List of publications of AIIMS, New Delhi for the month of AUGUST, 2016 [Source: www.pubmed.com].

1: Ahuja D, Bharati SJ, Gupta N, Kumar R, Bhatnagar S. Possible role of aprepitant for intractable nausea and vomiting following whole brain radiotherapy-a case report. Ann Palliat Med. 2016 Oct;5(4):315-318. doi: 10.21037/apm.2016.08.01. PubMed PMID: 27701875.

Radiation-induced nausea and vomiting (RINV) is one of the most distressing symptoms that adversely affects quality of life (QOL) as well as the ongoing management plan of cancer patients. Although there are protocols for management of chemotherapy induced nausea and vomiting (CINV) but such guidelines are still lacking for RINV. Various agents like 5-hydroxy tryptophan 3 (5-HT3) antagonist, dexamethasone, metoclopramide and haloperidol are used in clinical practice for RINV but the results are not very encouraging. Because of proposed similarity in the mechanism of nausea and vomiting following chemotherapy and radiotherapy, aprepitant, a substance P neurokinin 1 receptor antagonist can be an optimal agent for RINV on account of its unique pharmacological property. We report a case of metastatic carcinoma breast with bilateral cerebellar metastasis. She presented with complaints of headache and intractable nausea and vomiting. A single fraction whole brain radiotherapy (WBRT) was given for bilateral cerebellum metastasis which further precipitated her symptoms. The prophylactic and therapeutic efficacy of antiemetic used for RINV may be enhanced by adding aprepitant before starting radiotherapy in high risk cases as in ours.

DOI: 10.21037/apm.2016.08.01
PMID: 27701875 [PubMed - in process]

2: Alam MS, Zeeshan M, Rathore S, Sharma YD. Multiple Plasmodium vivax proteins of Pv-fam-a family interact with human erythrocyte receptor Band 3 and have a role in red cell invasion. Biochem Biophys Res Commun. 2016 Sep 23;478(3):1211-6. doi: 10.1016/j.bbrc.2016.08.096. PubMed PMID: 27545606.

Elucidation of molecular mechanisms of receptor-ligand biology during host-parasite interaction helps in developing therapeutic targets. Several Pv-fam-a family proteins of Plasmodium vivax bind to host erythrocytes but their erythrocyte receptors remains to be explored. Here, we show that three merozoite proteins (PvTRAg36, PvATRAg74, and PvTRAg38) of this family interact with Band 3 on human erythrocytes through its three exofacial loops (loop 1, loop 3, and loop 6). These parasite proteins also interfered with the parasite growth in in-vitro, and the inhibition rate seems to be associated with their binding affinity to Band 3. This redundancy in receptor-ligand interaction could be one of the probable mechanism parasite utilizes to invade the host erythrocyte more efficiently.

DOI: 10.1016/j.bbrc.2016.08.096
PMID: 27545606 [PubMed - in process]

3: Anoop S, Misra A, Mani K, Pandey RM, Gulati S, Bhatt SP, Mahajan H. Estimation of Liver Span Using MRI for Prediction of Type 2 Diabetes in Non-obese Asian Indians. J Diabetes Sci Technol. 2016 Aug 18. pii: 1932296816664916. [Epub ahead of print] PubMed PMID: 27543273.

4: Babu A, Gupta A, Sharma P, Ranjan P, Kumar A. Blunt traumatic superior gluteal artery pseudoaneurysm presenting as gluteal hematoma without bony injury: A rare case report. Chin J Traumatol. 2016 Aug 1;19(4):244-6. PubMed PMID: 27578385; PubMed Central PMCID: PMC4992137.

Blunt traumatic injuries to the superior gluteal artery are rare in clinic. A majority of injuries present as aneurysms following penetrating trauma, fracture pelvis or posterior dislocation of the hip joint. We reported a rare case of superior gluteal artery pseudoaneurysm following blunt trauma presenting as large expanding right gluteal hematoma without any bony injury. The gluteal hematoma

was suspected clinically, confirmed by ultrasound and the arterial injury was diagnosed by CT angiography that revealed a large right gluteal hematoma with a focal contrast leakage forming a pseudoaneurysm within the hematoma. Pseudoaneurysm arose from the superior gluteal branch of right internal iliac artery, which was successfully angioembolized. The patient was discharged on day 4 of hospitalization with resolving gluteal hematoma. This report highlighted the importance of considering an arterial injury following blunt trauma to the buttocks with subsequent painful swelling. Acknowledgment of this rare injury pattern was necessary to facilitate rapid diagnosis and appropriate treatment.

PMCID: PMC4992137
PMID: 27578385 [PubMed - in process]

5: Bal C, Yadav MP, Ballal S. Cocktail Therapy of 177Lu-PSMA-617 and 177Lu-EDTMP in Patients With mCRPC: A Proof-of-Principle Application. Clin Nucl Med. 2016 Aug;41(8):e386-7. doi: 10.1097/RLU.0000000000001251. PubMed PMID: 27187728.

