed.

DOI: 10.5152/TJAR.2017.60566
PMCID: PMC5512397
PMID: 28752009

Conflict of interest statement: Conflict of Interest: No conflict of interest was declared by the authors.

34: Gaur N, Sharma P, Verma S, Takkar B, Dhar S. Surgical correction of persistent adult-onset cyclic strabismus. J AAPOS. 2017 Feb;21(1):77-78. doi: 10.1016/j.jaapos.2016.08.019. Epub 2016 Dec 6. PubMed PMID: 27932042.

A 24-year-old man developed cyclic esotropia following vitreoretinal surgery for retinal detachment in his right eye. He underwent right eye medial rectus recession (6 mm) and lateral rectus resection (8.5 mm) under local anesthesia for the correction of cyclic esotropia. Following surgery, he developed a unique pattern of cyclic strabismus that involved alternation between esotropia and exotropia every 24 hours. To treat this condition, the patient underwent lateral rectus recession (8.5 mm) and medial rectus posterior fixation of medial rectus in the right eye. Following surgery, he was corrected for heterotropia on both esotropic and exotropic days.

DOI: 10.1016/j.jaapos.2016.08.019
PMID: 27932042

35: Goel N, Kumar V, Ghosh B. Congenital retinal macrovessel associated with vitreous hemorrhage. J AAPOS. 2017 Feb;21(1):83-85. doi: 10.1016/j.jaapos.2016.09.018. Epub 2016 Dec 12. PubMed PMID: 27979757.

A "congenital retinal macrovessel" (CRM) is an aberrant retinal vessel (frequently a vein) that traverses the central macula and supplies or drains both above and below the horizontal raphe. It is an uncommon entity that is usually disclosed on routine examination and may rarely cause a compromised visual acuity. We describe the case of an adolescent girl who underwent vitrectomy for vitreous hemorrhage and was found to have a CRM with vascular abnormalities. To

our knowledge, this is the first report of vitreous hemorrhage secondary to a CRM.

DOI: 10.1016/j.jaapos.2016.09.018
PMID: 27979757

36: Goudra B, Singh PM. Erratum to: Airway Management During Upper GI Endoscopic Procedures: State of the Art Review. Dig Dis Sci. 2017 Feb;62(2):553-554. doi: 10.1007/s10620-016-4406-9. PubMed PMID: 28008552.

37: Goudra B, Singh PM. Failure of Sedasys: Destiny or Poor Design? Anesth Analg. 2017 Feb;124(2):686-688. doi: 10.1213/ANE.0000000000001643. PubMed PMID: 27861440.

38: Goyal M, Kriplani A, Mahey R, Kachhawa G, Yadav R, Singh G. Giant congenital melanocytic nevus presenting as a huge vulvar mass: A rare case. Taiwan J Obstet Gynecol. 2017 Feb;56(1):109-111. doi: 10.1016/j.tjog.2016.12.006. PubMed PMID: 28254210.

39: Gulati S, Patel H, Chakrabarty B, Dubey R, Arora NK, Pandey RM, Paul VK, Ramesh K, Anand V, Meena A. Development and validation of AIIMS modified INCLEN diagnostic instrument for epilepsy in children aged 1 month-18 years. Epilepsy Res. 2017 Feb;130:64-68. doi: 10.1016/j.eplepsyres.2017.01.008. Epub 2017 Jan 25. PubMed PMID: 28157600.

OBJECTIVES: There is shortage of specialists for the diagnosis of children with epilepsy, especially in resource limited settings. Existing INCLEN (International Clinical Epidemiology Network) instrument was validated for children aged 2-9 years. The current study validated modifications of the same including wider symptomatology and age group.
METHODS: The Modified INCLEN tool was validated by a team of experts by modifying the existing tools (2-9 years) to widen the age range from 1 month to 18 years and include broader symptomatology in a tertiary care teaching hospital of North India between January and June 2015. A qualified medical graduate applied the candidate tool which was followed by gold standard evaluation by a Pediatric Neurologist (both blinded to each other).
RESULTS: A total of 197 children {128 boys (65%) and 69 girls (35%)}, with a mean age of 72.08 (±50.96) months, completed the study. The sensitivity, specificity, positive and negative predictive value, positive and negative likelihood ratio of the modified epilepsy tool were 91.5% (84.5-96.1), 88.6% (80.0-93.5), 89.7% (81.9-95.3), 90.8% (83.7-95.7), 8 (6.6-9.8) and 0.09 (0.07-0.12) respectively.
SIGNIFICANCE: The new modified diagnostic instruments for epilepsy is simple, structured and valid instruments covering 1month to 18 years for use in resource limited settings with acceptable diagnostic accuracy. All seizure semiologies as well as common seizure mimics like breath-holding spells are included in the tool. It also provides for identification of acute symptomatic and febrile seizures.

DOI: 10.1016/j.eplepsyres.2017.01.008
PMID: 28157600

40: Gupta C, Sharma P, Saxena R, Garg A, Sharma S. Clinical correlation of imaging findings in congenital cranial dysinnervation disorders involving abducens nerve. Indian J Ophthalmol. 2017 Feb;65(2):155-159. doi: 10.4103/ijo.IJO_1013_15. PubMed PMID: 28345573; PubMed Central PMCID: PMC5381296.

PURPOSE: High-resolution magnetic resonance imaging (MRI) of intracranial parts of sixth nerve and seventh nerve and the extraocular muscles (EOMs) in orbit to correlate the clinical characteristics in patients with two special forms of strabismus in congenital cranial dysinnervation disorders which are Duane's retraction syndrome (DRS) and Mobius syndrome.
MATERIALS AND METHODS: Morphological analysis by 3T MRI of orbit (using surface coils) and brain (using 32 channel head coil) was performed on 6 patients with clinical DRS (1 bilateral), 2 cases with Mobius syndrome, and 1 case with congenital sixth nerve palsy. These were compared with findings in five controls.
RESULTS: We observed absence/hypoplasia of sixth nerve in five out of seven eyes with DRS (71.42%), anomalous course in one eye, sixth and seventh nerve absence/hypoplasia in affected eyes with Mobius syndrome and bilateral absence/hypoplasia of the sixth nerve in congenital sixth nerve palsy. For EOMs we calculated maximum diameter, area, and circumference of muscles using Osirix software, and noticed significant hypoplasia of lateral rectus in comparison to controls ($P < 0.001$).
CONCLUSIONS: MRI gives useful information regarding confirmation of clinical diagnosis and its neurological anomalies in complex cases and helps to plan tailor made surgical management.

DOI: 10.4103/ijo.IJO_1013_15
PMCID: PMC5381296
PMID: 28345573 [Indexed for MEDLINE]

41: Gupta N, Ganger A, Bhartiya S, Verma M, Tandon R. In Vivo Confocal Microscopic Characteristics of Crystalline Keratopathy in Patients with Sclerokeratitis. Ocul Immunol Inflamm. 2017 Feb 22:1-6. doi: 10.1080/09273948.2017.1281422. [Epub ahead of print] PubMed PMID: 28282739.

PURPOSE: To report in vivo confocal features in a clinical case series of patients with sclerokeratitis presenting as crystalline keratopathy.
METHODS: Five cases of crystalline keratopathy following sclerokeratitis are described. Confocal microscopic images of the cornea were captured in all cases to confirm the diagnosis by evaluating the morphology of the crystals.
RESULTS: Unilateral and non-progressive peripheral crystalline keratopathy manifested after previous episodes of sclerokeratitis in the involved eye. Confocal microscopy revealed numerous, discrete, hyperreflective, needle-like, shiny crystals in the anterior and posterior stromal layers of the cornea. These deposits were oriented randomly and showed occasional confluence. An extensive ophthalmic and systemic evaluation did not reveal any other contributory factors.
CONCLUSION: Crystalline keratopathy, probably resulting from an immune-mediated response, is a possible manifestation of sclerokeratitis. This should be considered during long-term follow-up of such patients and differentiated from infectious crystalline keratopathy.

DOI: 10.1080/09273948.2017.1281422
PMID: 28282739

42: Gupta P, Gupta R, Balhara YP. Obsessive-Compulsive Symptoms Associated With Aripiprazole Treatment in Bipolar Disorder: A Case Report. J Clin Psychopharmacol. 2017 Feb;37(1):108-109. doi: 10.1097/JCP.0000000000000629. PubMed PMID: 27930496.

43: Gupta S, Gupta YK. Combination of Zizyphus jujuba and silymarin showed better neuroprotective effect as compared to single agent in MCAo-induced focal cerebral ischemia in rats. J Ethnopharmacol. 2017 Feb 2;197:118-127. doi: 10.1016/j.jep.2016.07.060. Epub 2016 Jul 22. PubMed PMID: 27452658.

ETHNOPHARMACOLOGICAL RELEVANCE: Traditionally, Zizyphus jujuba is used for anticonvulsant, hypnotic-sedative, anxiolytic, tranquilizer, antioxidant and anti-inflammatory properties. Likewise silymarin is popularly used for its potent

antioxidant and hepatoprotective effects. Stroke being a multifactorial disease with unsatisfactory treatment outcomes, necessitates development of multimodal therapeutic interventions. Thus, we evaluated the therapeutic benefits of herbal combination of Z. jujuba and silymarin in a focal cerebral ischemia model.
AIM OF THE STUDY: To evaluate the neuroprotective potential of hydroalcoholic extract of Z. jujuba (HEZJ) fruit and silymarin alone and in combination in middle cerebral artery occlusion (MCAo) model of focal cerebral ischemia in rats.
MATERIALS AND METHODS: Male Wistar rats were pretreated with HEZJ (100, 250 and 500mg/kg, p.o.) or silymarin (250mg/kg, p.o.) for 3 days prior to induction of MCAo. Neurological deficit score, motor impairment and cerebral infarction were assessed 24h following MCAo. HEZJ (250mg/kg) co-administered with silymarin (250mg/kg) for 3 days prior to induction of MCAo was also evaluated for above parameters and oxidative stress. Malondialdehyde (MDA), nitric oxide (NO) and superoxide dismutase (SOD) levels in the cortex, striatum and hippocampal brain regions were estimated 24h post MCAo.
RESULTS: Pretreatment with HEZJ and silymarin reduced the neurological deficit score, motor impairment and cerebral infarction volume. HEZJ and silymarin pretreatment also ameliorated the oxidative stress in different brain regions, which was evident from increased SOD levels, decreased MDA and NO levels as compared to MCAo control rats. Interestingly neuroprotective efficacy was potentiated by pretreatment with HEZJ and silymarin combination.
CONCLUSION: Pretreatment with HEZJ and silymarin combination was observed to have better neuroprotection mediated via amelioration of oxidative stress in the focal cerebral ischemia model.

DOI: 10.1016/j.jep.2016.07.060
PMID: 27452658 [Indexed for MEDLINE]

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

group. Lercanidipine (13.78±2.78%) significantly attenuated percentage infarct volume as evident from diffusion-weighted (DWI) and T2-weighted images as compared to vehicle treated MCAo group (25.90±2.44%) investigated 96h post-MCAo. The apparent diffusion coefficient (ADC) was also significantly improved in lercanidipine group as compared to control group. Biochemical alterations were significantly ameliorated by lercanidipine till 120min post-reperfusion group and MMP-9 inhibition observed even with 240min group. Thus, lercanidipine revealed significant neuroprotective effect mediated through attenuation of oxidative stress, inflammation and apoptosis.

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The genes related to B-cell development are frequently altered in B-cell acute lymphoblastic leukemia (B-ALL). One hundred sixty-two newly diagnosed B-ALL cases, median age 8.5 years (2 months-67 years), were prospectively analyzed for copy number alterations (CNAs) in CDKN2A/B, IKZF1, PAX5, RB1, ETV6, BTG1, EBF1, and pseudoautosomal region genes (CRLF2, CSF2RA, IL3RA) using multiplex ligation-dependent probe amplification. The CNAs were detected in 114 (70.4%) cases; most commonly affected genes being CDKN2A/B-55 (34%), PAX5-51 (31.5%), and IKZF1-43 (26.5%). IKZF1 and RB1 deletions correlated with higher induction failure. Patients classified as good-risk, according to the integrated CNA profile and cytogenetic criteria, had lower induction failure [5 (8.6%) vs. 20 (25.3%); p=0.012]. Those classified as good-risk, based on CNA profile irrespective of cytogenetics, also showed lower induction failure [6 (9.4%) vs. 19 (26%); p=0.012]. The CNA profile identified patients with better induction outcome and has a potential role in better risk stratification of B-ALL.

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Juvenile onset open angle glaucoma (JOAG) affects patients before 40 years of age, who present with high intraocular pressure and deep steep cupping of the optic nerve head. While it was considered to be inherited in an autosomal dominant fashion, recent studies have shown an autosomal recessive pattern as well as sporadic occurrence of the disease in several families. In this review, we analyze the genetic basis of the disease along with common mutations and their association with JOAG. We also analyzed the inheritance patterns in a large group of unrelated JOAG patients (n=336) from Northern India wherein the prevalence of familial occurrence was assessed and segregation analysis performed, to determine the mode of inheritance.

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Testicular maturation arrest is characterized by interruption of germ cell development and differentiation. Genetic factors play important role in the causation of human disease, including male infertility. The objective was to study copy number variations in testicular maturation arrest using single nucleotide polymorphism (SNP) microarray technique. Conventional cytogenetics, targeted fluorescence in situ hybridization (FISH) and sequence-tagged site (STS) polymerase chain reaction (PCR) were used to confirm some of the SNP microarray findings. SNP microarray on 68 cases of testicular maturation arrest detected copy number variations (CNVs) mostly on sex chromosomes involving pseudoautosomal regions (PAR) 1, 2 and 3 as well as azoospermic factors (AZFs) besides three cases of chromosomal abnormalities (two Klinefelter syndromes and one case of dicentric Y). The AZF deletion was observed in 14 (20.6%) cases and the AZFc gain was observed in 6 (8.8%) cases. PAR 1 and 2 CNVs was observed in 5 (7.3%) cases. PAR 3 CNVs was detected in 19 cases and 2 controls. The TSPY2 gene gain (within PAR 3 CNVs) was observed in 16 cases and 1 control. CNV containing autosomal genes possibly associated with male infertility in this study was SPATA31A2-A5 (9p12) in five cases. In this study, SNP microarray identified possible underlying aetiology in 55.9% (38/68) cases besides identifying minimal critical region of AZFc deletion as 0.51 mb (Y:24356128-24873665) involving TTY5, RBMY2FP, RBMY1F, RBMY1J, TTY6 and PRY genes. SNP microarray seems superior, sensitive, specific as well as cost-effective method and has potential to be the first tier investigations to explore underlying genomic factors of testicular maturation arrest. The present study is an attempt to find out probable genomic factors with idiopathic testicular maturation arrest.

DOI: 10.1111/andr.12330
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Theranostics has received considerable attention since both therapy and imaging modalities can be integrated into a single nanocarrier. In this study, fluorescent iron oxide (FIO) nanoparticles and gemcitabine (G) encapsulated poly(lactide-co-glycolide) (PLGA) nanospheres (PGFIO) conjugated with human epidermal growth factor receptor 2, (HER-2) antibody (HER-PGFIO) were prepared and characterized. HER-PGFIO showed the magnetic moment of 10emu/g, relaxivity (r2) of 773mM(-1)s(-1) and specific absorption rate (SAR) of 183W/g. HER-PGFIO showed a sustained release of gemcitabine for 11days in PBS (pH 7.4). In vitro cytotoxicity evaluation of HER-PGFIO in 3D MIAPaCa-2 cultures showed 50% inhibitory concentration (IC50) of 0.11mg/mL. Subcutaneous tumor xenografts of MIAPaCa-2 in SCID mice were developed and the tumor regression study at the end

of 30days showed significant tumor regression (86±3%) in the HER-PGFIO with magnetic hyperthermia (MHT) treatment group compared to control group. In vivo MRI imaging showed the enhanced contrast in HER-PGFIO+MHT treated group compared to control. HER-PGFIO showed significant tumor regression and enhanced MRI in treatment groups, which could be an effective nanocarrier system for the treatment of pancreatic cancer.STATEMENT OF SIGNIFICANCE: Combination therapies are best suitable to treat pancreatic cancer. Theranostics are the next generation therapeutics with both imaging and treatment agents encapsulated in a single nanocarrier. The novelty of the present work is the development of targeted nanocarrier that provides chemotherapy, thermotherapy and MRI imaging properties. The present work is the next step in developing the nanocarriers for pancreatic cancer treatment. Different treatment modalities embedding into a single nanocarrier is the biggest challenge that was achieved without compromising the functionality of each other. The surface modification of polymeric nanocarriers for antibody binding and their multifunctional abilities will appeal to wider audience.

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Hepatopulmonary fusion is an extremely rare accompaniment of right congenital diaphragmatic hernia. It is associated with abnormal systemic arterial supply and venous drainage of the right lung along with congenital heart disease. Children with this condition have a comparatively poor prognosis. We report a case of right congenital diaphragmatic hernia with hepatopulmonary fusion along with review of the literature with stress on diagnosis and management.