Prostate cancer is the second most common primary tumor affecting men worldwide. Among them, 10-20% develop castration resistant prostate cancer (CRPC). Ga-PSMA-PET/CT is an important theranostic agent for the evaluation of CRPC to assess the feasibility of treatment with Lu-PSMA-617 which is a novel therapeutic agent. Interestingly, in certain cases, we have observed non-PSMA-avid lesions despite raised sPSA levels. In this regard, we present a case of cocktail therapy applied using Lu-PSMA-617 and Lu-EDTMP therapy in a 38-year-old male CRPC patient with both soft tissue and extensive skeletal metastases.

DOI: 10.1097/RLU.0000000000001251
PMID: 27187728 [PubMed - indexed for MEDLINE]

6: Bansal VK, Krishna A, Manek P, Kumar S, Prajapati O, Subramaniam R, Kumar A, Kumar A, Sagar R, Misra MC. A prospective randomized comparison of testicular functions, sexual functions and quality of life following laparoscopic totally extra-peritoneal (TEP) and trans-abdominal pre-peritoneal (TAPP) inguinal hernia repairs. Surg Endosc. 2016 Aug 5. [Epub ahead of print] PubMed PMID: 27495344.

BACKGROUND: There is very scant literature on the impact of inguinal hernia mesh repair on testicular functions and sexual functions following open and laparoscopic repair. The present randomized study compares TAPP and TEP repairs in terms of testicular functions, sexual functions, quality of life and chronic groin pain.
METHODS: This study was conducted from April 2012 to October 2014. A total of 160 patients with uncomplicated groin hernia were randomized to either trans-abdominal pre-peritoneal (TAPP) repair or totally extra-peritoneal (TEP) repair. Testicular functions were assessed by measuring testicular volume, testicular hormone levels preoperatively and at 3 months postoperatively. Sexual functions were assessed using BMSFI, and quality of life was assessed using WHO-QOL BREF scale preoperatively and at 3 and 6 months postoperatively. Chronic groin pain was evaluated using the VAS scale at 3 months, 6 months and at 1 year.
RESULTS: The median duration of follow-up was 13 months (range 6-18 months). The mean preoperative pain scores (p value 0.35) as well as the chronic groin pain were similar between TEP and TAPP repairs at 3 months (p value 0.06) and 6 months (p value 0.86). The testicular resistive index and testicular volume did not show any significant change at follow-up of 3 months (p value 0.9) in the study population. No significant difference was observed in testicular resistive index and testicular volume when comparing TEP and TAPP groups at at follow-up of 3 months (p value >0.05). There was a statistically significant improvement in the sexual drive score, erectile function and overall satisfaction over the follow-up period following laparoscopic inguinal hernia repair. However, sexual function improvement was similar in patients undergoing both TEP and TAPP repairs. All the domains of quality of life in the study population showed a significant improvement at a follow-up of 3 and 6 months. Subgroup analysis of all the domains of quality of life in both TAPP and TEP groups showed a similar increment as in the study population (p value <0.001); however, the mean scores of all the domains were comparable between the two subgroups (p value >0.05),

preoperatively and 3 and 6 months follow-up.
CONCLUSIONS: Laparoscopic groin hernia repair improves the testicular functions, sexual functions and quality of life, but TEP and TAPP repairs are comparable in terms of these long-term outcomes.

DOI: 10.1007/s00464-016-5142-0
PMID: 27495344 [PubMed - as supplied by publisher]

7: Behera HS, Satpathy G, Tripathi M. Isolation and genotyping of Acanthamoeba spp. from Acanthamoeba meningitis/ meningoencephalitis (AME) patients in India. Parasit Vectors. 2016 Aug 9;9(1):442. doi: 10.1186/s13071-016-1729-5. PubMed PMID: 27507421; PubMed Central PMCID: PMC4977702.

BACKGROUND: Acanthamoeba spp. are free-living ubiquitous protozoans capable of causing Acanthamoeba meningitis/meningoencephalitis (AME) of the central nervous system in humans. Acanthamoeba spp. are divided into 20 different genotypes (T1-T20) on the basis of variation in nucleotide sequences of the 18S rRNA gene. The objective of this study was to identify the genotypes of Acanthamoeba spp. in patients of Acanthamoeba meningitis/meningoencephalitis (AME) using 18S rRNA gene-based PCR assay. The present study provides information regarding the involvement of the most prevalent and predominant genotype of Acanthamoeba spp. in Acanthamoeba meningitis/meningoencephalitis infections in India.
METHODS: Cerebrospinal fluid (CSF) was collected from 149 clinically suspected Acanthamoeba meningitis/meningoencephalitis (AME) patients reporting to the outpatient department/causality services of the Neurosciences Centre, AIIMS, New Delhi, India during the past five years. Samples were inoculated onto 2 % non-nutrient agar plates overlaid with E. coli and incubated at 30 °C for 14 days. Among 149 suspected patients, ten were found culture-positive for Acanthamoeba spp. out of which six isolates were established in axenic culture for molecular analysis. DNA was isolated and a PCR assay was performed for amplification of the Diagnostic fragment 3 (DF3) (~280 bp) region of the 18S rRNA gene from axenic culture of six Acanthamoeba spp. isolates. Rns genotyping was performed on the basis of the variation in nucleotide sequences of DF3 region of the 18S rRNA gene.
RESULTS: In the phylogenetic analysis, all of the six Acanthamoeba spp. isolates were found to belong to genotype T4. The sequence homology search for these six isolates in the NCBI databank showed homology with the available strains of Acanthamoeba spp. The newly generated sequences are available in the GenBank database under accession numbers KT004416-KT004421.
CONCLUSIONS: In the present study, genotype T4 was found as the most prevalent and predominant genotype in Acanthamoeba meningitis/ meningoencephalitis infections. Hence further studies are needed to develop optimal therapeutic strategy against Acanthamoeba spp. of genotype T4 to combat against the infections.