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OBJECTIVES: The postoperative course following on-pump coronary artery bypass grafting (CABG) in patients with severe left ventricular (LV) systolic dysfunction is often unpredictable. Therefore, the aim of this study was to identify predictors of poor postoperative outcome in this subset of patients. DESIGN: Prospective observational study SETTING: Single university hospital PARTICIPANTS: Forty patients with severe LV systolic dysfunction undergoing isolated on-pump CABG INTERVENTIONS: None MEASUREMENTS AND MAIN RESULTS: Comprehensive transesophageal echocardiographic examination was performed to obtain the indices of systolic and diastolic LV function after induction of anesthesia. A poor postoperative outcome was defined as patient death or vasoactive inotropic score≥20 for at least 6 hours and/or requiring intra-aortic balloon counterpulsation and/or mechanical ventilation for≥24 hours. Poor postoperative outcome was observed in 40% (16/40) of patients. Patients with poor postoperative outcomes had a significantly higher systolic dyssynchrony index, septal-lateral delay with a significantly lower global longitudinal strain and isovolumic acceleration, end-diastolic volume, end-systolic volume, and lateral and medial mitral annulus systolic velocity. In a binary logistic regression

model, global longitudinal strain (odds ratio, 1.5, confidence interval [CI] 95%, 1.19-1.88, p = 0.001), septal-lateral delay (odds ratio, 1.02, 95% CI, 1.01-1.03; p = 0.001) and systolic dyssychrony index (odds ratio, 1.3, 95% CI, 1.13-1.48; p = 0.000) were found to be predictors of poor postoperative outcome.
CONCLUSION: Global longitudinal strain, systolic dyssynchrony index, and septal-lateral delay were reliable and accurate predictors of adverse outcomes in patients with severe LV systolic dysfunction undergoing on-pump CABG.

DOI: 10.1053/j.jvca.2016.04.025
PMID: 27546830

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Consumer knowledge is understood to play a role in managing risk factors associated with cardiovascular disease and may be influenced by level of education. The association between population knowledge, behaviours and actual salt consumption was explored overall, and for more-educated compared to less-educated individuals. A cross-sectional survey was done in an age-and sex-stratified random sample of 1395 participants from urban and rural areas of North and South India. A single 24-h urine sample, participants' physical measurements and questionnaire data were collected. The mean age of participants was 40 years, 47% were women and mean 24-h urinary salt excretion was 9.27 (8.87-9.69) g/day. Many participants reported favourable knowledge and behaviours to minimise risks related to salt. Several of these behaviours were associated with reduced salt intake-less use of salt while cooking, avoidance of snacks, namkeens, and avoidance of pickles (all $p < 0.003$). Mean salt intake was comparable in more-educated (9.21, 8.55-9.87 g/day) versus less-educated (9.34, 8.57-10.12 g/day) individuals ($p = 0.82$). There was no substantively different pattern of knowledge and behaviours between more-versus less-educated groups and no clear evidence that level of education influenced salt intake. Several consumer behaviours related to use of salt during food preparation and consumption of salty products were related to actual salt consumption and therefore appear to offer an opportunity for intervention. These would be a reasonable focus for a government-led education campaign targeting salt.

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Children with disorders of sex development (DSD) manifest at birth with malformed genitalia or later with atypical pubertal development. Those born with malformed genitalia are often diagnosed at birth. However, in resource-poor countries like India, where not all births are supervised by healthcare workers, some of these children remain undiagnosed until puberty or even later. The aim of this study was to assess the gender issues and psychosocial problems of children with DSD. Participants included 205 children with DSD (103 with 46,XX DSD and 102 with 46,XY DSD). Both the children with DSD and their parents underwent semistructured interviews by a clinical psychologist. The birth of a child with DSD was perceived as a major medical and social problem by parents from all socioeconomic strata. Mothers were distressed as many believed the DSD condition was

transmitted through the mother. Children who were not diagnosed and treated during infancy or early childhood experienced considerable social discrimination not only from relatives and friends but also from medical and paramedical staff in hospitals. Several patients had been operated during infancy without an etiological diagnosis and without provision of adequate information to the parents. Some children had problems related to complications of surgery. Most teenage patients with 5α-reductase-2 deficiency reared as females presented with gender dysphoria, while children with androgen insensitivity (except for one) or with gonadal dysgenesis developed a gender identity concordant with their gender of rearing. Parents of children with DSD preferred a male gender assignment for their children (if that was possible) because of the social advantages of growing up male in a patriarchal society.

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INTRODUCTION: Macrophagic myofasciitis (MMF) is a rare disorder, reported mainly in European adults, with occasional childhood cases. We report a series of 6 patients with pediatric MMF from the Indian subcontinent.
METHODS: Clinical details, creatine kinase levels, and results of electromyography are described for patients diagnosed with MMF. Fresh-frozen and formalin-fixed muscle biopsies were evaluated by hematoxylin-eosin staining, histochemistry, immunohistochemistry, and electron microscopy.
RESULTS: Six of 2,218 muscle biopsies were diagnosed as MMF; patient charts were reviewed. The 6 patients were all children; all presented with hypotonia and/or motor delay. Mean age at diagnosis was 16.2 months. There were 4 boys and 2 girls. All had a history of hepatitis B vaccination. Histopathology revealed infiltration by sheets of large periodic acid-Schiff stain-positive histiocytes. Ultrastructural examination demonstrated needle-shaped crystals within histiocytes. One patient had a co-existent neuromuscular disorder, merosin-deficient congenital muscular dystrophy.
CONCLUSIONS: MMF is a rare inflammatory myopathy that should be considered in the differential diagnosis of congenital myopathies in children. Muscle Nerve 56: 71-77, 2017.

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BACKGROUND: Neural tube defects (NTDs) are one of the commonest birth defects. There was paucity of community-based data on occurrence of NTDs in India, especially from rural parts of the country. Against this background, the current study was carried out with main objectives to determine the prevalence of NTDs and its specific types (anencephaly, spina bifida and encephalocele) in a rural community setting over the time period 2001 to 2014.
METHODS: This was a community-based cross-sectional study carried out in 28 villages of Ballabgarh Tehsil of Faridabad district in north India (population ~ 96,000). A household survey was undertaken by trained multi-purpose workers who enquired ever-married women about history of conception with outcome as NTD during the study period. The probable case of NTD was determined using a colored pictorial card with photographs of different types of NTDs. These cases were

confirmed by doctors.
RESULTS: A total of 26,946 live births occurred during the years 2001 to 2014. A total of 140 confirmed cases of NTDs were identified. The live birth prevalence of NTDs was 24.1 per 10,000 live births (95% confidence interval, 18.8-30.6). The birth prevalence of NTDs for the years 2008 to 2014 was 50.8 (95% confidence interval, 39.9-63.8) per 10,000 live and stillbirths. The most common type of NTD was found to be spina bifida followed by anencephaly and encephalocele.
CONCLUSION: We found high prevalence of NTDs in rural community settings from north India for years 2001 to 2014.Birth Defects Research 109:203-210, 2017.© 2016 Wiley Periodicals, Inc.

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Background: National drug policies are formulated to encourage rational use of drugs and to reduce drug resistance. This study assessed physicians' compliance with the National Drug Policy on Malaria at a tertiary care hospital in north India.
Methods: This mixed method study extracted data from adult malaria inpatient records of the hospital from 2010-2015, and assessed drug supply at pharmacies. Physicians' practices and perspectives were explored by in-depth interviews. Compliance was assessed by severity, type of species and pregnancy status. Thematic analysis was done for the qualitative data.
Results: A total of 247 case files were reviewed. Vivax malaria (41.0%) was more common than falciparum malaria (37.2%). The majority (90.8%) of cases were severe malaria. Overall compliance for use of schizonticidal drug was 73.0% in severe malaria and was only 9.5% in uncomplicated malaria. Compliance for use of gametocidal drug (primaquine) was 15.3%. Schizonticidal drugs were available in all pharmacies except the public one. Primaquine was available in only one. The main themes emerging in the thematic network analysis were physicians' misconceptions, physician-related factors, and hospital-related and drug access factors.
Conclusions: The degree of compliance for severe malaria treatment was reasonably good but low for radical cure. Raising knowledge and awareness among health care providers, by using written treatment protocols and continuing medical education would improve compliance.

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PMID: 28460016

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Epub 2017 Feb 28. Review. PubMed PMID: 27510322.

Drug-induced photosensitivity occurs when a drug is capable of absorbing radiation from the sun (usually ultraviolet A) leading to chemical reactions that cause cellular damage (phototoxicity) or, more rarely, form photoallergens (photoallergy). The manifestation varies considerably in presentation and severity from mild pain to severe blistering. Despite screening strategies and guidelines in place to predict photoreactive drugs during development there are still new drugs coming onto the market that cause photosensitivity. Thus, there is a continuing need for dermatologists to be aware of the different forms of presentation and the culprit drugs. Management usually involves photoprotection and cessation of drug treatment. However, there are always cases where the culprit drug is indispensable. The reason why some patients are susceptible while others remain asymptomatic is not known. A potential mechanism for the phototoxic reactions is the generation of reactive oxygen species (ROS), and there are a number of reasons why some patients might be less able to cope with enhanced levels of ROS.

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The incidence of myopia is constantly on the rise. Patients of high myopia and pathological myopia are young and can lose vision due to a number of degenerative changes occurring at the macula. With the emergence of new technologies such as swept-source optical coherence tomography (OCT) and OCT angiography, our understanding of macular pathology in myopia has improved significantly. New conditions such as myopic traction maculopathy have been defined. Early, noninvasive detection of myopic choroidal neovascularization and its differentiation from lacquer cracks is possible with a greater degree of certainty. We discuss the impact of these new exciting and promising technologies and management of macular pathology in myopia. Incorporation of OCT in the microscope has also improved macular surgery. New concepts such as fovea-sparing internal limiting membrane peeling have emerged. A review of literature and our experience in managing all these conditions are discussed.

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Sirtuin 1 (SIRT1) is one of the member of the mammalian proteins of the Sirtuin family of NAD(+) dependent deacetylases, has recently been shown to attenuate amyloidogenic processing of amyloid protein precursor (APP) in in-vitro cell

culture studies and transgenic mouse models of Alzheimer's disease (AD). SIRT1 has been shown to have a protective role against (AD). It has been reported earlier that increasing SIRT1 activity can prevent AD in mice model. Tripeptide as an activator of SIRT1 were screened on the basis of structural information by molecular docking and synthesized by solid phase method. The enhancement of biochemical activity of pure recombinant SIRT1 as well as SIRT1 in serum of AD patients in presence of tripeptide was done by Fluorescent Activity Assay. The activity of SIRT1 by peptide was assessed in IMR-32 cell line by measuring acetylated p53 level. Further the protective effect of SIRT1 activator in cellular model of AD was analyzed by MTT assay. We find CWR tripeptide as a SIRT1 activator by molecular docking, enhanced the activity of SIRT1 protein by lowering the Michaelis constant, Km by allosteric mechanism. The activity of serum SIRT1 of AD was also increases by CWR. It also decreased the acetylation of p53 in IMR32 neuroblastoma cells and protected the cell death caused by Aβ amyloid fragments in cell line model of AD. Thus, it can be concluded that CWR may serve as platform to elucidate further small molecule activator as a therapeutic agent for AD targeting SIRT1.

DOI: 10.1016/j.ejmech.2016.11.001
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ETHNOPHARMACOLOGICAL RELEVANCE: Aqueous bark extract of Terminalia arjuna (TA) has been in use as an ethnomedicine for cardiovascular ailments in the Indian subcontinent for centuries. Studies using hemodynamic, ROS scavenging and anti-inflammatory parameters in animal models have shown its anti-atherogenic, hypotensive, inotropic, anti-inflammatory effects. However, details analysis on its effects on established molecular and cell biological markers are a prerequisite for its wider acceptance to the medical community.
AIMS OF THE STUDY: To test the efficacy of TA extract in ameliorating cardiac hypertrophy induced by ISO in rats.
METHODS: Cardiac hypertrophy was induced by ISO (5mg/kg/day s.c. for 14 days) in rats and a standardized aqueous extract of TA stem bark was orally administered by gavage. Total RNA and protein were isolated from control, ISO, ISO plus TA and TA treated rat hearts and analyzed for the transcripts for the markers of hypertrophy, signaling kinases, transcription factors and total protein profile.
RESULTS: TA extract reversed the induction of fetal genes like β-myosin heavy chain, skeletal α-actin and brain natriuretic peptide in hypertrophic rat hearts. While ISO slightly increased the level of phospho-ERK, TA repressed it to about one third of the base line level. Survival kinase Akt, ER stress marker Grp78 and epigenetic regulator HDAC5 were augmented by ISO and TA restored them by various extents. ISO administration moderately increased the transcription factor NFκB binding activity, while coadministration of TA further increased it. AP-1 binding activity was largely unchanged by ISO treatment but it was upregulated when administered along with TA. MEF2D binding activity was increased by ISO and TA restored it to the baseline level. Global proteomic analysis revealed that TA treatment restored a subset of proteins up- and down-regulated in the hypertrophied hearts. Amongst those restored by TA were purinergic receptor X, myosin light chain 3, tropomyosin, and kininogen; suggesting a nodal role of TA in modulating cardiac function.
CONCLUSIONS: This study for the first time reveals that TA partially or completely restores the marker mRNAs, signaling kinases, transcription factors and total protein profile in rat heart, thereby demonstrating its efficacy in preventing ISO-induced cardiac hypertrophy.

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HMGB1 (High Mobility Group Box-1) is a very versatile highly abundant architectural protein that plays multiple roles in human health and diseases. Under physiological condition it serves an amazing assortment of roles in different compartments of cell. The reported high expression of HMGB1 in almost all types of human cancers and inflammatory diseases make it a critical molecular therapeutic target. In the present study we have mobilized a proximal twenty one bp nucleotide (21RY) which is in the promoter region (-55 to-75) of hmgb1 gene and targeted it with triplex forming oligonucleotide (TFO) in combination with two widely used chemotherapeutic drugs actinomycin (ACT) and adriamycin (ADM). The interaction of actinomycin and adriamycin to 21R*R●Y DNA triplex was studied using UV melting profiles, CD spectroscopy, spectrofluorimetry and Isothermal titration calorimetry. The 21R*R●Y formation was confirmed from biphasic thermal melting profiles , continuous variation method , analysis of CD marker band and thermodynamic parameters. The binding of ADM and ACT to 21R*R●Y was characterized by hypochromic and bathochromic shift in their respective absorption spectrum, quenching (ADM) and enhanced fluorescence (ACT) of steady-state fluorescence intensity, perturbation in the circular dichroic spectrum and change in thermal melting temperatures. The ITC profile and Scatchard plot analysis indicate non-cooperative and higher binding affinity of these drugs to 21R*R●Y compared to their corresponding duplexes. Therefore combining these chemotherapeutic drugs with triplex forming oligonucleotide may offer new diagnostic and therapeutic options in targeting a gene of interest more specifically with fewer side effects. This study shows that ACT and ADM effectively recognize 21R*R●Y triplex DNA formed on the hmgb1 promoter region.

DOI: 10.2174/1871520617666170213142619
PMID: 28270074

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The thymus is a lymphatic organ that undergoes dynamic changes with age and disease. It is important to be familiar with these physiological changes in the thymus gland to be able to identify pathology and make an accurate diagnosis. The thymus may be involved in multisystem disorders or show focal isolated lesions. The aim of this article is to review the radiological anatomy of the thymus, normal variants, and pathology including hyperplasia and benign/malignant lesions involving the thymus gland in the pediatric age group. We also propose an algorithmic approach for imaging evaluation of a suspected thymic mass on the basis of morphologic features.

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PMCID: PMC5296624
PMID: 28224091

Conflict of interest statement: Conflict-of-interest statement: There is no conflict of interest associated with any of the senior author or other coauthors contributing their efforts in this manuscript.

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Klebsiella pneumoniae is a nosocomial pathogen with clinical importance due to its increasing resistance to carbapenems and colistin. Here, we report the genome sequences of eight colistin-resistant K. pneumoniae strains which might help in understanding the molecular mechanism of the species. The sequence data indicate genomes of ~5.2 to 5.4 Mb, along with several plasmids.

DOI: 10.1128/genomeA.01466-16
PMCID: PMC5289671
PMID: 28153885

74: Meghwani H, Prabhakar P, Mohammed SA, Seth S, Hote MP, Banerjee SK, Arava S, Ray R, Maulik SK. Beneficial effects of aqueous extract of stem bark of Terminalia arjuna (Roxb.), An ayurvedic drug in experimental pulmonary hypertension. J Ethnopharmacol. 2017 Feb 2;197:184-194. doi: 10.1016/j.jep.2016.07.029. Epub 2016 Jul 9. PubMed PMID: 27401289.