DOI: 10.1186/s13071-016-1729-5
PMCID: PMC4977702
PMID: 27507421 [PubMed - in process]

8: Benson R, Giridhar P, Venkatesulu BP, Mallick S, Raza MW, Rath GK. Re-irradiation for head and neck squamous cell carcinoma. J Egypt Natl Canc Inst. 2016 Aug 29. pii: S1110-0362(16)30037-1. doi: 10.1016/j.jnci.2016.07.002. [Epub ahead of print] Review. PubMed PMID: 27595192.

INTRODUCTION: Local recurrences after curative treatment have a potential for cure with salvage surgery or with re-irradiation.
METHODS: We reviewed the PubMed for articles published in English with key words squamous cell carcinoma, recurrent, re-irradiation, prognostic factors to find relevant articles describing prognostic factors, re-irradiation, and outcome for recurrent head and neck squamous cell carcinoma.
RESULTS: Various factors including age, performance status, time for recurrence, previous radiation dose volume and site of recurrence, previous use of chemotherapy are all prognostic factors in recurrent head and neck squamous cell carcinoma. Surgery is feasible in very select subgroup of patients and must be

done when feasible. Re-irradiation with the aid of modern sophisticated technology is safe and confers durable and clinically meaningful survival benefit. Re-irradiation in head and neck recurrent squamous cell carcinoma may provide an expected median survival of 10-12months. Chemotherapy may be added along with radiation in the recurrent setting.
CONCLUSION: Treatment approaches may have to be personalized. Re surgery must be done in all patients in whom it is feasible. In patients in whom surgery is not feasible, re-irradiation must be evaluated as a therapeutic option especially in patients with limited volume recurrence.

DOI: 10.1016/j.jnci.2016.07.002
PMID: 27595192 [PubMed - as supplied by publisher]

9: Bhardwaj M, Sharma A, Sen S, Kumar L, Satpathy G, Kashyap S, Pushker N, Singh VK, Rai A. Chlamydia and ocular adnexal lymphomas: An Indian experience. Exp Mol Pathol. 2016 Aug;101(1):74-80. doi: 10.1016/j.yexmp.2016.07.001. PubMed PMID: 27435913.

CHLAMYDIA AND OCULAR ADNEXAL LYMPHOMAS: AN INDIAN EXPERIENCE: Ocular adnexal lymphomas (OALs) are a heterogeneous group of malignancies, majority being extranodal mucosa-associated lymphoid tissue (MALT) type. Different geographical regions have reported association of Chlamydia with OALs (MALT type). In India, role of Chlamydia in OALs remains unexplored. The aim of this study was to detect Chlamydia and to correlate with clinicopathological features of OALs in India. The clinicopathological features of 41 OAL cases were studied prospectively. Chlamydia DNA was detected by genus specific PCR amplifying major outer membrane protein (MOMP) gene followed by DNA sequencing. Chlamydia immunoexpression was evaluated by immunofluorescence and immunohistochemistry. The results were correlated with clinicopathological features including follow-up and survival. Chlamydia genome was detected in 3/41 (7.3%) OAL cases by PCR. Direct sequencing revealed C. trachomatis in 3 positive cases. Immunofluorescence and immunohistochemistry showed Chlamydia antigen in 5/41 and 1/41 cases respectively. Immunofluorescence demonstrated higher sensitivity than immunohistochemistry. A significant association was observed between Chlamydia positivity and orbital location (P=0.05). Follow-up revealed relapse in 2 Chlamydia positive cases (P=0.056). Our results demonstrate for the first time presence of C. trachomatis genome in 7.3% OAL cases in India. As no other reports are documented, more detailed studies from different regions within India are needed to explore status of Chlamydia in OALs.

DOI: 10.1016/j.yexmp.2016.07.001
PMID: 27435913 [PubMed - in process]

10: Bhardwaj S, Pandit D, Sinha A, Hari P, Cheong HI, Bagga A. Congenital Chloride Diarrhea - Novel Mutation in SLC26A3 Gene. Indian J Pediatr. 2016 Aug;83(8):859-61. doi: 10.1007/s12098-015-1944-7. PubMed PMID: 26637435.

The authors report a case of congenital chloride diarrhea with molecular confirmation of diagnosis. A 10-mo-old boy presented with failure to thrive, voluminous diarrhea, dehydration, hyponatremia, hypokalemia, metabolic alkalosis and history of maternal polyhydramnios. The diagnosis of congenital chloride diarrhea was based on high fecal and low urinary chloride excretion, in addition to biochemical abnormalities. Genetic testing revealed a novel homozygous mutation in exon 4 of the SLC26A3 gene that encodes the protein regulating chloride bicarbonate absorption in distal ileum and colon. Therapy with oral fluids and electrolytes led to decrease in stool frequency and improvement in growth parameters.

DOI: 10.1007/s12098-015-1944-7

PMID: 26637435 [PubMed - in process]

11: Bhari N, Pahadiya P, Arava S, Gupta S. Histoplasmosis mimicking non-Hodgkin lymphoma in a 40-year-old man with AIDS. Int J STD AIDS. 2016 Aug 17. pii: 0956462416665942. [Epub ahead of print] PubMed PMID: 27535728.

In patients with acquired immunodeficiency syndrome (AIDS), advanced immunosuppression is associated with atypical presentation of dermatological conditions. Our patient presented with a single crusted plaque over the lower lip and large tender cervical lymphadenopathy. The enzyme-linked immunosorbent assay for human immunodeficiency virus was found to be positive, and his CD4+ lymphocyte cell count was 4 cells/mm(3) The presence of multiple histoplasma spores in the biopsies from the crusted plaque over lip and cervical lymph node helped in the confirmation of the diagnosis of histoplasmosis, and the patient showed significant improvement within two months of treatment with conventional injection amphotericin B initially followed by oral itraconazole.

DOI: 10.1177/0956462416665942
PMID: 27535728 [PubMed - as supplied by publisher]

12: Bharti J, Vatsa R, Singhal S, Roy KK, Kumar S, Perumal V, Meena J. Pregnancy with chronic kidney disease: maternal and fetal outcome. Eur J Obstet Gynecol Reprod Biol. 2016 Sep;204:83-7. doi: 10.1016/j.ejogrb.2016.07.512. PubMed PMID: 27541443.

OBJECTIVE: Pregnancy with chronic kidney disease (CKD) is considered to be high risk. The purpose of this study was to assess the effect of pregnancy on CKD and the fetomaternal outcome in these patients.
STUDY DESIGN: A retrospective observational study was conducted in the Department of Obstetrics and Gynaecology, All India Institute of medical sciences, New Delhi over a period of 11 years. A total number of 80 pregnant patients with CKD were reviewed. Staging of CKD was done according to glomerular filtration rate (GFR). Maternal demographic profile, stage of CKD, biochemical profile, antenatal and neonatal records were analyzed. The course of pregnancy was then reviewed and note was made of any maternal or fetal complication. At the time of analysis, patients were divided into early (Stage 1, 2) and late stage (Stage 3-5) disease. All the variables were compared between two groups. Data analysis was carried out using SPSS software version 20.0.
RESULTS: There was significantly increased incidence of preeclampsia (p=0.001) and moderate to severe anemia (p=0.001) in late stage disease as compared to early stage. The renal parameters including mean GFR and serum creatinine deteriorated with pregnancy in both the groups. Among fetal complications, the patients in late stage had significantly increased incidence of small for gestational age, low 5min Apgar score and increased NICU admissions. The overall preterm delivery rate was 57.5%. There was an overall increase in the incidence of caesarean section (CS) rate (64%).
CONCLUSIONS: Despite advances in antenatal care, incidence of adverse events in mother and fetus remain high in these women of CKD as compared to the rates expected in the general population. In all patients of CKD planning for pregnancy, the pre-existing disease should be optimized before conception.

DOI: 10.1016/j.ejogrb.2016.07.512
PMID: 27541443 [PubMed - in process]

13: Bhoi S, Mishra PR, Soni KD, Baitha U, Sinha TP. Epidemiology of traumatic cardiac arrest in patients presenting to emergency department at a level 1 trauma center. Indian J Crit Care Med. 2016 Aug;20(8):469-72. doi: 10.4103/0972-5229.188198. PubMed PMID: 27630459; PubMed Central PMCID: PMC4994127.

INTRODUCTION: There is a paucity of literature on prehospital care and epidemiology of traumatic cardiac arrest (TCA) in India. This study highlights the profile and characteristics of TCA.
METHODS: A retrospective cohort study was conducted to study epidemiological profile of TCA patients ≥1 year presenting to a level 1 trauma center of India.
RESULTS: One thousand sixty-one patients were recruited in the study. The median age (interquartile range) was 32 (23-45) years (male:female ratio of 5.9:1). Asystole (253), pulseless electrical activity (11), ventricular fibrillation (six), and ventricular tachycardia (five) were initial arrest rhythm. Road traffic crash (RTC) (57.16%), fall from height (18.52%), and assault (10.51%) were modes of injury. Prehospital care was provided by police (36.59%), ambulance (10.54%), relatives (45.40%), and bystanders (7.47% cases). Return of spontaneous circulation was seen in 69 patients, of which only three survived to hospital discharge.
CONCLUSION: RTC in young males was a major cause of TCA. Asystole was the most common arrest rhythm. Police personnel were major prehospital service provider. Prehospital care needs improvement including the development of robust TCA registry.