ETHNOPHARMACOLOGICAL RELEVANCE: The stem bark of Terminalia arjuna (Roxb.) is widely used in Ayurveda in various cardiovascular diseases. Many animal and clinical studies have validated its anti-ischemic, antihypertensive, antihypertrophic and antioxidant effects. Pulmonary hypertension (PH) is a fatal disease which causes right ventricular hypertrophy and right heart failure. Pulmonary vascular smooth muscle hypertrophy and increased oxidative stress are major pathological features of PH. As available limited therapeutic options fail to reduce the mortality associated with PH, alternative areas of therapy are worth exploring for potential drugs, which might be beneficial in PH.
AIM OF THE STUDY: The effect of a standardised aqueous extract of the stem bark of Terminalia arjuna (Roxb.) in preventing monocrotaline (MCT)-induced PH in rat was investigated.
MATERIALS AND METHODS: The study was approved by Institutional Animal Ethics Committe. Male Wistar rats (150-200g) were randomly distributed into five groups; Control, MCT (50mg/kg subcutaneously once), sildenafil (175µg/kg/day three days

after MCT for 25 days), and Arjuna extract (TA125 and TA250 mg/kg/day orally after MCT for 25 days). PH was confirmed by right ventricular weight to left ventricular plus septum weight (Fulton index), right ventricular systolic pressure (RVSP), echocardiography, percentage medial wall thickness of pulmonary arteries (%MWT). Oxidative stress in lung was assessed by super oxide dismutase (SOD), catalase, reduced glutathione (GSH) and thiobarbituric acid reactive substance (TBARS). The protein expressions of nicotinamide adenine dinucleotide phosphate (NADPH) oxidase (NOX-1) in lung and gene expression of Bcl2 and Bax in heart were analyzed by Western blot and RT PCR respectively.
RESULTS: MCT caused right ventricular hypertrophy (0.58±0.05 vs 0.31±0.05; P<0.001 vs. control) and increase in RVSP (33.5±1.5 vs 22.3±4.7mm of Hg; P<0.001). Both sildenafil and Arjuna prevented hypertrophy and RVSP. Pulmonary artery acceleration time to ejection time ratio in echocardiography was decreased in PH rats (0.49±0.05 vs 0.32±0.06; P<0.001) which was prevented by sildenafil (0.44±0.06; P<0.01) and TA250 (0.45±0.06; P<0.01). % MWT of pulmonary arteries was increased in PH and was prevented by TA250. Increase in TBARS (132.7±18.4 vs 18.8±1.6nmol/mg protein; P<0.001) and decrease in SOD (58.4±14.1 vs 117.4±26.9U/mg protein; P<0.001) and catalase (0.30±0.05 vs 0.75±0.31U/mg protein; P<0.001) were observed in lung tissue of PH rats, which were prevented by sildenafil and both the doses of Arjuna extract. Protein expression of NOX1 was significantly increased in lung and gene expression of Bcl2/Bax ratio was significantly decreased in right ventricle in MCT-induced PH, both were significantly prevented by Arjuna and sildenafil.
CONCLUSIONS: Aqueous extract of Terminalia arjuna prevented MCT-induced pulmonary hypertension which may be attributed to its antioxidant as well as its effects on pulmonary arteriolar wall thickening.

DOI: 10.1016/j.jep.2016.07.029
PMID: 27401289 [Indexed for MEDLINE]

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The scientific discourse of chronic total occlusions interventions is mired in a technical jargon so confusing that it prevents an average interventional cardiologist from pursuing this field so much so that it has become a domain of a few. This review attempts to simplify this vernacular and present it in a manner that this procedure comes within the scope of a mainstream interventionist.

DOI: 10.1016/j.ihj.2017.02.004
PMCID: PMC5414967 [Available on 2018-03-01]
PMID: 28460777

76: Mittal A, Sharma S, Gupta VG, Ragesh R, Nischal N, Gogia A, Soneja M, Das CJ, Sharma SK. Carcinoma of Unknown Primary Presenting as Peripheral Symmetric Gangrene. J Assoc Physicians India. 2017 Feb;65(2):78-81. PubMed PMID: 28457039.

Cancer of unknown primary accounts for almost 4-5% of all invasive cancers and consists of tumors from various primary sources with considerable heterogeneity in biology and behaviour. Most of these tumors present with symptoms due to distant metastasis. Histology, immunohistochemistry and molecular profiling is the mainstay for diagnosis. In most cases of adenocarinoma associated with paraneoplastic acral vascular syndrome (PAVS), a site in the lung, ovary or uterus is discernible. Here we report a case of metastatic adenoarcinoma of unknown primary presenting as PAVS, a case which to the best of our knowledge has not been reported in published literature.

PMID: 28457039

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An 18-year-old boy presented with acute-onset quadriparesis that had developed 4 weeks prior. He had an intermittent fever and significant weight loss during this period. After extensive investigations, the patient was diagnosed with an acute motor and sensory axonal neuropathy (AMSAN) variant of Guillain-Barre syndrome (GBS) and disseminated tuberculosis with mediastinal lymphadenopathy, pericarditis, and pleural effusion. Plasmapheresis was performed and first-line anti-tubercular therapy was administered. At the follow-up at 6 months, the patient was asymptomatic, he had no residual weakness and could walk without support, and tuberculosis had completely resolved on X-rays. Many infectious agents have been known to trigger GBS, but only a few cases of GBS and tuberculosis have been reported. This association needs to be evaluated further.

DOI: 10.5582/irdr.2016.01073
PMCID: PMC5359354
PMID: 28357183

78: Murli L, Thukral A, Sankar MJ, Vishnubhatla S, Deorari AK, Paul VK, Sakariah A, Dolma, Agarwal R. Reliability of transcutaneous bilirubinometry from shielded skin in neonates receiving phototherapy: a prospective cohort study. J Perinatol. 2017 Feb;37(2):182-187. doi: 10.1038/jp.2016.189. Epub 2016 Oct 20. PubMed PMID: 27763628.

OBJECTIVE: To determine the agreement between transcutaneous bilirubin (TcB) measured from shielded skin and serum total bilirubin (STB) in infants (34 to 41 weeks of gestation) with hyperbilirubinemia receiving phototherapy (PT).
STUDY DESIGN: In this prospective cohort study, we shielded a small area of skin on sternum using a commercial photo-opaque patch (BilEclipseTM, Philips Respironics, Murrysville, PA, USA). The TcB from the shielded skin (TcBs) and STB were measured at four time points-before initiation, 12 and 24 h during and once after (12 h) cessation of PT. TcB was measured using multiwavelength transcutaneous bilirubinometer (BiliChek, Philips Children's Medical Ventures, Monroeville, PA, USA). The STB was measured in triplicate by spectrophotometry (Apel BR 5100, APEL, Japan). Bland and Altman plots were drawn to determine agreement between the TcBs and STB.
RESULTS: The gestation and birth weight of enrolled neonates were 37.0 (1.0) weeks and 2750 (458) g, respectively. The age at initiation and duration of PT were 75 (27 to 312) and 25.3 (4.4) h, respectively. Bland and Altman plot showed poor agreement between TcBs and STB at all time points. The gradient (median, range) between TcBs and STB at 0, 12, 24 h and 12 h after cessation of PT were -0.2 (-4.9 to 3.5), 1.4 (-4.7 to 4.0), 1.5 (-3.8 to 9.4) and 2 (-2.9 to 5.8) mg dl(-1). The proportions of TcBs values outside ±1.5 mg dl(-1) of STB ranged from 47 to 64% at four time points.
CONCLUSION: TcBs does not appear to be reliable for estimating serum bilirubin in late preterm and term neonates receiving PT.

DOI: 10.1038/jp.2016.189
PMID: 27763628

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OBJECTIVE: To evaluate the effect of autologous blood harvest (ABH)-induced volume shifts using electrical cardiometry (EC) in patients with pulmonary artery hypertension secondary to left heart disease.
DESIGN: Prospective, randomized, controlled trial.
SETTING: A tertiary care hospital.
PARTICIPANTS: The study comprised 50 patients scheduled to undergo heart valve replacement.
INTERVENTIONS: Patients were divided randomly into 2 experimental groups that were distinguished by whether ABH was performed. Blood volume extracted in the test group was replaced simultaneously with 1:1 colloid (Tetraspan; B Braun Melsungen, Melsungen, Germany). Hemodynamic, respiratory, and EC-derived parameters were recorded at predefined set points (T1 [post-induction/pre-ABH] and T2 [20 minutes post-ABH]).
MEASUREMENTS AND MAIN RESULTS: Withdrawal of 15% of blood volume in the ABH group caused significant reductions in thoracic fluid content (TFC) (-10.1% [-15.0% to -6.1%]); right atrial pressure (-23% [-26.6% to -17.6%]); mean arterial pressure (-12.6% [-22.2% to -3.8%]); airway pressures: (peak -6.2% [-11.7% to -2.8%] and mean -15.4% [-25.0% to -8.3%]); and oxygenation index (-10.34% [-16.4% to -4.8%]). Linear regression analysis showed good correlation between the percentage change in TFC after ABH and the percentage of change in right atrial pressure, stroke volume variation, autologous blood extracted, peak and mean airway pressures, and oxygen index.
CONCLUSIONS: In addition to its proven role in blood conservation, therapeutic benefits derived from ABH include decongestion of volume-loaded patients, decrease in TFC, and improved gas exchange. EC tracks beat-to-beat fluid and hemodynamic fluctuations during ABH and helps in the execution of an early patient-specific, goal-directed therapy, allowing for its safe implementation in patients with pulmonary hypertension secondary to left heart disease.

DOI: 10.1053/j.jvca.2016.07.032
PMID: 27720494

80: Neelapu BC, Kharbanda OP, Sardana HK, Balachandran R, Sardana V, Kapoor P, Gupta A, Vasamsetti S. Craniofacial and upper airway morphology in adult obstructive sleep apnea patients: A systematic review and meta-analysis of cephalometric studies. Sleep Med Rev. 2017 Feb;31:79-90. doi: 10.1016/j.smrv.2016.01.007. Epub 2016 Jan 30. Review. PubMed PMID: 27039222.

Obstructive sleep apnea (OSA) is one of the common sleep breathing disorders in adults, characterised by frequent episodes of upper airway collapse during sleep. Craniofacial disharmony is an important risk factor for OSA. Overnight polysomnography (PSG) study is considered to be the most reliable confirmatory investigation for OSA diagnosis, whereas the precise localization of site of obstruction to the airflow cannot be detected. Identifying the cause of OSA in a particular ethnic population/individual subject helps to understand the etiological factors and effective management of OSA. The objective of the meta-analysis is to elucidate altered craniofacial anatomy on lateral cephalograms in adult subjects with established OSA. Significant weighted mean difference with insignificant heterogeneity was found for the following parameters: anterior lower facial height (ALFH: 2.48 mm), position of hyoid bone (Go-H: 5.45 mm, S-H: 6.89 mm, GoGn-H: 11.84°, GoGn-H: 7.22 mm, N-S-H: 2.14°), and pharyngeal airway space (PNS-Phw: -1.55 mm, pharyngeal space: -495.74 mm(2) and oro-pharyngeal area: -151.15 mm(2)). Significant weighted mean difference with significant heterogeneity was found for the following parameters: cranial base (SN: -2.25 mm, S-N-Ba: -1.45°), position and length of mandible (SNB: -1.49° and Go-Me: -5.66 mm) respectively, maxillary length (ANS-PNS: -1.76 mm), tongue area (T: 366.51 mm(2)), soft palate area (UV: 125.02 mm(2)), and upper airway length (UAL: 5.39 mm). This meta-analysis supports the relationship between craniofacial disharmony and obstructive sleep apnea. There is a strong evidence for reduced pharyngeal airway space, inferiorly placed hyoid bone and increased anterior

facial heights in adult OSA patients compared to control subjects. The cephalometric analysis provides insight into anatomical basis of the etiology of OSA that can influence making a choice of appropriate therapy.

DOI: 10.1016/j.smrv.2016.01.007
PMID: 27039222

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82: Paul G, Deshmukh A, Kaur I, Rathore S, Dabral S, Panda A, Singh SK, Mohmmed A, Theisen M, Malhotra P. A novel Pfs38 protein complex on the surface of Plasmodium falciparum blood-stage merozoites. Malar J. 2017 Feb 16;16(1):79. doi: 10.1186/s12936-017-1716-0. PubMed PMID: 28202027; PubMed Central PMCID: PMC5312596.

BACKGROUND: The Plasmodium genome encodes for a number of 6-Cys proteins that contain a module of six cysteine residues forming three intramolecular disulphide bonds. These proteins have been well characterized at transmission as well as hepatic stages of the parasite life cycle. In the present study, a large complex of 6-Cys proteins: Pfs41, Pfs38 and Pfs12 and three other merozoite surface proteins: Glutamate-rich protein (GLURP), SERA5 and MSP-1 were identified on the Plasmodium falciparum merozoite surface.
METHODS: Recombinant 6-cys proteins i.e. Pfs38, Pfs12, Pfs41 as well as PfMSP-165 were expressed and purified using Escherichia coli expression system and antibodies were raised against each of these proteins. These antibodies were used to immunoprecipitate the native proteins and their associated partners from parasite lysate. ELISA, Far western, surface plasmon resonance and glycerol density gradient fractionation were carried out to confirm the respective interactions. Furthermore, erythrocyte binding assay with 6-cys proteins were undertaken to find out their possible role in host-parasite infection and seropositivity was assessed using Indian and Liberian sera.
RESULTS: Immunoprecipitation of parasite-derived polypeptides, followed by LC-MS/MS analysis, identified a large Pfs38 complex comprising of 6-cys proteins: Pfs41, Pfs38, Pfs12 and other merozoite surface proteins: GLURP, SERA5 and MSP-1. The existence of such a complex was further corroborated by several protein-protein interaction tools, co-localization and co-sedimentation analysis. Pfs38 protein of Pfs38 complex binds to host red blood cells (RBCs) directly via glycophorin A as a receptor. Seroprevalence analysis showed that of the six antigens, prevalence varied from 40 to 99%, being generally highest for MSP-165 and GLURP proteins.
CONCLUSIONS: Together the data show the presence of a large Pfs38 protein-associated complex on the parasite surface which is involved in RBC binding. These results highlight the complex molecular interactions among the P. falciparum merozoite surface proteins and advocate the development of a multi-sub-unit malaria vaccine based on some of these protein complexes on merozoite surface.

DOI: 10.1186/s12936-017-1716-0
PMCID: PMC5312596
PMID: 28202027 [Indexed for MEDLINE]

83: Prabhakar H, Kalaivani M. Propofol versus thiopental sodium for the treatment of refractory status epilepticus. Cochrane Database Syst Rev. 2017 Feb 3;2:CD009202. doi: 10.1002/14651858.CD009202.pub4. Review. PubMed PMID: 28155226.

BACKGROUND: This review is an update of a previously published review in the Cochrane Database of Systematic Reviews (Issue 6, 2015).Failure to respond to

antiepileptic drugs in patients with uncontrolled seizure activity such as refractory status epilepticus (RSE) has led to the use of anaesthetic drugs. Coma is induced with anaesthetic drugs to achieve complete control of seizure activity. Thiopental sodium and propofol are popularly used for this purpose. Both agents have been found to be effective. However, there is a substantial lack of evidence as to which of the two drugs is better in terms of clinical outcomes.
OBJECTIVES: To compare the efficacy, adverse effects, and short- and long-term outcomes of refractory status epilepticus (RSE) treated with one of the two anaesthetic agents, thiopental sodium or propofol.
SEARCH METHODS: We searched the Cochrane Epilepsy Group Specialized Register (16 August 2016), the Cochrane Central Register of Controlled Trials (CENTRAL) via the Cochrane Register of Studies Online (CRSO, 16 August 2016), MEDLINE (Ovid, 1946 to 16 August 2016), ClinicalTrials.gov (16 August 2016), and the South Asian Database of Controlled Clinical Trials (16 August 2016). Previously we searched IndMED, but this was not accessible at the time of the latest update.
SELECTION CRITERIA: All randomised controlled trials (RCTs) or quasi-RCTs (regardless of blinding) assessing the control of RSE using either thiopental sodium or propofol in patients of any age and gender.
DATA COLLECTION AND ANALYSIS: Two review authors screened the search results and reviewed the abstracts of relevant and eligible trials before retrieving the full-text publications.
MAIN RESULTS: One study with a total of 24 participants was available for review. This study was a small, single-blind, multicentre trial studying adults with RSE receiving either propofol or thiopental sodium for the control of seizure activity. This study was terminated early due to recruitment problems. For our primary outcome of total control of seizures after the first course of study drug, there were 6/14 patients versus 2/7 patients in the propofol and thiopental sodium groups, respectively (risk ratio (RR) 1.50, 95% confidence interval (CI) 0.40 to 5.61, low quality evidence). Mortality was seen in 3/14 patients versus 1/7 patients in the propofol and thiopental sodium groups, respectively (RR 1.50, 95% CI 0.19 to 11.93, low quality evidence). Our third primary outcome of length of ICU stay was not reported. For our secondary outcomes of adverse events, infection was seen in 7/14 patients versus 5/7 patients in the propofol and thiopental sodium groups, respectively (RR 0.70; 95% CI 0.35 to 1.41). Hypotension during administration of study drugs and requiring use of vasopressors was seen in 7/14 patients versus 4/7 patients in the propofol and thiopental sodium groups, respectively (RR 0.87; 95% CI 0.38 to 2.00). The other severe complication noted was non-fatal propofol infusion syndrome in one patient. Patients receiving thiopental sodium required more days of mechanical ventilation when compared with patients receiving propofol: (median (range) 17 days (5 to 70 days) with thiopental sodium versus four days (2 to 28 days) with propofol). At three months there was no evidence of a difference between the drugs with respect to outcome measures such as control of seizure activity and functional outcome.
AUTHORS' CONCLUSIONS: Since the last version of this review we have found no new studies.There is a lack of robust, randomised, controlled evidence to clarify the efficacy of propofol and thiopental sodium compared to each other in the treatment of RSE. There is a need for large RCTs for this serious condition.

DOI: 10.1002/14651858.CD009202.pub4
PMID: 28155226 [Indexed for MEDLINE]

84: Prasad M, Kathuria P, Nair P, Kumar A, Prasad K. Mobile phone use and risk of brain tumours: a systematic review of association between study quality, source of funding, and research outcomes. Neurol Sci. 2017 May;38(5):797-810. doi: 10.1007/s10072-017-2850-8. Epub 2017 Feb 17. PubMed PMID: 28213724.

Mobile phones emit electromagnetic radiations that are classified as possibly carcinogenic to humans. Evidence for increased risk for brain tumours accumulated in parallel by epidemiologic investigations remains controversial. This paper aims to investigate whether methodological quality of studies and source of funding can explain the variation in results. PubMed and Cochrane CENTRAL searches were conducted from 1966 to December 2016, which was supplemented with

relevant articles identified in the references. Twenty-two case control studies were included for systematic review. Meta-analysis of 14 case-control studies showed practically no increase in risk of brain tumour [OR 1.03 (95% CI 0.92-1.14)]. However, for mobile phone use of 10 years or longer (or >1640 h), the overall result of the meta-analysis showed a significant 1.33 times increase in risk. The summary estimate of government funded as well as phone industry funded studies showed 1.07 times increase in odds which was not significant, while mixed funded studies did not show any increase in risk of brain tumour. Metaregression analysis indicated that the association was significantly associated with methodological study quality ($p < 0.019$, 95% CI 0.009-0.09). Relationship between source of funding and log OR for each study was not statistically significant ($p < 0.32$, 95% CI 0.036-0.010). We found evidence linking mobile phone use and risk of brain tumours especially in long-term users (≥10 years). Studies with higher quality showed a trend towards high risk of brain tumour, while lower quality showed a trend towards lower risk/protection.

DOI: 10.1007/s10072-017-2850-8
PMID: 28213724

85: Pujari A, Swamy DR, Chawla R, Dhakal S. Simple way to optimise ultrasonographic visualisation of the retinal periphery and anterior segment structures. BMJ Case Rep. 2017 Feb 20;2017. pii: bcr2017219287. doi: 10.1136/bcr-2017-219287. PubMed PMID: 28219915.

86: Pushker N, Bajaj MS, Singh AK, Lokdarshi G, Bakhshi S, Kashyap S. Intra-ocular medulloepithelioma as a masquerade for PHPV and Panophthalmitis: a Diagnostic Dilemma. Saudi J Ophthalmol. 2017 Apr-Jun;31(2):109-111. doi: 10.1016/j.sjopt.2017.02.004. Epub 2017 Feb 21. PubMed PMID: 28559724; PubMed Central PMCID: PMC5436372.

A previously diagnosed child of persistent hyperplastic primary vitreous (PHPV) with painless blind eye remained clinically silent for about 3 years follow-up. The child suddenly presented as a case of orbital cellulitis and panopthalmitis with meningitis. No definite mass lesion was detected on ultrasonography, magnetic resonance imaging (MRI) and positron emission tomography (PET) scan. Histopathology of the enucleated eye revealed intra-ocular medulloepithelioma as the culprit of sterile panophthalmitis and orbital inflammation.

DOI: 10.1016/j.sjopt.2017.02.004
PMCID: PMC5436372
PMID: 28559724

87: Raghavendran K, Misra MC, Mulholland MW. The Role of Academic Institutions in Global Health: Building Partnerships With Low- and Middle-Income Countries. JAMA Surg. 2017 Feb 1;152(2):123-124. doi: 10.1001/jamasurg.2016.3107. PubMed PMID: 27679937.

88: Rai T, Choudhury BN, Kedia S, Bopanna S, Venigalla PM, Garg SK, Singla V, Makharia G, Ahuja V. Short-Term Clinical Response to Corticosteroids Can Predict Long-Term Natural History of Ulcerative Colitis: Prospective Study Experience. Dig Dis Sci. 2017 Apr;62(4):1025-1034. doi: 10.1007/s10620-017-4450-0. Epub 2017 Feb 4. PubMed PMID: 28161855.

BACKGROUND: Long-term outcome and natural history of steroid response in adult ulcerative colitis patients based on short-term response is largely unknown. AIM: To evaluate whether short-term clinical response at 30 days after steroid initiation for moderate to severe disease can predict long-term outcome. METHODS: This prospective observational study recruited 161 patients who received oral/intravenous steroid therapy at our institution from April 2005 to July 2009. Short-term response at 30 days and long-term response at the end of first and third years were measured. Risk factors for long-term outcome at 1 and 3 years

were analyzed by multivariate regression model.
RESULTS: At the end of 30 days, 90 patients (55.9%) had complete response, 47 (29.2%) partial response, and 24 (14.9%) did not respond at all. At the end of first year, 53/90 (60%) complete responders (at 30 days) maintained steroid-free remission when compared to 17/71 (23.9%, p < 0.001) partial/no responders. Similar result was observed at the end of third year (74.7 vs 55.1%, p = 0.017). On multivariable analysis, short-term outcome at 30 days was a predictor of outcome at the end of one year (RR 4.1, 95% CI 2.2-8.5) and 3 years (RR 2.1, 95% CI 1.02-4.5).
CONCLUSIONS: Short-term response to steroids is a strong predictor of long-term outcome at 1 and 3 years in active ulcerative colitis patients.

DOI: 10.1007/s10620-017-4450-0
PMID: 28161855 [Indexed for MEDLINE]

89: Rajak SK, Kumaresan A, Attupuram NM, Chhillar S, Baithalu RK, Nayak S, Sreela L, Singh RK, Tripathi UK, Mohanty TK, Yadav S. Age-related changes in transcriptional abundance and circulating levels of anti-Mullerian hormone and Sertoli cell count in crossbred and Zebu bovine males. Theriogenology. 2017 Feb;89:1-8. doi: 10.1016/j.theriogenology.2016.10.003. Epub 2016 Oct 11. PubMed PMID: 28043339.

Age-related changes in peripheral anti-Mullerian hormone (AMH) concentrations and transcriptional abundance of AMH gene in testicular tissue were studied in crossbred (Holstein Friesian × Tharparkar) and Zebu (Tharparkar) males. In both the breeds, basal AMH concentrations were estimated using ELISA method in blood plasma obtained from six males each at 1, 6, 12, 18, and 24 months age. After blood collection at respective ages, all the males were castrated and expression and immunolocalization of AMH was performed in the testicular tissue. The concentration of AMH in blood plasma was found to be highest at 1 month of age in both crossbred and Zebu males, which subsequently decreased with advancing age. Significantly (P < 0.05) lower concentration of AMH was observed in crossbred as compared with Zebu males at 24 months of age. In line with peripheral AMH concentrations, the expression of AMH gene was also higher (P < 0.05) at 1 month of age, which thereafter declined significantly with advancement of age in crossbred males. Furthermore, the expression of AMH gene differed significantly between Zebu and crossbred males at all the age groups studied. Immunolocalization of AMH in testicular tissue also revealed a stronger expression at 1 month age, which gradually decreased till 24 months of age. The true Sertoli cell count was significantly higher in Zebu compared with crossbred males at all age groups studied except at 6 months age. The relationship between Sertoli cell count and circulating AMH concentrations was negative and significant (r = -0.81; P = 0.004). In conclusion, expression of AMH gene in testicular tissue and peripheral blood concentrations of AMH were higher in young compared with adults in both crossbred and Zebu males; however, the transcriptional abundance and circulating levels of AMH were higher in Zebu compared with crossbred males.

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

90: Rajan D, Lakshmanan G, Gupta SK, Sivasubramanian R, Saxena A, Juneja R. Effect of Recorded Maternal Voice on Child's Cooperation During Cardiac Catheterization - A randomized controlled trial. Indian Pediatr. 2017 Mar 15;54(3):204-207. Epub 2017 Feb 2. PubMed PMID: 28159944.

OBJECTIVE: To assess the effect of recorded maternal voice on child's cooperation during cardiac catheterization.
DESIGN: Randomized placebo controlled trial.
Setting: Cardiac catheterization laboratory at a tertiary care hospital.
PARTICIPANTS: 90 children with congenital heart disease scheduled for cardiac

catheterization between July 2014 and Dec 2014 randomized to maternal voice group and control group.
INTERVENTION: During cardiac catheterization, children in maternal voice group listened to a 3-min audio-recording of their mother's voice, played in loop, using head-phones. Children in the other group wore headphones without auditory stimuli.
MAIN OUTCOME MEASURES: Child's cooperation during cardiac catheterization as assessed by Child Emotional Manifestation Scale.
RESULTS: Children in the maternal voice group showed lower mean (SD) distress scores [13.2 (4.6) vs. 16 (5.6), P=0.01]. The requirement of sedative agents during the procedure was not different (P=0.09).
CONCLUSION: Allowing children to listen to recorded voice of their mother is an effective strategy to improve cooperation during cardiac catheterization.

PMID: 28159944 [Indexed for MEDLINE]

91: Ramanujam B, Bharti K, Viswanathan V, Garg A, Tripathi M, Bal C, Chandra PS, Tripathi M. Can ictal-MEG obviate the need for phase II monitoring in people with drug-refractory epilepsy? A prospective observational study. Seizure. 2017 Feb;45:17-23. doi: 10.1016/j.seizure.2016.10.013. Epub 2016 Oct 31. PubMed PMID: 27912111.

PURPOSE: To determine if ictal-magnetoencephalography (ictal-MEG) source localization (SL) added information towards delineating the ictal-onset zone (IOZ), whether and how it helped final decision-making in epilepsy-surgery.
METHODS: Definite focal clusters on ictal-MEG were available for 32 DRE-patients, data was analyzed (single equivalent current dipole (ECD) model), SL done. Clinical history, long-term video-EEG (VEEG) monitoring, epilepsy-protocol MRI, FDG-PET, ictal-SPECT and interictal-MEG were discussed at the multispeciality Epilepsy Surgery Case-conference (ESC). Cases were reviewed with ictal-MEG SL presented only at the last ESC (after decision using other available modalities). Patients were grouped as VEEG localization and MRI-lesion concordant (Group-A), discordant (Group-B), and no MRI-lesion (Group-C). Final hypothesis or decision, surgical outcome in those operated, and how ictal-MEG data influenced them were recorded.
RESULTS: Five lesion-negative patients had identification of lesions after review of MRI with ictal-MEG SL. The difference between numbers of patients cleared for surgery without and with ictal MEG data was statistically significant (p=0.0044); but the difference in those cleared for phase II monitoring was not (p=1.00). Ictal MEG influenced decisions on possibility of surgery in 9 and converted decisions of phase II monitoring in 11 patients to electrocorticography-guided lesionectomy (20 in all; Group A-11, Group B-4, Group C-5); five were operated, with good seizure-control on follow-up.
CONCLUSIONS: Delineation of IOZ by ictal-MEG helped convert DRE patients unsuitable for surgery or planned for phase II monitoring into candidates suitable for surgery, even ECoG-guided resections, and resulted in favorable outcomes in those who were operated.

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PMID: 27912111 [Indexed for MEDLINE]

92: Ramsuran V, Hernández-Sanchez PG, O'hUigin C, Sharma G, Spence N, Augusto DG, Gao X, García-Sepúlveda CA, Kaur G, Mehra NK, Carrington M. Sequence and Phylogenetic Analysis of the Untranslated Promoter Regions for HLA Class I Genes. J Immunol. 2017 Mar 15;198(6):2320-2329. doi: 10.4049/jimmunol.1601679. Epub 2017 Feb 1. PubMed PMID: 28148735; PubMed Central PMCID: PMC5340644.

Polymorphisms located within the MHC have been linked to many disease outcomes by mechanisms not yet fully understood in most cases. Variants located within

untranslated regions of HLA genes are involved in allele-specific expression and may therefore underlie some of these disease associations. We determined sequences extending nearly 2 kb upstream of the transcription start site for 68 alleles from 57 major lineages of classical HLA class I genes. The nucleotide diversity within this promoter segment roughly follows that seen within the coding regions, with HLA-B showing the highest (~1.9%), followed by HLA-A (~1.8%), and HLA-C showing the lowest diversity (~0.9%). Despite its greater diversity, HLA-B mRNA expression levels determined in 178 European Americans do not vary in an allele- or lineage-specific manner, unlike the differential expression levels of HLA-A or HLA-C reported previously. Close proximity of promoter sequences in phylogenetic trees is roughly reflected by similarity of expression pattern for most HLA-A and -C loci. Although promoter sequence divergence might impact promoter activity, we observed no clear link between the phylogenetic structures as represented by pairwise nucleotide differences in the promoter regions with estimated differences in mRNA expression levels for the classical class I loci. Further, no pair of class I loci showed coordinated expression levels, suggesting that distinct mechanisms across loci determine their expression level under nonstimulated conditions. These data serve as a foundation for more in-depth analysis of the functional consequences of promoter region variation within the classical HLA class I loci.

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PMCID: PMC5340644 [Available on 2018-03-15]
PMID: 28148735

93: Raza K, Singh S, Rani N, Mishra R, Mehta K, Kaler S. Anomalous Innervation of the Median Nerve in the Arm in the Absence of the Musculocutaneous Nerve. Sultan Qaboos Univ Med J. 2017 Feb;17(1):e106-e108. doi: 10.18295/squmj.2016.17.01.019. Epub 2017 Mar 30. PubMed PMID: 28417038; PubMed Central PMCID: PMC5380405.

The brachial plexus innervates the upper extremities. While variations in the formation of the brachial plexus and its terminal branches are quite common, it is uncommon for the median nerve to innervate the muscles of the arm. During the dissection of an elderly male cadaver at the Department of Anatomy, All India Institute of Medical Sciences, New Delhi, India, in 2016, the coracobrachialis muscle was found to be supplied by a direct branch from the lateral root of the median nerve and the musculocutaneous nerve was absent. The branches of the median nerve supplied the biceps brachii and brachialis muscles and the last branch continued as the lateral cutaneous nerve of the forearm. These variations may present atypically in cases of arm flexor paralysis or sensory loss on the lateral forearm. Knowledge of these variations is important in surgeries and during the administration of regional anaesthesia near the shoulder joint and upper arm.

DOI: 10.18295/squmj.2016.17.01.019
PMCID: PMC5380405
PMID: 28417038

94: Rustagi RS, Arora K, Das RR, Pooni PA, Singh D. Incidence, risk factors and outcome of acute kidney injury in critically ill children - a developing country perspective. Paediatr Int Child Health. 2017 Feb;37(1):35-41. doi: 10.1080/20469047.2015.1120409. Epub 2016 Jan 9. PubMed PMID: 26752169.

BACKGROUND: Acute kidney injury (AKI) is common in critically ill children and is associated with poor outcome.
OBJECTIVE: To study the incidence, risk factors and outcome of AKI in children admitted to paediatric intensive care unit (PICU) of a developing country.
MATERIALS AND METHODS: This prospective observational study was conducted in a tertiary care PICU over one-year period. Critically ill children aged from 2 months to 18 years were included. RIFLE criteria based on GFR, and urine output was used for categorisation.

RESULTS: Of 380 children, 53 children (14%) had AKI (met any of the RIFLE criteria). The most common diagnoses underlying AKI were acute lower respiratory tract infection, CNS illness and severe dehydration. Subjects with AKI had a higher PRISM score (>10) at admission, longer duration of stay and high mortality. Significant risk factors for AKI following multivariate analysis were: age 1-5, PRISM score (>10) at admission, shock, infection, thrombocytopenia, hypo-albuminaemia and multi-organ dysfunction. Twenty-six of 53 subjects fulfilled the maximum RIFLE criteria within 72 h after admission and the mean (SD) time to first RIFLE attend was 1.6 (1.2) day. Subjects with AKI (RIFLE criteria) had 4.5 times higher mortality than those without AKI (36 vs 8%, P< etc).
CONCLUSION: A high incidence of AKI was noted in the PICU that was associated with high mortality. The RIFLE criterion is an effective tool which can be used not only for predicting the outcomes, but may help in the early identification of patients at risk for AKI.

DOI: 10.1080/20469047.2015.1120409
PMID: 26752169 [Indexed for MEDLINE]

95: Sahai P, Mohanti BK, Sharma A, Thakar A, Bhasker S, Kakkar A, Sharma MC, Upadhyay AD. Clinical outcome and morbidity in pediatric patients with nasopharyngeal cancer treated with chemoradiotherapy. Pediatr Blood Cancer. 2017 Feb;64(2):259-266. doi: 10.1002/pbc.26240. Epub 2016 Sep 29. PubMed PMID: 27681956.

OBJECTIVES: The aim of the study was to evaluate the outcome and treatment-related morbidity in pediatric patients with nasopharyngeal carcinoma (NPC) treated with chemoradiotherapy.
METHODS: We did a retrospective review of 41 pediatric patients diagnosed with NPC between 2000 and 2013. The majority of the patients were treated with neoadjuvant chemotherapy followed by concurrent chemoradiation with the dose of 70 Gy in 35 fractions. Eight patients were treated with intensity-modulated radiation therapy, while the remaining with three-dimensional conformal radiation therapy or two-dimensional simulation technique.
RESULTS: The median age of the patients was 14 years (range 6-20 years). Most of the patients had locoregionally advanced disease (stage III/IVA/IVB). The histology of all the cases was undifferentiated carcinoma. Immunohistochemistry for the Epstein-Barr virus-Latent membrane protein 1 was positive in nine of the 13 tested cases. The median follow-up for all and the surviving patients was 26.6 months (range 2-140.8) and 51.2 months, respectively. The 3-year overall survival (OS) and event-free survival (EFS) rates were estimated at 83.7% (95% confidence interval [CI]: 64.8-93%) and 55.8% (95%CI: 38.7-69.8%), respectively. Distant metastases were the predominant pattern of failure. Treatment response showed an independent association with OS. T classification (T1/T2 vs. T3/T4) was significantly associated with EFS. Xerostomia, hypothyroidism, dental caries, neck fibrosis, trismus, and dysphagia were the common late effects in survivors. Radiation myelitis was observed in one patient.
CONCLUSIONS: Treatment with neoadjuvant chemotherapy followed by concurrent chemoradiation provides good survival outcomes in pediatric NPC. The quality of life of the survivors is a pertinent area that necessitates consideration.