DOI: 10.4103/0972-5229.188198
PMCID: PMC4994127
PMID: 27630459 [PubMed]

14: Birla S, Khadgawat R, Jyotsna VP, Jain V, Garg MK, Bhalla AS, Sharma A. Identification of novel GHRHR and GH1 mutations in patients with isolated growth hormone deficiency. Growth Horm IGF Res. 2016 Aug;29:50-6. doi: 10.1016/j.ghir.2016.04.001. PubMed PMID: 27114065.

OBJECTIVE: Human growth is an elementary process which starts at conception and continues through different stages of development under the influence of growth hormone (GH) secreted by the anterior pituitary gland. Variation affecting the production, release and functional activity of GH leads to growth hormone deficiency (GHD), which is of two types: isolated growth hormone deficiency (IGHD) and combined pituitary hormone deficiency (CPHD). IGHD may result from mutations in GH1 and GHRHR while CPHD is associated with defects in transcription factor genes PROP1, POU1F1 and HESX1. The present study reports on the molecular screening of GHRHR and GH1 in IGHD patients.
METHODS: A total of 116 clinically diagnosed IGHD patients and 100 controls were enrolled for the study after taking informed consent. Family history was noted and 5ml blood sample was drawn. Anatomical and/or morphological pituitary gland alterations were studied using magnetic resonance imaging (MRI). DNA from blood samples was processed for screening the GHRHR and GH1 by Sanger sequencing.
RESULTS: Mean age at presentation of the 116 patients (67 males and 49 females) was 11.71±3.5years. Mean height standard deviation score (SDS) and weight SDS were -4.5 and -3.5 respectively. Nine (7.8%) were familial and parental consanguinity was present in 21 (19.8%) families. Eighty-three patients underwent MRI and morphological alterations of the pituitary were observed in 39 (46.9%). GH1 and GHRHR screening revealed eleven variations in 24 (21%) patients of which, four were novel deleterious, one novel non-pathogenic and six reported changes.
CONCLUSIONS: GHRHR contributed more to IGHD in our patients which confirmed that GHRHR should be screened first before GH1 in our population. Identification of GH1 and GHRHR variations helped in defining our mutational spectrum which will play a crucial role in providing predictive and prenatal genetic testing to the patients.

DOI: 10.1016/j.ghir.2016.04.001
PMID: 27114065 [PubMed - in process]

15: Chauhan V, Dada R, Jain V. Aetiology and clinical profile of children with 46, XY differences of sex development at an Indian referral centre. Andrologia. 2016 Aug 8. doi: 10.1111/and.12663. [Epub ahead of print] PubMed PMID: 27501740.

46, XY differences of sex development (DSD) constitute a heterogenous group of rare genetic defects. Definitive aetiological diagnosis cannot be made in more than half of these cases. The aim of our study was to prospectively evaluate and assign a probable diagnosis based on clinical and biochemical parameters in children with 46, XY DSD. Prospective clinical and biochemical screening was performed in a series of 46, XY children referred to paediatric endocrine services of our centre. Forty children with 46, XY DSD were investigated, and presumptive aetiological diagnoses of 5-alpha reductase deficiency (5αRD), partial gonadal dysgenesis (PGD), partial androgen insensitivity syndrome (PAIS), congenital bilateral anorchia (CBA), congenital lipoid adrenal hyperplasia (CLAH), ovotesticular DSD (OT-DSD) and Frasier syndrome (FS) were made. The most frequent cause of 46, XY DSD in our cohort was 5αRD (40%) followed by PGD (27.5%). Our study illustrates the complexity of 46, XY DSD with a significant overlap of phenotype and endocrine parameters between the different conditions. 5αRD was considered to be the predominant cause in our cohort.

DOI: 10.1111/and.12663
PMID: 27501740 [PubMed - as supplied by publisher]

16: Chawla B, Tomar A, Sen S, Bajaj MS, Kashyap S. Intraocular fine needle aspiration cytology as a diagnostic modality for retinoblastoma. Int J Ophthalmol. 2016 Aug 18;9(8):1233-5. doi: 10.18240/ijo.2016.08.23. PubMed PMID: 27588281; PubMed Central PMCID: PMC4990592.

17: Chawla N, Charan D, Kumar S, Pattanayak RD. Pica associated with initiation of atypical antipsychotic drugs: Report of two cases. Psychiatry Clin Neurosci. 2016 Aug;70(8):363-4. doi: 10.1111/pcn.12408. PubMed PMID: 27214004.

18: Chawla R, Mittal K, Venkatesh P, Sharma YR. Solar retinopathy following cannabis consumption. Clin Exp Optom. 2017 Jan;100(1):92-93. doi: 10.1111/cxo.12421. PubMed PMID: 27530184.