DOI: 10.1002/pbc.26240
PMID: 27681956 [Indexed for MEDLINE]

96: Sahu A, Bhargava R, Sagar R. Awareness about Specific Learning Disorder among teachers and parents: An Indian perspective. Asian J Psychiatr. 2017 Apr;26:149. doi: 10.1016/j.ajp.2017.02.001. Epub 2017 Feb 5. PubMed PMID: 28483081.

97: Saini C, Tarique M, Rai R, Siddiqui A, Khanna N, Sharma A. T helper cells in leprosy: An update. Immunol Lett. 2017 Apr;184:61-66. doi:

10.1016/j.imlet.2017.02.013. Epub 2017 Feb 21. Review. PubMed PMID: 28235552.

Leprosy is an ancient disease caused by gram positive, rod shaped bacilli called Mycobacterium leprae. Patients present with varied clinico-pathological disease depending on the host immune response to Mycobacterium leprae. Thus tuberculoid (TT) and lepromatous (LL) patients represent two ends of a spectrum where the former shows limited disease, high T cell mediate immune (CMI) response and low antibody (HI) levels in serum. In contrast the latter has low T cell and high humoral immune response i.e antibody levels. The mechanisms underlying these differences have been investigated intensely; however, there is no consensus on the primary immunological basis. Over three decades, Th1 and Th2 paradigm were thought to underling tuberculoid and lepromatous disease respectively. However many patients were shown to have mixed Th1/Th2 pattern of (IFN-γ/IL-4) cytokines. The present review was undertaken with a view to understand the T cells and cytokine dysregulation in leprosy. In recent years the sub classes of T cells that are Regulatory in nature (Treg) have been implicated in immune diseases where they were shown to suppress T cell functions. Additionally Th17 cells secreting IL-17A, IL17F, were implicated in immune inflammation. Taken together these regulatory cells may play a part in influencing immune responses in leprosy.

DOI: 10.1016/j.imlet.2017.02.013
PMID: 28235552

98: Satapathy S, Choudhary V, Sagar R. Tools to assess psychological trauma & its correlates in child sexual abuse: A review & current needs in Asia. Asian J Psychiatr. 2017 Feb;25:60-73. doi: 10.1016/j.ajp.2016.10.012. Epub 2016 Oct 19. Review. PubMed PMID: 28262176.

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

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

99: Satpathy G, Behera HS, Ahmed NH. Chlamydial eye infections: Current perspectives. Indian J Ophthalmol. 2017 Feb;65(2):97-102. doi: 10.4103/ijo.IJO_870_16. Review. PubMed PMID: 28345563; PubMed Central PMCID: PMC5381307.

Chlamydia trachomatis, an obligate intraocular bacteria causing trachoma, adult and neonatal inclusion conjunctivitis, was the leading cause of blindness in the last century worldwide. Improvement in socioeconomic and living conditions, availability of antibiotics, and introduction of National Trachoma Control

Programmes reduced the prevalence in developed countries, but it persisted in resource-poor settings of Africa and Asia, including India. In 2016, as per the WHO report, trachoma is restricted to 42 countries, causing blindness/visual impairment in ~1.9 million people. India is one of the five countries with nearly half of total active trachoma patients. Introduction of Global Elimination of Trachoma 2020 program by the WHO, using SAFE strategy (surgery for trachomatous trichiasis; Antibiotics for C. trachomatis; Facial cleanliness; and environmental improvement) greatly reduced the prevalence, but trachoma still persists in India. Global increase in the reproductive tract infection by C. trachomatis urogenital serotypes (D-K) has led to concurrent increase in C. trachomatis eye infections. Therefore, kerato eye infections due to chlamydial infections continue to be seen in hospitals. Over the years, there have been advances in laboratory diagnostics, in understanding the pathogenesis, tissue tropism, C. trachomatis genomics, and treatment modalities. Due attention and research is still needed for the study of C. trachomatis eye infections.

DOI: 10.4103/ijo.IJO_870_16
PMCID: PMC5381307
PMID: 28345563 [Indexed for MEDLINE]

100: Seth R, Pathak N, Singh A, Chopra A, Kumar R, Kalaivani M. Pediatric Acute Myeloid Leukemia: Improved Survival Rates in India. Indian J Pediatr. 2017 Feb;84(2):166-167. doi: 10.1007/s12098-016-2234-8. Epub 2016 Nov 10. PubMed PMID: 27830523.

101: Sethi A, Joshi M, Thukral A, Singh Dalal J, Kumar Deorari A. A Quality Improvement Initiative: Improving Exclusive Breastfeeding Rates of Preterm Neonates. Indian J Pediatr. 2017 Apr;84(4):322-325. doi: 10.1007/s12098-017-2306-4. Epub 2017 Feb 24. PubMed PMID: 28233253.

This study is a single center quality improvement (QI) initiative in a tertiary care neonatal intensive care unit which was done with an objective to increase the proportion of neonates receiving mother's own milk (at postnatal age of 7 d) from the current rate of 12.5% to 30% over a period of six weeks. Additional objectives were to evaluate the proportion of mothers' expressing breast milk within 3 h of birth, on day one and three and the amount of expressed breast milk (EBM) on day one and day seven. A team was formulated to evaluate the reasons for inadequate breast milk expression and to plan the steps for promoting the same. Comprehensive postnatal breast feeding counseling (CPNC) to promote early breast milk expression was initiated soon after the birth of a preterm neonate. CPNC was done for next fifteen mothers and their breast feeding support was streamlined. The effect of CPNC and teamwork was discussed amongst the team members every day and adjustments incorporated (Plan-Do-Study-Act cycle). The proportion of neonates receiving mother's only milk (MOM) on day 7 increased to 80% (12/15) after 4 wk of QI. Thus, a simple and feasible CPNC package lead to improved breast milk output in mothers.

DOI: 10.1007/s12098-017-2306-4
PMID: 28233253

102: Sethi SK, Sinha R, Rohatgi S, Kher V, Iyengar A, Bagga A. Pediatric renal transplant practices in India. Pediatr Transplant. 2017 May;21(3). doi: 10.1111/petr.12892. Epub 2017 Feb 1. PubMed PMID: 28145625.

Limited access to tertiary-level health care, limited trained pediatric nephrologists and transplant physicians, lack of facilities for dialysis, lack of an effective deceased donor program, non-affordability, and non-adherence to immunosuppressant drugs poses a major challenge to universal availability of pediatric transplantation in developing countries. We present the results of a survey which, to the best of our knowledge, is the first such published attempt at understanding the current state of pediatric renal transplantation in India. A designed questionnaire formulated by a group of pediatric nephrologists with the

aim of understanding the current practice of pediatric renal transplantation was circulated to all adult and pediatric nephrologists of the country. Of 26 adult nephrologists who responded, 16 (61.5%) were involved in pediatric transplantation, and 10 of 15 (66.6%) pediatric nephrologists were involved in pediatric transplantation. Most of the centers doing transplants were private/trust institution with only three government institutions undertaking it. Induction therapy was varied among pediatric and adult nephrologists. There were only a few centers (n=5) in the country routinely doing >5 transplants per year. Preemptive transplants and protocol biopsies were a rarity. The results demonstrate lower incidence of undertaking pediatric transplants in children below 6 years, paucity of active cadaveric programs and lack of availability of trained pediatric nephrologists and staff. In contrast to these dissimilarities, the immunosuppressant use seems to be quite similar to Western registry data with majority favoring induction agent and triple immunosuppressant (steroid, mycophenolate mofetil and tacrolimus) for maintenance. The survey also identifies major concerns in availability of this service to all regions of India as well as to all economic segments.

DOI: 10.1111/petr.12892
PMID: 28145625

103: Sharan P. Perspectives from resource poor settings. World Psychiatry. 2017 Feb;16(1):42-43. doi: 10.1002/wps.20380. PubMed PMID: 28127920; PubMed Central PMCID: PMC5269488.

104: Sharawat IK, Dawman L. Acute Focal Dystonia After a Single Dose of Oral Cetirizine in a 9-Year-Old Boy. Pediatr Emerg Care. 2017 Feb 4. doi: 10.1097/PEC.0000000000001062. [Epub ahead of print] PubMed PMID: 28169979.

Common cold is an acute illness affecting pediatric population in particular. The use of antihistamines is a common practice, with cetirizine being a frequently used drug with a good safety profile. However, adverse events due to the use of antihistamines have been rarely reported, such as drug-induced dystonia with the use of cetirizine. In our present case, dystonia due to the intake of cetirizine was observed, which the patient responded well to the use of benzodiazapines, namely, clonazepam. We report this case to highlight the occurrence of this adverse event with the use of cetirizine.

DOI: 10.1097/PEC.0000000000001062
PMID: 28169979

105: Sharawat IK, Dawman L, Satapathy AK. Primary angiitis of the central nervous system in a 7-month-old infant. Childs Nerv Syst. 2017 Feb;33(2):223-225. doi: 10.1007/s00381-017-3339-8. Epub 2017 Jan 12. PubMed PMID: 28083640.

106: Sharma A, Singh K, Biswas A, Ranjan R, Kishor K, Kumar R, Pandey H, Kamal VK, Saxena R. Evaluation of role of FV, FVIII and APLAs in the pathogenesis of APCR in FV Leiden negative DVT patients: a study in India. J Thromb Thrombolysis. 2017 Feb;43(2):217-223. doi: 10.1007/s11239-016-1469-6. PubMed PMID: 28063132.

Resistance to APC (APCR) is a very important cause of thrombophilia and most frequently caused by the Leiden mutation. APCR is also seen in the absence of FV Leiden and associated with elevated levels of factor V (FV), factor VIII (FVIII) and antiphospholipid antibodies (APLAs). The aim of this prospective case control study was to find out the frequency and role of FV, FVIII and APLAs in the pathogenesis of APCR in FV Leiden negative deep vein thrombosis (DVT) patients in India. A total 30 APCR positive and FV Leiden negative patients with DVT and similar number of age and sex matched healthy controls were recruited.

Significantly higher mean FVIII levels were observed in patients as compared to controls [patients: 132.3±30.7 IU/ml, controls: 117.5±17.7 IU/ml, p=0.025]. A significant negative correlation was also observed between FVIII and APC ratio (Pearson correlation=0.368, p=<0.001). Mean FV levels in patients [107.1±13.1 IU/ml] and controls [102±11.9 IU/ml] were not statistically significant (p=0.119). Anti β2 glycoprotein I (Anti-β2-GPI, IgG) showed significant association with APCR phenotype (p=0.050), unlike other factors such as protein C, protein S, lupus anticoagulant and anticardiolipin antibodies. The strong association of FVIII and anti-β2 GPI (IgG) antibodies with APCR phenotype is suggestive of incorporation of these factors in APCR positive DVT patients in the absence of FV Leiden mutation in India. However more studies in large sample size are required for setting up the proper investigation protocol in these patients.

DOI: 10.1007/s11239-016-1469-6
PMID: 28063132 [Indexed for MEDLINE]

107: Sharma JB, Goyal M, Kumar S, Roy KK, Sharma E, Arora R. Concomitant female genital tuberculosis and endometriosis. Indian J Tuberc. 2017 Jul;64(3):173-177. doi: 10.1016/j.ijtb.2017.01.006. Epub 2017 Feb 22. PubMed PMID: 28709484.

AIMS: To demonstrate an association between female genital tuberculosis (FGTB) and endometriosis.
METHODS: A total of 16 women who underwent laparoscopy (12 cases) or laparotomy (4 cases) and were found to have female genital tuberculosis and endometriosis were enrolled in this retrospective study.
RESULTS: The mean age and parity were 28.2 years and 0.2, respectively. Past history of tuberculosis was present in 75% of the women (pulmonary in 50%). Menstrual dysfunction (especially oligomenorrhoea and dysmenorrhoea), constitutional symptoms, infertility, abdominal pain and lump were the main complaints. Diagnosis of FGTB was made by positive acid-fast bacilli (AFB) on microscopy, culture of endometrial aspirate, positive polymerase chain reaction (PCR), histopathological finding of epitheliod granuloma or findings of TB on laparoscopy or laparotomy. Diagnosis of endometriosis was made by laparoscopy or laparotomy. Pelvic adhesions were seen in all women, whereas frozen pelvis was seen in 7 (43.7%) women. Surgery was performed, which was laparoscopic adhesiolysis in 12 (75%), drainage of endometrioma in 12 (75%), cystectomy in 8 (50%), and total abdominal hysterectomy with bilateral salpingo-oophorectomy in 4 (25%) cases. With more then one type of (surgery in many cases).
DISCUSSION: Female genital tuberculosis and endometriosis may have similar manifestations and can co-exist.

DOI: 10.1016/j.ijtb.2017.01.006
PMID: 28709484

108: Sharma P, Chaurasia S, Rasal A, Angmo D. Synergistic innervational downshoot: a distinct vertical dysinnervation pattern and its unique management. Can J Ophthalmol. 2017 Feb;52(1):e31-e38. doi: 10.1016/j.jcjo.2016.07.017. Epub 2016 Nov 18. PubMed PMID: 28237170.

109: Sharma S, Bhanot R, Deka D, Bajpai M, Gupta DK. Impact of fetal counseling on outcome of antenatal congenital surgical anomalies. Pediatr Surg Int. 2017 Feb;33(2):203-212. doi: 10.1007/s00383-016-4015-x. Epub 2016 Nov 18. PubMed PMID: 27864598.

AIM: To analyze the impact of counseling on antenatal congenital surgical anomalies (ACSA).
METHODS: Cases presenting with ACSA for fetal counseling and those presenting in post-natal period following diagnosis of ACSA (PACSA) for surgical opinion were

analyzed for spectrum, presentation and outcome.
RESULTS: 117 cases including ACSA(68);PACSA(49) were analyzed. Gestational age at diagnosis of ACSA;PACSA was 17-37;17-39 weeks (median 24;32 weeks). Diagnoses in ACSA;PACSA included urological (26;31), neurological (10;5), congenital diaphragmatic hernia (CDH)(5;1), gastrointestinal (5;5), lung and chest anomalies (5;1), intraabdominal cysts (4;1), abdominal wall defects (4;0), tumors (3;3), limb anomaly (1;1), esophageal atresia (1;1), conjoint twins (1;0), hepatomegaly (1;0), and major cardiac anomalies (2;0). Two antenatal interventions were done for ACSA; vesicoamniotic shunt and amnioinfusion for oligohydramnios. 17;24 ACSA;PACSA required early surgical intervention in post-natal period. Nine ACSA underwent medical termination of pregnancy and 4 had intrauterine demise. Nine ACSA babies died including two CDH, one gastroschisis, one duodenal atresia, one conjoint twins, one megacystitis with motility disorder and three posterior urethral valves. All PACSA babies survived.
CONCLUSION: Fetal counseling for CSA portrays true outcome of ACSA with 32.3% (22/68) mortality versus 0% for PACSA due to selection bias. However, fetal counseling ensures optimal perinatal care.

DOI: 10.1007/s00383-016-4015-x
PMID: 27864598 [Indexed for MEDLINE]

110: Sharma V, Malgulwar PB, Purkait S, Patil V, Pathak P, Agrawal R, Kulshreshtha R, Mallick S, Julka PK, Suri A, Sharma BS, Suri V, Sharma MC, Sarkar C. Genome-wide ChIP-seq analysis of EZH2-mediated H3K27me3 target gene profile highlights differences between low- and high-grade astrocytic tumors. Carcinogenesis. 2017 Feb 1;38(2):152-161. doi: 10.1093/carcin/bgw126. PubMed PMID: 27993893.

Enhancer of zeste homolog-2(EZH2) is a key epigenetic regulator that functions as oncogene and also known for inducing altered trimethylation of histone at lysine-27 (H3K27me3) mark in various tumors. However, H3K27me3 targets and their precise relationship with gene expression are largely unknown in astrocytic tumors. In this study, we checked EZH2 messenger RNA and protein expression in 90 astrocytic tumors of different grades using quantitative PCR and immunohistochemistry, respectively. Further, genome-wide ChIP-seq analysis for H3K27me3 modification was also performed on 11 glioblastomas (GBMs) and 2 diffuse astrocytoma (DA) samples. Our results showed EZH2 to be highly overexpressed in astrocytic tumors with a significant positive correlation with grade. Interestingly, ChIP-seq mapping revealed distinct differences in genes and pathways targeted by these H3K27me3 modifications between GBM versus DA. Neuroactive ligand receptor pathway was found most enriched in GBM ($P = 9.4 \times 10-25$), whereas DA were found to be enriched in metabolic pathways. Also, GBM showed a higher enrichment of H3K27me3 targets reported in embryonic stem cells and glioma stem cells as compared with DAs. Our results show majority of these H3K27me3 target genes were downregulated, not only due to H3K27me3 modification but also due to concomitant DNA methylation. Further, H3K27me3 modification-associated gene silencing was not restricted to promoter but also present in gene body and transcription start site regions. To the best of our knowledge, this is the first high-resolution genome-wide mapping of H3K27me3 modification in adult astrocytic primary tissue samples of human, highlighting the differences between grades. Interestingly, we identified SLC25A23 as important target of H3K27me3 modification, which was downregulated in GBM and its low expression was associated with poor prognosis in GBMs.

DOI: 10.1093/carcin/bgw126
PMID: 27993893

111: Shrivastava P, Nayak B, Singh P. Migrated Hem-o-Lok clips in the ureter: a rare cause of recurrent urinary tract infection. BMJ Case Rep. 2017 Feb 15;2017. pii: bcr2016219143. doi: 10.1136/bcr-2016-219143. PubMed PMID: 28202487.

Erosion of surgical materials into the adjacent organs following surgical procedures is a rare complication. Migrations of these surgical materials into the urinary tract like pelvicalyceal system, ureter and bladder have been reported following various urological procedures. We present a case of migrated Hem-o-Lok clips into the ureter following a laparoscopic partial nephrectomy for angiomyolipoma of the left kidney presented with recurrent urinary tract infection. The case was managed with ureteroscopic removal of clips. The patient is asymptomatic on last follow-up.

DOI: 10.1136/bcr-2016-219143
PMID: 28202487 [Indexed for MEDLINE]

112: Sihota R, Midha N, Selvan H, Sidhu T, Swamy DR, Sharma A, Gupta A, Gupta V, Dada T, Chaudhary S. Prognosis of different glaucomas seen at a tertiary center: A 10-year overview. Indian J Ophthalmol. 2017 Feb;65(2):128-132. doi: 10.4103/ijo.IJO_875_16. PubMed PMID: 28345568; PubMed Central PMCID: PMC5381291.

AIM: This study aims to determine treatment patterns, long-term intraocular pressure (IOP) and perimetric control in different glaucomas seen at a tertiary eye center.
SETTINGS AND DESIGN: Hospital-based, cross-sectional chart review of patients routinely following up at an outpatient glaucoma service.
METHODS: Patients with a follow-up of at least 10 years were evaluated. Their mean IOP, visual field (VF) status, and medications/surgery required at final assessment were noted.
STATISTICAL ANALYSIS: Descriptive statistics (mean, standard deviation, and range) were used for all parameters.
RESULTS: A total of 230 patients met our inclusion and exclusion criteria, 79 having ocular hypertension with open angles or primary angle closure (PAC), 35 primary open angle glaucoma (POAG), 50 PAC glaucoma (PACG), 20 primary congenital glaucoma (PCG), 46 secondary glaucoma patients. Ocular hypertensives with open angles showed progression to POAG in 3.7%, those with PAC in 5.2%, at a mean IOP of 17.3 ± 3.37 mmHg and 17.13 ± 4.41 mmHg, respectively. A progression on Humphrey Field Analyzer was seen in 11% of POAG and PACG eyes at a mean IOP of 13.50 ± 5.07 and 13.09 ± 3.95 mmHg, respectively. Fifteen percent of primary congenital glaucomas (PCGs) showed a glaucomatous VF defect after 10 years. In secondary glaucoma eyes, the mean IOP at last follow-up visit was 12.38 ± 3.74 mmHg, with progression noted in 7.69% of eyes.
CONCLUSION: This study provides evidence that routine delivery of care can provide well controlled IOP in glaucomas, both primary and secondary, and the VF stabilized in about 90% of patients over a period of 10 years, with the currently available glaucoma medications and trabeculectomy.

DOI: 10.4103/ijo.IJO_875_16
PMCID: PMC5381291
PMID: 28345568 [Indexed for MEDLINE]

113: Sikary AK, Kumar R. Case report of fatal post-coital bleeding with systemic bleeding diathesis. Int J Gynaecol Obstet. 2017 Apr;137(1):94-95. doi: 10.1002/ijgo.12100. Epub 2017 Feb 2. PubMed PMID: 28083962.

114: Singh A, Mohan A, Dey AB, Mitra DK. Programmed death-1(+) T cells inhibit effector T cells at the pathological site of miliary tuberculosis. Clin Exp Immunol. 2017 Feb;187(2):269-283. doi: 10.1111/cei.12871. Epub 2016 Nov 24. PubMed PMID: 27665733; PubMed Central PMCID: PMC5217927.

Optimal T cell activation is vital for the successful resolution of microbial infections. Programmed death-1 (PD-1) is a key immune check-point receptor expressed by activated T cells. Aberrant/excessive inhibition mediated by PD-1

may impair host immunity to Mycobacterium tuberculosis infection, leading to disseminated disease such as miliary tuberculosis (MTB). PD-1 mediated inhibition of T cells in pulmonary tuberculosis and TB pleurisy is reported. However, their role in MTB, particularly at the pathological site, remains to be addressed. The objective of this study was to investigate the role of PD-1-PD-ligand 1 (PD-L1) in T cell responses at the pathological site from patients of TB pleurisy and MTB as clinical models of contained and disseminated forms of tuberculosis, respectively. We examined the expression and function of PD-1 and its ligands (PD-L1-PD-L2) on host immune cells among tuberculosis patients. Bronchoalveolar lavage-derived CD3 T cells in MTB expressed PD-1 (54·2 ± 27·4%, P ≥ 0·0009) with significantly higher PD-1 ligand-positive T cells (PD-L1: 19·8 ± 11·8%; P ≥ 0·019, PD-L2: 12·6 ± 6·2%; P ≥ 0·023), CD19(+) B cells (PD-L1: 14·4 ± 10·4%; P ≥ 0·042, PD-L2: 2·6 ± 1·43%; not significant) and CD14(+) monocytes (PD-L1: 40·2 ± 20·1%; P ≥ 0·047, PD-L2: 22·4 ± 15·6%; P ≥ 0·032) compared with peripheral blood (PB) of MTB and healthy controls. The expression of PD-1 was associated with a diminished number of cells producing effector cytokines interferon (IFN)-γ, tumour necrosis factor (TNF)-α, interleukin (IL)-2 and elevated apoptosis. Locally accumulated T cells were predominantly PD-1(+) -PD-L1(+) , and blocking this pathway restores the protective T cell response. We conclude that M. tuberculosis exploits the PD-1 pathway to evade the host immune response by altering the T helper type 1 (Th1) and Th2 balance at the pathological site of MTB, thereby favouring disease dissemination.

DOI: 10.1111/cei.12871
PMCID: PMC5217927 [Available on 2018-02-01]
PMID: 27665733 [Indexed for MEDLINE]

115: Singh A, Seth R, Singla M, Kabra SK, Lodha R. Clinical Profile of Dengue Infection in Immune-compromised Children. Indian Pediatr. 2017 Apr 15;54(4):330-331. Epub 2017 Feb 2. PubMed PMID: 28159953.

Review of records of children admitted with dengue infection was carried out to compare clinical and laboratory parameters, course of illness, and outcome between immune-compromised and immune-competent patients. Statistically significant differences were found in days to platelet recovery (P=0.03), hepatic dysfunction (P= 0.04), and higher requirement of fluid (P= 0.01) in immune-compromised group.

PMID: 28159953 [Indexed for MEDLINE]

116: Singh PM, Borle A, Trikha A, Michos L, Sinha A, Goudra B. Role of Periarticular Liposomal Bupivacaine Infiltration in Patients Undergoing Total Knee Arthroplasty-A Meta-analysis of Comparative Trials. J Arthroplasty. 2017 Feb;32(2):675-688.e1. doi: 10.1016/j.arth.2016.09.042. Epub 2016 Oct 8. Review. PubMed PMID: 28029532.

BACKGROUND: Over last 2 years, many trials have evaluated newly approved liposomal bupivacaine for periarticular infiltration in total knee arthroplasty (TKA) with mixed results. Our meta-analysis attempts to consolidate the results and make evidence-based conclusions.
METHODS: Trails comparing periarticular infiltration of liposomal bupivacaine to conventional analgesic regimens for total knee arthroplasty published till June 2016 were searched in medical database. Comparisons were made for length of stay (LOS), postoperative pain scores, range of motion, and opioid consumption. Meta-regression was performed for LOS to evaluate various analgesic control subgroups.
RESULTS: Sixteen trials were included in the final analysis. Liposomal bupivacaine group showed a shorter LOS (reported in 13 subgroups) than control

group by 0.17 ± 0.04 days (random effects, P < .001, I(2) = 84.66%). Meta-regression for various types of control showed a predictability (R(2)) of 73%, τ(2) = 0.013 (random effects, P < .001, I(2) = 45.16). Only femoral block subgroup attained statistically significant shorter LOS on splitting the control group. Numeric pain scores were lower for pooled control group and local anesthetic infiltration subgroup in immediate postoperative phase. Second postoperative day analgesia was statistically superior to overall clubbed controls and femoral block subgroup. Superiority and/or inferiority of liposomal bupivacaine could not be proven for opioid consumption and range of motion because of a small pooled sample size. Publication bias is likely for LOS (Egger test, X intercept = 2.42, P < .001).
CONCLUSION: Liposomal bupivacaine infiltration has questionable clinical advantage, as it marginally shortens patient's hospital stay especially in comparison with patients receiving analgesic femoral nerve block. Compared with conventional regimens, it can provide slightly superior yet sustained (till second postoperative day) perioperative analgesia. High heterogeneity suggests need for standardization of infiltration techniques for better predictability of results.

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

117: Singh PM, Panwar R, Borle A, Goudra B, Trikha A, van Wagensveld BA, Sinha A. Efficiency and Safety Effects of Applying ERAS Protocols to Bariatric Surgery: a Systematic Review with Meta-Analysis and Trial Sequential Analysis of Evidence. Obes Surg. 2017 Feb;27(2):489-501. doi: 10.1007/s11695-016-2442-3. Review. PubMed PMID: 27878754.

Application of the enhanced recovery after surgery (ERAS) to the bariatric surgical procedures is at its early stages with little consolidated evidence. This meta-analysis evaluates present literature and indicates pathways for development of evidence-based standardized ERAS protocols for bariatric surgery. Comparative trials between ERAS and conventional bariatric surgery published till June 2016 were searched in the medical database. Comparisons were made for length of stay (LOS), readmission, complications (major/minor), and reoperation rates. Trial sequential analysis (TSA) for the strength of meta-analysis was performed for the primary outcome LOS. Five subgroups with a total of 394 and 471 patients in ERAS and conventional group respectively were included. LOS was shorter in ERAS group by 1.56 ± 0.18 days (random-effects, p < 0.001, I (2) = 93.07 %). The sample size in ERAS was well past the "information size" variable which was calculated to be 189 as per the TSA for power 85%. MH odds ratio [1.41 (95% CI 1.13 to1.76)] was higher for minor complications in the ERAS group (fixed effects, I (2) = 0, p < 0.001). Superiority/inferiority of ERAS could not be established for major or overall complications, readmission, and anastomotic leak rates. No publication bias was found in the included trials (Egger's test, X-intercept = 6.14, p = 0.66). Evaluation based on Cochrane collaboration recommendations suggested that all the five included trials had a high risk of methodological bias. ERAS protocols for bariatric procedures allow faster return to home for patients. The present bariatric ERAS protocols have high heterogeneity and would benefit from standardization. Minor complication rates increase with implementation of ERAS, however without any significant effect on overall patient morbidity. Further randomized trials comparing ERAS with conventional care are required to consolidate these findings.

DOI: 10.1007/s11695-016-2442-3
PMID: 27878754

118: Singh S, Zafar A, Khan S, Naseem I. Towards therapeutic advances in melanoma management: An overview. Life Sci. 2017 Apr 1;174:50-58. doi: 10.1016/j.lfs.2017.02.011. Epub 2017 Feb 24. Review. PubMed PMID: 28238718.

Melanoma is one of the most aggressive types of skin cancer with rapidly increasing incidence rate. The disease is largely considered incurable and the patients diagnosed with metastatic melanoma have a survival of not more than five years. Despite of the recent advances in anti-melanoma chemo- and immunotherapies, the available drugs are relatively toxic and responsive to only a limited subset of lesions. Currently, topical pharmacotherapy is demonstrated as an effective approach for the treatment of various skin cancers. Also, in vitro testing of melanoma cell lines and murine melanoma models has identified a number of relatively safe and effective phytochemicals. In this review, we described the use of topical pharmacotherapy for the treatment of skin cancers. Melanoma treatment by drugs targeting MAPK-pathway has also been discussed. Long non-coding RNAs and therapeutics targeting ER-associated pathways looks quite promising for the treatment of melanoma. Moreover, some natural anticancer compounds that have been reported to have anti-melanoma effects have also been described. At present a better understanding of genetics and epigenetics of initiation and progression of melanoma is needed for the identification of novel biomarkers and development of targeted therapeutics against melanoma.

DOI: 10.1016/j.lfs.2017.02.011
PMID: 28238718 [Indexed for MEDLINE]

119: Singh T, Modi JN, Kumar V, Dhaliwal U, Gupta P, Sood R. Admission to Undergraduate and Postgraduate Medical Courses: Looking Beyond Single Entrance Examinations. Indian Pediatr. 2017 Mar 15;54(3):231-238. Epub 2017 Feb 2. PubMed PMID: 28159948.

In India, a single national level entrance examination for admission to undergraduate and postgraduate medical courses has been introduced. This is largely an effort towards alleviating financial corruption in admission process, improving logistics and ease of examination for students, and resource-efficacy in conduct of examination. Unfortunately, the possible educational impact of such single high-stakes examination has not been overtly discussed. A major handicap in doing so is the lack of documentation and analysis of our own experience with multiple entrance examinations over many years. One adverse aspect of a single high-stakes examination, especially the Postgraduate entrance examination, is that the students' learning priorities get redefined to being 'examination-oriented' rather than 'competency-development oriented'. Hence, we must draw lessons from admission processes in other countries that have gone through similar course. Two key effective practices in these countries include giving weightage to prior academic performance, and use of a combination of some form of cognitive testing, aptitude testing and non-cognitive assessment, for taking selection decisions. It is prudent to modify our existent examination processes utilizing the same principles. There is a need to improve the formative assessments and the end-of-training certification examinations, and possibly also include them as inputs for the admission process.

PMID: 28159948 [Indexed for MEDLINE]

120: Singhal R, Chawla S, Rathore DK, Bhasym A, Annarapu GK, Sharma V, Seth T, Guchhait P. Development of pro-inflammatory phenotype in monocytes after engulfing Hb-activated platelets in hemolytic disorders. Clin Immunol. 2017 Feb;175:133-142. doi: 10.1016/j.clim.2016.12.007. Epub 2016 Dec 28. PubMed PMID: 28039017.

Monocytes and macrophage combat infections and maintain homeostatic balance by engulfing microbes and apoptotic cells, and releasing inflammatory cytokines. Studies have described that these cells develop anti-inflammatory properties upon recycling the free-hemoglobin (Hb) in hemolytic conditions. While investigating the phenotype of monocytes in two hemolytic disorders-paroxysmal nocturnal hemoglobinuria (PNH) and sickle cell disease (SCD), we observed a high number of

pro-inflammatory (CD14(+)CD16(hi)) monocytes in these patients. We further investigated in vitro the phenotype of these monocytes and found an estimated 55% of CD14(+) cells were transformed into the CD14(+)CD16(hi) subset after engulfing Hb-activated platelets. The CD14(+)CD16(hi) monocytes, which were positive for both intracellular Hb and CD42b (platelet marker), secreted significant amounts of TNF-α and IL-1β, unlike monocytes treated with only free Hb, which secreted more IL-10. We have shown recently the presence of a high number of Hb-bound hyperactive platelets in patients with both diseases, and further investigated if the monocytes engulfed these activated platelets in vivo. As expected, we found 95% of CD14(+)CD16(hi) monocytes with both intracellular Hb and CD42b in both diseases, and they expressed high TNF-α. Furthermore our data showed that these monocytes whether from patients or developed in vitro after treatment with Hb-activated platelets, secreted significant amounts of tissue factor. Besides, these CD14(+)CD16(hi) monocytes displayed significantly decreased phagocytosis of E. coli. Our study therefore suggests that this alteration of monocyte phenotype may play a role in the increased propensity to pro-inflammatory/coagulant complications observed in these hemolytic disorders-PNH and SCD.

DOI: 10.1016/j.clim.2016.12.007
PMID: 28039017 [Indexed for MEDLINE]

121: Som A, Maitra S, Bhattacharjee S, Baidya DK. Goal directed fluid therapy decreases postoperative morbidity but not mortality in major non-cardiac surgery: a meta-analysis and trial sequential analysis of randomized controlled trials. J Anesth. 2017 Feb;31(1):66-81. doi: 10.1007/s00540-016-2261-7. Epub 2016 Oct 13. Review. PubMed PMID: 27738801.

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

DOI: 10.1007/s00540-016-2261-7
PMID: 27738801 [Indexed for MEDLINE]

122: Srivastava R, Batra A, Dhawan D, Bakhshi S. Association of energy intake and expenditure with obesity: A cross-sectional study of 150 pediatric patients following treatment for leukemia. Pediatr Hematol Oncol. 2017 Feb;34(1):29-35. doi: 10.1080/08880018.2016.1272025. Epub 2017 Mar 13. PubMed PMID: 28287332.