19: Chawla R, Tripathy K, Gogia V, Venkatesh P. Progressive outer retinal necrosis-like retinitis in immunocompetent hosts. BMJ Case Rep. 2016 Aug 10;2016. pii: bcr2016216581. doi: 10.1136/bcr-2016-216581. PubMed PMID: 27511757.

We describe two young immunocompetent women presenting with bilateral retinitis with outer retinal necrosis involving posterior pole with centrifugal spread and multifocal lesions simulating progressive outer retinal necrosis (PORN) like retinitis. Serology was negative for HIV and CD4 counts were normal; however, both women were on oral steroids at presentation for suspected autoimmune chorioretinitis. The retinitis in both eyes responded well to oral valaciclovir therapy. However, the eye with the more fulminant involvement developed retinal detachment with a loss of vision. Retinal atrophy was seen in the less involved eye with preservation of vision. Through these cases, we aim to describe a unique evolution of PORN-like retinitis in immunocompetent women, which was probably aggravated by a short-term immunosuppression secondary to oral steroids.

DOI: 10.1136/bcr-2016-216581
PMID: 27511757 [PubMed - in process]

20: Chiramel DM, Singh DS, Gupta DS. Topical tacrolimus causing gingival hyperplasia: A case report. Dermatol Ther. 2016 Aug 29. doi: 10.1111/dth.12407. [Epub ahead of print] PubMed PMID: 27572623.

21: Dash C. Is Intracranial Pressure Monitoring of Patients With Diffuse Traumatic Brain Injury Valuable? An Observational Multicenter Study. Neurosurgery. 2016 Aug 2. [Epub ahead of print] PubMed PMID: 27571525.

22: Deshmukh V, Singh S, Sirohi N, Baruhee D. Variation in the Obturator Vasculature During Routine Anatomy Dissection of a Cadaver. Sultan Qaboos Univ Med J. 2016 Aug;16(3):e356-8. doi: 10.18295/squmj.2016.16.03.016. PubMed PMID: 27606118; PubMed Central PMCID: PMC4996301.

The obturator artery normally originates from the internal iliac artery while the obturator vein drains into the internal iliac vein. During a routine gross anatomy dissection class for undergraduate students at the All India Institute of Medical Sciences, New Delhi, India, in 2016, a rare unilateral variation in the obturator vasculature was found in a female cadaver of approximately 55 years of age. In this case, the left obturator artery originated from the superior gluteal artery and the left obturator vein drained into the external iliac vein. Knowledge of such variations is necessary during hernia procedures, ligation of the internal iliac artery and muscle graft surgeries.

DOI: 10.18295/squmj.2016.16.03.016
PMCID: PMC4996301
PMID: 27606118 [PubMed]

23: Dey J, Gautam H, Venugopal S, Porwal C, Mirdha BR, Gupta N, Singh UB. Tuberculosis as an Etiological Factor in Liver Abscess in Adults. Tuberc Res Treat. 2016;2016:8479456. doi: 10.1155/2016/8479456. PubMed PMID: 27595021; PubMed Central PMCID: PMC4995316.

Background. Tuberculosis of the liver without active pulmonary or miliary tuberculosis is considered as an uncommon diagnosis. The aim of the present study was to determine the etiological role of tuberculosis in adult patients presenting with features of liver abscess. Methods. A total of 40 patients with liver abscess were included in the study. The liver abscess aspirate was subjected to microscopy, culture, and polymerase chain reaction to determine the role of tuberculosis as an etiological factor in liver abscess. Results. Of the 40 patients enrolled, 25% (10/40) were diagnosed with having tubercular liver abscess. In a total of 40 specimens, 2.5% (1/40) were positive for acid fast bacilli by Ziehl-Neelsen method, while 10% (4/40) were positive for M. tuberculosis by culture using BACTEC 460 and the yield increased to 25% (10/40) by polymerase chain reaction for M. tuberculosis. Conclusion. 25% of the patients presenting with liver abscess had tubercular etiology without features of active pulmonary or miliary tuberculosis. Liver can act as the primary site of involvement in the absence of activity elsewhere in the body. Tuberculosis should be considered as an important differential diagnosis of liver abscess irrespective of evidence of active tuberculosis elsewhere in the body.

DOI: 10.1155/2016/8479456
PMCID: PMC4995316
PMID: 27595021 [PubMed]

24: Gandhi AK, Kumar P, Bhandari M, Devnani B, Rath GK. Burden of preventable cancers in India: Time to strike the cancer epidemic. J Egypt Natl Canc Inst. 2016 Aug 30. pii: S1110-0362(16)30053-X. doi: 10.1016/j.jnci.2016.08.002. [Epub ahead of print] Review. PubMed PMID: 27591115.