Increased obesity in leukemia survivors has been attributed to chemotherapy and

radiation. Data on total energy intake (TEI) and total energy expenditure (TEE) are lacking in obese childhood leukemia patients after completion of therapy from India. We conducted a cross-sectional study in pediatric acute leukemia patients after completion of therapy wherein energy intake was assessed by 24-hour recall method. TEE was calculated using Harris-Benedict equation, by assessing the physical activity level using Physical Activity Questionnaire for children and basal metabolic rate by World Health Organization equation. Indian Academy of Pediatrics 2015 guidelines for BMI were used for defining overweight and obesity. Nutritional status was assessed in 150 leukemia patients after completion of therapy. Twenty-five percent of leukemia patients after completion of therapy were overweight and obese versus 11% of healthy controls ($p = 0.042$). The mean ratio of TEI/required energy intake (REI), TEE/required energy expenditure (REE), and (TEI:REI)/(TEE:REE) were significantly higher in overweight and obese group versus nonobese survivors ($p < 0.001$, $p = 0.091$, $p < 0.001$, respectively). Multivariate analysis showed higher income (HR-2.3, $p = 0.04$), increased TEI/REI (HR-4, $p = 0.049$) and higher (TEI:REI)/(TEE:REE) (HR-3.1, $p = 0.039$) to be significant factors predicting obesity. Obesity in leukemia patients after completion of therapy is associated with increased energy intake, causing imbalance between energy intake and TEE in these patients.

DOI: 10.1080/08880018.2016.1272025
PMID: 28287332 [Indexed for MEDLINE]

123: Suchal K, Malik S, Khan SI, Malhotra RK, Goyal SN, Bhatia J, Kumari S, Ojha S, Arya DS. Protective effect of mangiferin on myocardial ischemia-reperfusion injury in streptozotocin-induced diabetic rats: role of AGE-RAGE/MAPK pathways. Sci Rep. 2017 Feb 9;7:42027. doi: 10.1038/srep42027. PubMed PMID: 28181586; PubMed Central PMCID: PMC5299420.

Hyperglycemia induced advanced glycation end products-receptor for advanced glycation end products (AGE-RAGE) activation is thought to involve in the development of cardiovascular disease in diabetics. Activation of AGE-RAGE axis results in the oxidative stress and inflammation. Mangiferin is found in the bark of mango tree and is known to treat diseases owing to its various biological activities. Thus, this study was designed to evaluate the effect of mangiferin in ischemia-reperfusion (IR) induced myocardial injury in diabetic rats. A single injection of STZ (70 mg/kg; i.p.) was injected to male albino Wistar rats to induce diabetes. After confirmation of diabetes, rats were administered vehicle (2 ml/kg; i.p.) and mangiferin (40 mg/kg; i.p.) for 28 days. On 28(th) day, left anterior descending coronary artery was ligated for 45 min and then reperfused for 60 min. Mangiferin treatment significantly improved cardiac function, restored antioxidant status, reduced inflammation, apoptosis and maintained myocardial architecture. Furthermore, mangiferin significantly inhibited the activation of AGE-RAGE axis, c-Jun N-terminal kinase (JNK) and p38 and increased the expression of extracellular regulated kinase 1/2 (ERK1/2) in the myocardium. Thus, mangiferin attenuated IR injury in diabetic rats by modulation of AGE-RAGE/MAPK pathways which further prevented oxidative stress, inflammation and apoptosis in the myocardium.

DOI: 10.1038/srep42027
PMCID: PMC5299420
PMID: 28181586

Conflict of interest statement: The authors declare no competing financial interests.

124: Takkar B, Azad SV, Gangwe AB. Successful management of choroidal neovascular membrane secondary to choroidal osteoma with intravitreal bevacizumab. Saudi J Ophthalmol. 2017 Apr-Jun;31(2):120-121. doi: 10.1016/j.sjopt.2017.02.003. Epub 2017 Feb 14. PubMed PMID: 28566982; PubMed Central PMCID: PMC5436376.

125: Talwar S, Agarwal P, Choudhary SK, Kothari SS, Juneja R, Saxena A, Airan B.

Aortopulmonary window: Morphology, diagnosis, and long-term results. J Card Surg. 2017 Feb;32(2):138-144. doi: 10.1111/jocs.12936. Epub 2017 Jan 30. PubMed PMID: 28139013.

OBJECTIVE: Aortopulmonary window (APW) is a rare congenital heart defect. We reviewed our experience with this condition over the last two decades.
METHODS: Between September 1993 and December 2013, 62 patients underwent surgery for APW. Depending on the associated lesions, they were divided into two groups: Simple (Group 1) or complex (Group 2). In the complex group, six patients had a ventricular septal defect, five patients had interrupted aortic arch, three patients had tetralogy of Fallot, two patients had double outlet right ventricle, and one patient had the right pulmonary artery arising from the ascending aorta.
RESULTS: Mean age at repair was 21.6±32.02 months (median=6, range 0.1-144 months). By preoperative echocardiographic assessment 27 out of 62 patients had severe pulmonary artery hypertension (52% of the cohort). Patch repair of APW was performed using the sandwich method (transwindow) (n=27; 43.5%), transaortic (n=18; 29%), and transpulmonary artery (n=5; 8.1%) approaches; 10 patients (16.1%) underwent double ligation and two (3.2%) underwent division and suturing. Overall hospital mortality in group 1 was 6.97% (3/43) and in group 2 it was 21% (4/19), p=0.085. Mean hospital stay in group 1 was 6.9±2.4 days (median=7 days) and in group 2 was 12±6.1 days (median=13 days), p=0.0001. Follow-up in group 1 was 1.6-9.8 years (median=6 years); in group 2, it was 1.8-8.9 years (median=6.5 years). There were no late deaths. Two patients needed reintervention for distortion of the right pulmonary artery origin. All patients were in New York Heart Association Class I/II at last follow up.
CONCLUSION: There are multiple acceptable surgical strategies for the treatment of aortopulmonary window. Despite a relatively advanced age and substantial number of patients with severe pulmonary hypertension the outcomes can still be good. Associated anomalies complicate the repair. Patients in the complex group had a protracted hospital course and a higher early mortality but similar late survival.

DOI: 10.1111/jocs.12936
PMID: 28139013 [Indexed for MEDLINE]

126: Tambe SV, Rana KK, Kakar A, Aggarwal S, Aggrawal A, Kakar S, Borkar N. Clinical importance of duodenal recesses with special reference to internal hernias. Arch Med Sci. 2017 Feb 1;13(1):148-156. doi: 10.5114/aoms.2017.64717. Epub 2016 Dec 19. PubMed PMID: 28144266; PubMed Central PMCID: PMC5206374.

INTRODUCTION: The detailed knowledge of the peritoneal recesses has great significance with respect to internal hernias. The recesses are usually related to rotation and adhesion of abdominal viscera to the posterior abdominal wall and/or the presence of retroperitoneal vessels which raises the serosal fold. The duodenal recesses are usually related to the 3(rd) and 4(th) parts of the duodenum. Internal hernias with respect to these recesses are difficult to diagnose clinically and usually noticed at the time of laparotomy. So, the knowledge of these recesses can be valuable to abdominal surgeons.
MATERIAL AND METHODS: The present study was conducted in 100 cases including 10 cadavers, 45 post mortem cases and 45 cases undergoing laparotomy.
RESULTS: We found superior and inferior duodenal recesses in 28% and 52% respectively, paraduodenal in 12%, mesentericoparietal in 3%, retroduodenal in 2% and duodenojejunal in 18% of cases. Two abnormal duodenojejunal recesses were found, one on the right (instead of the left) of the abdominal aorta, and in the other the opening was directed upwards instead of downwards. The incidence of internal hernias was 3%.
CONCLUSIONS: Thus it was observed that there is low incidence of superior and inferior duodenal recesses, and high incidence of paraduodenal recess. The abnormal recesses might be due to malrotation of the gut. In laparotomy cases, the internal hernia was noticed when the abdomen was opened for intestinal

obstruction. The incidence of internal hernia was found to be high.

DOI: 10.5114/aoms.2017.64717
PMCID: PMC5206374
PMID: 28144266

Conflict of interest statement: The authors declare no conflict of interest.

127: Tandon R, Singh A, Gupta N, Vanathi M, Gupta V. Upgradation and modernization of eye banking services: Integrating tradition with innovative policies and current best practices. Indian J Ophthalmol. 2017 Feb;65(2):109-115. doi: 10.4103/ijo.IJO_862_16. Review. PubMed PMID: 28345565; PubMed Central PMCID: PMC5381288.

PURPOSE: The purpose of this study is to review the history and evolution of the National Eye Bank (NEB) and analyze the impact over the years and report the outcome of the invested resources.
METHODS: Review of archival material, records, project reports, policy and procedures' manuals, and publications was done. Descriptive and analytical processing of data obtained was undertaken. Parameters evaluated included total collection, transplantation, utilization rates of donor cornea, changing trends over time in terms of numbers and duration of recipients waiting, impactful research translated into changes in standard operating protocols, new facilities, and subsequent effects on numbers or quality assurance measures and overview of major achievements. Periodic situational analysis with contextual relevance and interpretation of outcomes was done pertaining to national goals and international standards.
RESULTS: The NEB and cornea services have played a key leadership role in furthering the development of eye banking and corneal transplantation services. The contribution extends beyond routine patient care to education, training, generation of resources, advocacy, and policymaking. In quantifiable terms, the overall performance has steadily increased over the years. Major contributions include training of doctors, eye bank staff and corneal surgeons, introduction of innovative techniques for corneal transplantation, setting of national standards for eye banking and provision of preservation media, customized corneal, and ocular surface cell replacement therapy in collaboration with other departments and institutes.
CONCLUSION: The eye banking and corneal transplantation facilities have evolved with time providing quality services, modernized as appropriate with updated knowledge and incorporating technological advances supported by the systematic evidence-based approach.

DOI: 10.4103/ijo.IJO_862_16
PMCID: PMC5381288
PMID: 28345565 [Indexed for MEDLINE]

128: Tempe DK, Hasija S. Quest to determine the ideal position of the central venous catheter tip. Br J Anaesth. 2017 Feb;118(2):148-150. doi: 10.1093/bja/aew443. PubMed PMID: 28100515.

129: Tewari N, Mathur VP, Sardana D, Bansal K. Lesch-Nyhan syndrome: The saga of metabolic abnormalities and self-injurious behavior. Intractable Rare Dis Res. 2017 Feb;6(1):65-68. doi: 10.5582/irdr.2016.01076. PubMed PMID: 28357186; PubMed Central PMCID: PMC5359358.

Lesch-Nyhan syndrome (LNS) is an X-linked recessive disorder of purine metabolism caused by a mutation in Xq26.2-q26.3 (OMIM 308000.0004). The presence of the diagnostic triad, i.e. signs of self-injurious behavior (SIB) and results of pedigree analysis and novel molecular biology & genetic testing, confirms the diagnosis of LNS. With a level of hypoxanthine guanine phosphoribosyl-transferase 1 (HPRT1) enzyme activity < 2%, patients develop neurological, neurocognitive, and neuromotor symptoms along with SIB. Described here is a case of 4-year-old

boy who was diagnosed with LNS. The boy displayed SIB, i.e. biting of the lips and fingers, and he had cerebral venous sinus thrombosis caused by LNS.

DOI: 10.5582/irdr.2016.01076
PMCID: PMC5359358
PMID: 28357186

130: Titiyal JS, Kaur M, Falera R. Intraoperative optical coherence tomography in anterior segment surgeries. Indian J Ophthalmol. 2017 Feb;65(2):116-121. doi: 10.4103/ijo.IJO_868_16. Review. PubMed PMID: 28345566; PubMed Central PMCID: PMC5381289.

Intraoperative optical coherence tomography (iOCT) is a noninvasive imaging modality that provides a real-time dynamic feedback of the various surgical steps. Comprehensive literature search was performed in MEDLINE using "intraoperative optical coherence tomography" and "iOCT" as keywords. The use of iOCT as an aid to decision-making has been successfully reported in cases undergoing keratoplasty, implantable Collamer lens (ICL) implantation as well as cataract surgery. iOCT helps to assess the graft-host relationship in penetrating keratoplasty. It helps confirm the presence of a big bubble, detect subclinical big bubbles and guide layer by layer stromal dissection in cases of deep anterior lamellar keratoplasty. It acts as a guide during crucial surgical steps in endothelial keratoplasty, right from scoring of the Descemet membrane to ensuring graft apposition at the end of surgery. The morphological features of the corneal incision in phacoemulsification may be assessed. iOCT is a useful tool in assessing the status of the posterior capsule and may help identify preexisting posterior capsular defects during cataract surgery in various clinical scenarios such as posterior polar cataract, traumatic cataract, and vitrectomized eyes. It allows on-table assessment of the ICL vault and potentially facilitates exchange of ICL in the same sitting in extremes of vault. Ocular surface disorders such as ocular surface squamous neoplasia, pterygium, and dermoid may find an application for iOCT, wherein an iOCT-guided stromal dissection will ensure adequate depth of dissection. Further technological advancements may allow for automatic centration and tracking and address the present limitation of instrument-induced shadowing.

DOI: 10.4103/ijo.IJO_868_16
PMCID: PMC5381289
PMID: 28345566 [Indexed for MEDLINE]

131: Tiwari A, Gupta VG, Bakhshi S. Newer medical therapies for metastatic soft tissue sarcoma. Expert Rev Anticancer Ther. 2017 Mar;17(3):257-270. doi: 10.1080/14737140.2017.1285229. Epub 2017 Feb 6. Review. PubMed PMID: 28103739.

INTRODUCTION: Metastatic/advanced soft tissue sarcoma has a poor prognosis conventionally, treatment options have been limited. In recent years, this area has been a rich ground for research with many new drugs being approved and several more in the pipeline. With multiple new treatment options available, it is vital to keep up pace with this rapidly changing field. Areas covered: Recent data regarding use of novel agents in advanced soft tissue sarcoma is reviewed with a focus on clinical applicability. The goal is to guide the clinician into choosing appropriate lines of therapy for the individual patient in light of recent availability of multiple new treatment options. Expert commentary: Patients with advanced soft tissue sarcoma can expect to receive several lines of therapy in the modern era. Tumor histology should ideally guide the choice of therapy. The new FDA approved second line drugs viz, trabectedin, pazopanib and eribulin should be considered first after failure of doxorubicin-based chemotherapy. Additional options have become available, such as antiangiogenic agents, mTOR inhibitors, and several new molecules targeting specific oncogenic pathways. All these agents have a role in treating soft tissue sarcoma, and careful individualization of therapy can help achieve optimal outcomes in these challenging patients.

DOI: 10.1080/14737140.2017.1285229

PMID: 28103739 [Indexed for MEDLINE]

132: Tomar GS, Goyal K, Chandran R, Luthra A, Chauhan V, Kumar N. Aneurysmal hemorrhage in a pregnant patient with coarctation of aorta: An anesthetic challenge. J Clin Anesth. 2017 Feb;37:176-178. doi: 10.1016/j.jclinane.2016.12.008. Epub 2017 Jan 19. PubMed PMID: 28235521.

A 25years old female patient with pregnancy of 16weeks (G2 P1), diagnosed to have distal anterior cerebral artery aneurysm (DACA) with Hunt & Hess grade I, subarachnoid hemorrhage (SAH) and coexisting atretic type of aortic coarctation posted for aneurysmal clipping under general anesthesia is a challenge to anesthesiologists in perioperative period. Hypertensive surges in a pregnant patient may result in rupture of aneurysms. Mortality in the mothers with CoA has been reported to be in the range of 0 to 9%. Anesthetic management of a pregnancy with CoA and SAH has never been reported.

DOI: 10.1016/j.jclinane.2016.12.008
PMID: 28235521

133: Tripathi R, Verma D, Gupta VK, Tyagi S, Kalaivani M, Ramji S, Mala YM. Evaluation of 75 g glucose load in non-fasting state [Diabetes in Pregnancy Study group of India (DIPSI) criteria] as a diagnostic test for gestational diabetes mellitus. Indian J Med Res. 2017 Feb;145(2):209-214. doi: 10.4103/ijmr.IJMR_1716_15. PubMed PMID: 28639597; PubMed Central PMCID: PMC5501053.

BACKGROUND & OBJECTIVES: There is no consensus regarding optimal standard for diagnosis of gestational diabetes mellitus (GDM). In this study, use of 75 g glucose load in non-fasting state [Diabetes in Pregnancy Study Group of India (DIPSI) criteria] as a diagnostic test for GDM in pregnant women was compared with different oral glucose tolerance tests (OGTTs).
METHODS: This prospective study included 936 pregnant women, who underwent plasma glucose evaluation two hours after the challenge of 75 g glucose load irrespective of the timing of last meal (DIPSI criteria for GDM). After three days, standard 75 g OGTT was done in all women irrespective of previous plasma glucose value. Accuracy of the first result was compared to OGTT using cut-offs as per the World Health Organization (WHO) and International Association of Diabetes and Pregnancy Study Groups (IADPSG) criteria for the diagnosis of GDM.
RESULTS: Of the total 936 pregnant women, 73 (7.8%) patients had plasma glucose value ≥140 mg/dl when measured two hours after glucose load. When comparing with the WHO and IADPSG criteria, the sensitivity values were 65.1 and 74.1 per cent, respectively, and the corresponding specificity values were 96.3 and 96.9 per cent, respectively. On comparing with the WHO OGTT, only 41 of the 73 (56.2%) were true positives, whereas when IADPSG criteria were used, true positives were 46 (63%). False negative cases were also present when classified by the WHO and IADPSG criteria though in lesser numbers than false positives. The positive predictive values (PPVs) for the WHO and IADPSG criteria were 56.1 and 63 per cent, respectively, and their corresponding negative predictive values were 97.7 and 97.9 per cent, respectively.
INTERPRETATION & CONCLUSIONS: Our findings showed that when 75 g glucose load in non-fasting state was used as a diagnostic test for GDM, almost one quarter of patients with GDM escaped diagnosis as sensitivity values were low. On the other hand, some GDM cases were falsely labelled as normal as this test did not account for cases of fasting hyperglycaemia. In addition, comparison with other OGTTs showed low PPVs. Hence, use of DIPSI criteria for diagnosing GDM must be reconsidered till further validation.

DOI: 10.4103/ijmr.IJMR_1716_15
PMCID: PMC5501053
PMID: 28639597

134: Vashist P, Senjam SS, Gupta V, Gupta N, Kumar A. Definition of blindness under National Programme for Control of Blindness: Do we need to revise it? Indian J Ophthalmol. 2017 Feb;65(2):92-96. doi: 10.4103/ijo.IJO_869_16. Review. PubMed PMID: 28345562; PubMed Central PMCID: PMC5381306.

A review appropriateness of the current definition of blindness under National Programme for Control of Blindness (NPCB), Government of India. Online search of peer-reviewed scientific published literature and guidelines using PubMed, the World Health Organization (WHO) IRIS, and Google Scholar with keywords, namely blindness and visual impairment, along with offline examination of reports of national and international organizations, as well as their cross-references was done until December 2016, to identify relevant documents on the definition of blindness. The evidence for the historical and currently adopted definition of blindness under the NPCB, the WHO, and other countries was reviewed. Differences in the NPCB and WHO definitions were analyzed to assess the impact on the epidemiological status of blindness and visual impairment in India. The differences in the criteria for blindness under the NPCB and the WHO definitions cause an overestimation of the prevalence of blindness in India. These variations are also associated with an over-representation of refractive errors as a cause of blindness and an under-representation of other causes under the NPCB definition. The targets for achieving elimination of blindness also become much more difficult to achieve under the NPCB definition. Ignoring differences in definitions when comparing the global and Indian prevalence of blindness will cause erroneous interpretations. We recommend that the appropriate modifications should be made in the NPCB definition of blindness to make it consistent with the WHO definition.

DOI: 10.4103/ijo.IJO_869_16
PMCID: PMC5381306
PMID: 28345562 [Indexed for MEDLINE]

135: Venkatesh P. Retina and the tubercle Bacillus: Four decades of our journey and current understanding. Indian J Ophthalmol. 2017 Feb;65(2):122-127. doi: 10.4103/ijo.IJO_864_16. Review. PubMed PMID: 28345567; PubMed Central PMCID: PMC5381290.

Tuberculosis continues to be a major pandemic with enormous public health implication. Involvement of ocular tissues in the form of tubercles, tuberculomas, panophthalmitis, and iris granulomas are well recognized as definitive manifestations of tuberculosis. For these lesions, confirmatory evidence is available in the form of demonstration of acid-fast Bacillus on Ziehl-Neelsen staining. For other retinochoroidal disorders such as central serous chorioretinopathy, retinal vasculitis, and presumed ocular tuberculosis, hard evidence about the role of Mycobacterium tuberculosis is lacking. In this review, work done at our center over the past four decades in the form of experimental animal studies, nucleic acid amplification assays and clinical studies regarding the above retinochoroidal pathologies and the tubercle Bacillus is presented. It is possible that revisiting experimental animal studies may be a way forward in the current scenario of ambiguity about the cause-effect relationship between M. tuberculosis and few of the retinochoroidal disorders.

DOI: 10.4103/ijo.IJO_864_16
PMCID: PMC5381290
PMID: 28345567 [Indexed for MEDLINE]

136: Venkatesulu BP, Mallick S, Rath GK. Patterns of care of cervical cancer in the elderly: A qualitative literature review. J Geriatr Oncol. 2017 Mar;8(2):108-116. doi: 10.1016/j.jgo.2016.12.004. Epub 2017 Feb 4. PubMed PMID: 28169196.

INTRODUCTION: Cancer of the uterine cervix is the fourth most common cancer worldwide among women. However, there is limited data about elderly patients with cervical cancer and gross underrepresentation of elderly patients in clinical

trials. Hence, the optimal therapy of such patients is not well formulated.
METHODOLOGY: We conducted this systematic review of evidence to assess patterns of care in elderly patients with cervical cancer.
RESULTS: A total of 17,338 publications are reported in PubMed until July, 2016 pertaining to cervical cancer. Out of these, only 24 publications (full length papers or meeting proceedings) reported about clinical outcomes of elderly patients with cervical carcinoma. These publications report data from as early as 1949 to the present. In these publications, out of 14,479 patients aged ≥60years of age, 11,279 (77.89%) received external beam radiation. Concurrent chemotherapy has been used in 11 publications. Brachytherapy usage has been reported in 19 publications. In a few studies, brachytherapy was not used because of fear of toxicity. Overall, low dose rate (LDR) was the most common modality, followed by high dose rate (HDR). The authors have showed technical reasons (48.7%), comorbidities (69.4%) and patient refusal (38.3%) as causes for not delivering brachytherapy. Five-year overall survival (OS) has been found to be inferior to the non-elderly cohort and ranges from 27%-69% for elderly patients compared to 58%-75% in the non-elderly population. An 11% 5year OS has been reported for patients treated with suboptimal radiation dose compared to 74% in those treated with chemo radiotherapy followed by brachytherapy.
CONCLUSION: Gross underrepresentation of patients above 65years in clinical trials has resulted in treatment dilemmas in the elderly. Newer advances like immunotherapy, hypoxic modifiers, image guided radiation, image guided brachytherapy are promising approaches to reduce treatment complications and optimize outcome in elderly patients in cervical cancer.

DOI: 10.1016/j.jgo.2016.12.004
PMID: 28169196

137: Verma G, Vishnoi K, Tyagi A, Jadli M, Singh T, Goel A, Sharma A, Agarwal K, Prasad SC, Pandey D, Sharma S, Mehrotra R, Singh SM, Bharti AC. Characterization of key transcription factors as molecular signatures of HPV-positive and HPV-negative oral cancers. Cancer Med. 2017 Mar;6(3):591-604. doi: 10.1002/cam4.983. Epub 2017 Feb 3. PubMed PMID: 28155253; PubMed Central PMCID: PMC5345654.

Prior studies established constitutively active AP-1, NF-κB, and STAT3 signaling in oral cancer. Differential expression/activation of specific members of these transcription factors has been documented in HPV-positive oral lesions that respond better to therapy. We performed a comprehensive analysis of differentially expressed, transcriptionally active members of these pivotal signaling mediators to develop specific signatures of HPV-positive and HPV-negative oral lesions by immunohistochemical method that is applicable in low-resource settings. We examined a total of 31 prospective and 30 formalin-fixed, paraffin-embedded tissues from treatment-naïve, histopathologically and clinically confirmed cases diagnosed as oral or oropharyngeal squamous cell carcinoma (OSCC/OPSCC). Following determination of their HPV status by GP5 + /GP6 + PCR, the sequential sections of the tissues were evaluated for expression of JunB, JunD, c-Fos, p50, p65, STAT3, and pSTAT3(Y705), along with two key regulatory proteins pEGFR and p16 by IHC. Independent analysis of JunB and p65 showed direct correlation with HPV positivity, whereas STAT3 and pSTAT3 were inversely correlated. A combined analysis of transcription factors revealed a more restrictive combination, characterized by the presence of AP-1 and NF-κB lacking involvement of STAT3 that strongly correlated with HPV-positive tumors. Presence of STAT3/pSTAT3 with NF-κB irrespective of the presence or absence of AP-1 members was present in HPV-negative lesions. Expression of pSTAT3 strongly correlated with all the AP-1/NF-κB members (except JunD), its upstream activator pEGFR(Y)(1092) , and HPV infection-related negative regulator p16. Overall, we show a simple combination of AP-1, NF-κB, and STAT3 members' expression that may serve as molecular signature of HPV-positive lesions or more broadly the tumors that show better prognosis.

DOI: 10.1002/cam4.983
PMCID: PMC5345654
PMID: 28155253

138: Yadav DP, Madhusudhan KS, Kedia S, Sharma R, Pratap Mouli V, Bopanna S, Dhingra R, Pradhan R, Goyal S, Sreenivas V, Vikram NK, Makharia G, Ahuja V. Development and validation of visceral fat quantification as a surrogate marker for differentiation of Crohn's disease and intestinal tuberculosis. J Gastroenterol Hepatol. 2017 Feb;32(2):420-426. doi: 10.1111/jgh.13535. PubMed PMID: 27532624.

BACKGROUND AND AIM: Crohn's disease (CD) and intestinal tuberculosis (ITB) have close phenotypic resemblance. Mesenteric fat (a component of visceral fat [VF]) hypertrophy and fat wrapping, which is visible radiologically as fibrofatty proliferation, is seen more commonly in CD than in ITB.
AIM: The present study was conducted to study the role of VF in differentiating CD and ITB.
METHODS: Visceral fat area and subcutaneous (SC) fat area were measured on computed tomography in two cohorts (development and validation). VF/SC ratio was also calculated for all patients. In the development cohort, retrospective data collection was carried out for 75 patients with CD and ITB who were on follow-up from January 2012 to November 2014. In the validation cohort, 82 patients were recruited prospectively from December 2014 to December 2015 and were diagnosed as CD or ITB according to standard diagnostic criteria.
RESULTS: Visceral fat area and VF/SC ratio were significantly higher in CD patients (n = 42: development, n = 46: validation) than in ITB patients (n = 33: development, n = 36: validation) in both the development (106.2 ± 63.5 vs 37.3 ± 22, P = <0.001; 1.1 ± 0.57 vs 0.43 ± 0.24, P = <0.001) and validation cohorts (102.2 ± 69.8 vs 55.8 ± 44.9, P = 0.01; 1.2 ± 0.68 vs 0.56 ± 0.33, P = <0.001). A cut-off of 0.63 for VF/SC ratio in the development cohort had a high sensitivity (82%) and specificity (81%) in differentiating CD and ITB. Similar sensitivity (81%) and specificity (78%) were seen when this cut-off was applied in the validation cohort.
CONCLUSION: The VF/SC ratio is a simple, cost-effective, non-invasive and single objective parameter with a good sensitivity and specificity to differentiate CD and ITB.

DOI: 10.1111/jgh.13535
PMID: 27532624

139: Yadav R, Yadav RK, Sarvottam K, Netam R. Framingham Risk Score and Estimated 10-Year Cardiovascular Disease Risk Reduction by a Short-Term Yoga-Based Life-Style Intervention. J Altern Complement Med. 2017 Feb 16. doi: 10.1089/acm.2016.0309. [Epub ahead of print] PubMed PMID: 28437144.

OBJECTIVE: The aim of this study was to evaluate the efficacy of a short-term yoga-based life-style intervention program in lowering Framingham Risk Score (FRS) and estimated 10-year cardiovascular risk.
METHODS: This was a single-arm, pre-post interventional study including data from a historical cohort with low to moderate risk for cardiovascular disease (CVD). It was conducted in a tertiary-care hospital. Participants with low (0 or 1 CVD risk factors) to moderately high risk (10-year risk between 10% and 20% and two or more CVD risk factors) were included. Participants with previously diagnosed CVD, defined as a history of myocardial infarction, congestive heart failure, or cerebrovascular accident, were excluded from the analysis. However, those with controlled hypertension were included. Intervention included a pretested

short-term yoga-based life-style intervention, which included asanas (physical postures), pranayama (breathing exercises), meditation, relaxation techniques, stress management, group support, nutrition awareness program, and individualized advice. The intervention was for 10 days, spread over 2 weeks. However, participants were encouraged to include it in their day-to-day life. Outcomes included changes in FRS, and estimated 10-year CVD risk from baseline to week 2. A gender-based subgroup analysis was also done, and correlation between changes in FRS and cardiovascular risk factors was evaluated.
RESULTS: Data for 554 subjects were screened, and 386 subjects (252 females) were included in the analysis. There was a significant reduction in FRS ($p < 0.001$) and estimated 10-year cardiovascular risk ($p < 0.001$) following the short-term yoga-based intervention. There was a strong positive correlation between reduction in FRS and serum total cholesterol ($r = 0.60$; $p < 0.001$). There was a moderate positive correlation between reduction in FRS and low-density lipoprotein cholesterol ($r = 0.58$; $p < 0.001$), and a weak but positive correlation between reduction in FRS and triglycerides ($r = 0.26$; $p \leq 0.001$), serum very-low-density lipoprotein cholesterol ($r = 0.29$; $p < 0.001$), and systolic blood pressure ($r = 0.20$; $p \leq 0.001$).
CONCLUSIONS: This yoga-based life-style intervention program significantly reduced the CVD risk, as shown by lowered FRS and estimated 10-year CVD risk. Further testing of this promising intervention is warranted in the long term.

DOI: 10.1089/acm.2016.0309
PMID: 28437144

140: Yousuf SD, Rashid F, Mattoo T, Shekhar C, Mudassar S, Zargar MA, Ganie MA. Does the Oral Contraceptive Pill Increase Plasma Intercellular Adhesion Molecule-1, Monocyte Chemoattractant Protein-1, and Tumor Necrosis Factor-α Levels in Women with Polycystic Ovary Syndrome: A Pilot Study. J Pediatr Adolesc Gynecol. 2017 Feb;30(1):58-62. doi: 10.1016/j.jpag.2016.06.010. Epub 2016 Jul 2. PubMed PMID: 27381237.

STUDY OBJECTIVE: Polycystic ovary syndrome (PCOS), the most common endocrinopathy of women, is a state of chronic low-grade inflammation and is closely linked to type 2 diabetes mellitus and cardiovascular disease. Oral contraceptive pills (OCPs), is the usual first choice of treatment in women with PCOS. Because OCP use has been linked to the risk of venous thrombosis and there are limited data on the effect of OCP use on the inflammatory state of women with PCOS, our objective was to compare the levels of intercellular adhesion molecule (ICAM)-1, tumor necrosis factor (TNF)-α, and monocyte chemoattractant protein (MCP)-1 between drug-naive and OCP-treated women with PCOS. DESIGN, SETTING, PARTICIPANTS, INTERVENTIONS, AND MAIN OUTCOME MEASURES: Consequent to women diagnosed with PCOS on the basis of Rotterdam 2003 criteria, either treated with OCPs (ethinylestradiol 0.03 mg, levonogestrel-0.15 mg) for a period of 6 months (n = 50) or drug-naive (n = 51) were enrolled in this cross-sectional study. RESULTS: The mean ages of patients and control participants were comparable (21.99 ± 4.78 vs 21.92 ± 5.83 years; P = .947) as was body mass index (24.47 ± 3.92 vs 23.66 ± 3.43; P = .271). Clinical and androgen excess symptoms were significantly better in the OCP group compared with the drug-naive group (P = .01, P = .04). Total cholesterol and low-density lipoprotein cholesterol levels were significantly higher in the OCP group (P = .01). Plasma ICAM-1 levels, TNF-α levels, and MCP-1 levels showed a higher trend in patients but reached statistical significance only in cases of ICAM-1 and TNF-α (P = .01). CONCLUSION: OCP treatment of 6 months increases plasma ICAM-1, MCP-1, and TNF-α levels among women with PCOS, although OCPs significantly help in ameliorating features of hyperandrogenism and regularizing menstrual cycles. These cytokines correlate positively with many metabolic parameters including plasma glucose, lipids, and homeostatic model assessment-insulin resistance. Further investigation with well designed, randomized, longitudinal studies might help to ascertain the effect of OCPs on proinflammatory profiles among women with PCOS.

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PMID: 27381237 [Indexed for MEDLINE]

141: Zühlke LJ, Beaton A, Engel ME, Hugo-Hamman CT, Karthikeyan G, Katzenellenbogen JM, Ntusi N, Ralph AP, Saxena A, Smeesters PR, Watkins D, Zilla P, Carapetis J. Group A Streptococcus, Acute Rheumatic Fever and Rheumatic Heart Disease: Epidemiology and Clinical Considerations. Curr Treat Options Cardiovasc Med. 2017 Feb;19(2):15. doi: 10.1007/s11936-017-0513-y. Review. PubMed PMID: 28285457; PubMed Central PMCID: PMC5346434.

OPINION STATEMENT: Early recognition of group A streptococcal pharyngitis and appropriate management with benzathine penicillin using local clinical prediction rules together with validated rapi-strep testing when available should be incorporated in primary health care. A directed approach to the differential diagnosis of acute rheumatic fever now includes the concept of low-risk versus medium-to-high risk populations. Initiation of secondary prophylaxis and the establishment of early medium to long-term care plans is a key aspect of the management of ARF. It is a requirement to identify high-risk individuals with RHD such as those with heart failure, pregnant women, and those with severe disease and multiple valve involvement. As penicillin is the mainstay of primary and secondary prevention, further research into penicillin supply chains, alternate preparations and modes of delivery is required.

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PMID: 28285457