India has a rapidly growing population inflicted with cancer diagnosis. From an estimated incidence of 1.45 million cases in 2016, the cancer incidence is expected to reach 1.75 million cases in 2020. With the limitation of facilities

for cancer treatment, the only effective way to tackle the rising and humongous cancer burden is focusing on preventable cancer cases. Approximately, 70% of the Indian cancers (40% tobacco related, 20% infection related and 10% others) are caused by potentially modifiable and preventable risk factors. We review these factors with special emphasis on the Indian scenario. The results may help in designing preventive strategies for a wider application.

DOI: 10.1016/j.jnci.2016.08.002
PMID: 27591115 [PubMed - as supplied by publisher]

25: Garg PK, Deo SV, Kumar R, Shukla NK, Thulkar S, Gogia A, Sharma DN, Mathur SR. Staging PET-CT Scanning Provides Superior Detection of Lymph Nodes and Distant Metastases than Traditional Imaging in Locally Advanced Breast Cancer. World J Surg. 2016 Aug;40(8):2036-42. doi: 10.1007/s00268-016-3570-6. PubMed PMID: 27220508.

BACKGROUND: This study was designed to evaluate the role of a single 18-FDG positron emission tomography and computed tomography (PET-CT) scan in comparison to multiple organ-directed conventional investigations (CI) as a staging tool in locally advanced breast cancer (LABC) to detect regional and distant metastasis.
METHODS: All eligible patients were subjected to CI (chest X-ray, abdominal sonography, and bone scintigraphy) followed by a single 18-FDG PET-CT scan. Standard imaging criteria were used for diagnosis of metastasis. Histopathological confirmation was undertaken for suspicious lesions. An exploratory analysis was done to assess the impact of PET-CT on the staging of LABC and how it resulted in a change in management.
RESULT: The study included 79 patients of LABC. PET-CT detected distant metastasis in 36 (45.5 %) patients while CI could identify distant metastasis in 20 (25.3 %) patients. Two of the 36 patients in whom PET-CT detected distant metastasis were false positive. Overall PET-CT upstaged the disease in 38 (48.1 %) patients as compared to CI: stage III to stage IV migration in 14 (17.7 %) patients due to identification of additional sites of distant metastasis, and within stage III upstaging in 24 (30.3 %) patients due to identification of additional regional lymphadenopathy. PET-CT led to a change in management plan in 14 (17.7 %) patients.
CONCLUSION: PET-CT has a role in identifying additional sites of regional lymphadenopathy and distant metastasis to upstage the disease in a significant number of LABC patients in comparison to CI; this would help in accurate staging, selecting optimal treatment, and better prognostication of disease.

DOI: 10.1007/s00268-016-3570-6
PMID: 27220508 [PubMed - in process]

26: Gogi N, Khan SA. Editorial: Pediatric Orthopedics at the Doorstep of the Pediatrician. Indian J Pediatr. 2016 Aug;83(8):814-6. doi: 10.1007/s12098-016-2194-z. PubMed PMID: 27392617.

27: Gogna P, Gaba S, Mukhopadhyay R, Gupta R, Rohilla R, Yadav L. Plantar fasciitis: A randomized comparative study of platelet rich plasma and low dose radiation in sportspersons. Foot (Edinb). 2016 Aug;28:16-19. doi: 10.1016/j.foot.2016.08.002. PubMed PMID: 27521483.

BACKGROUND: Plantar Fasciitis makes up about 15% of patients requiring professional care due to foot symptoms. The treatment methods are numerous with none proving to be clearly superior to others. We aimed to compare two common treatment methods in search of the best treatment.
METHOD: All consecutive sportspersons presenting to our OPD with clinical diagnosis of plantar fasciitis underwent treatment consisting of stretching exercises, activity modification, and NSAID's for 6 months. First 40 patients who

did not respond to the treatment were divided randomly into two groups of 20 patients each, Group A (Platelet rich plasma - PRP) and Group B (low dose radiation - LDR). At the time of final follow-up (6 months) the mean improvement in the pain score (Visual-Analogue-Scale), American Orthopaedic Foot and Ankle Score (AOFAS) and Plantar fascia thickness on ultrasound were compared.
RESULT: Significant improvement in all 3 parameters was noted at the time of final follow up within both groups. When compared to each other, the difference in outcome of both these Groups on the given 3 parameters came out to be insignificant (p>0.05).
CONCLUSION: PRP is as good as LDR in patients with chronic recalcitrant plantar fasciitis not responding to physical therapy.

DOI: 10.1016/j.foot.2016.08.002
PMID: 27521483 [PubMed - in process]

28: Goudra B, Alvarez A, Singh PM. Practical considerations in the development of a nonoperating room anesthesia practice. Curr Opin Anaesthesiol. 2016 Aug;29(4):526-30. doi: 10.1097/ACO.0000000000000344. PubMed PMID: 27054415.

PURPOSE OF REVIEW: More than 25% of the procedures necessitating an anesthesia provider's involvement are performed outside the operating room. As a result, it is imperative that the expansion of anesthesia services to any new nonoperating room anesthesia (NORA) location takes into account the challenges and safety considerations associated with such a transformation.
RECENT FINDINGS: Although the adverse events encountered in the NORA suite are similar to those met in the operating room, the frequency and implications are different. In addition, many adverse events are site specific. Hypoxemia events, including cardiac arrest continue to dominate all areas of NORA practice. Challenges posed by new minimally invasive procedures continue to grow. Electronic documentation is rapidly expanding into the NORA suite, which brings both advantages and challenges.
SUMMARY: Involvement of anesthesia providers at the development stage and an understanding of the administrative and clinical challenges are essential elements in the building of a NORA practice.

DOI: 10.1097/ACO.0000000000000344
PMID: 27054415 [PubMed - in process]

29: Goyal M, Kriplani A, Kachhawa G, Badiger S. Prediction of preterm labor by a rapid bedside test detecting phosphorylated insulin-like growth factor-binding protein 1 in cervical secretions. Int J Gynaecol Obstet. 2016 Aug;134(2):165-8. doi: 10.1016/j.ijgo.2016.01.019. PubMed PMID: 27233814.

OBJECTIVE: To evaluate the utility of measuring phosphorylated insulin-like growth factor-binding protein 1 (phIGFBP-1) in cervical secretions to predict preterm birth among women with premature uterine contractions.
METHODS: A prospective study was conducted between September 27, 2013, and February 28, 2014, at a tertiary center in India. Participants with symptoms of preterm labor at 24-36weeks underwent testing for phIGFBP-1 in cervical secretions. Cervical length was measured by ultrasonography.
RESULTS: Cervical swab samples tested positive for phIGFBP-1 among 34 (57%) of the 60 participants. Mean cervical length was 2.15±0.63cm among the 46 (77%) women who delivered preterm and 2.54±0.47cm among the 14 (23%) women who delivered at term. Of the 46 preterm deliveries, 29 (63%) women tested positive for phIGFBP-1 and 17 (37%) tested negative. Mean length of pregnancy at delivery was 32.11±4.09weeks and 35.77±1.68weeks among women who tested positive and negative for phIGFBP-1, respectively. The sensitivity, specificity, positive predictive value, and negative predictive value of phIGFBP-1 to predict preterm birth were 86.96%, 35.29%, 64.52%, and 66.67%, respectively.
CONCLUSION: A rapid bedside test measuring phIGFBP-1 identified women at high risk of preterm delivery.

DOI: 10.1016/j.ijgo.2016.01.019
PMID: 27233814 [PubMed - in process]

30: Gunasekaran V, Banerjee J, Dwivedi SN, Upadhyay AD, Chatterjee P, Dey AB. Normal gait speed, grip strength and thirty seconds chair stand test among older Indians. Arch Gerontol Geriatr. 2016 Nov-Dec;67:171-8. doi: 10.1016/j.archger.2016.08.003. PubMed PMID: 27552583.

INTRODUCTION: Gait speed, maximum grip strength and thirty seconds chair stand test are quick, reliable measures of functional capacity in older adults. The objective of this study was to develop normative data of the said parameters, which is lacking in older Indians.
METHODOLOGY: In a cross sectional study, 723 participants of ≥60 years without any morbidity, were recruited with written consent at Geriatric Medicine clinic of All India Institute of Medical sciences, New Delhi. Time taken to walk comfortably (4m) was taken as Gait speed. Maximum grip strength was assessed by using dynamometer by pressing it for 3 times in each hand, and the best of six values noted. Thirty second chair stand was assessed by the number of repetitions to stand and sit from a chair in thirty second.
RESULT: The Cut-off (25th percentile) of gait speed for both male and female in all age group was 0.6m/s. The Cut-off for maximum grip strength in 60-65 years, 66-70 years and >70 years for male were 20, 15 and 15 and for females were 8, 6 and 6 in kg, respectively. The Cut-off for thirty second chair stand test in 60-65 years, 66-70 years and >70 years for male were 10, 9 and 8 and for females was 8, 8 and 7, respectively.
CONCLUSION: These normative data would be useful to the clinicians and researcher as Indian reference value, which is less as compared to western data. Community based multi-centre study is needed.

DOI: 10.1016/j.archger.2016.08.003
PMID: 27552583 [PubMed - in process]

31: Gupta A, Prabhakar S, Modi M, Bhadada SK, Kalaivani M, Lal V, Khurana D. Effect of Vitamin D and calcium supplementation on ischaemic stroke outcome: a randomised controlled open-label trial. Int J Clin Pract. 2016 Sep;70(9):764-70. doi: 10.1111/ijcp.12866. PubMed PMID: 27561415.

BACKGROUND AND AIMS: Vitamin D deficiency is a common problem in stroke survivors. Observational studies have reported an association of low vitamin D levels with greater stroke severity, poststroke mortality and functional disability. Randomised clinical trials are lacking. We sought to assess the effect of calcium and vitamin D supplementation in ischaemic stroke survivors with vitamin D deficiency/insufficiency on disability/mortality outcomes.
METHODS: In this randomised controlled open-label trial, 73 patients of acute ischaemic stroke were screened for serum 25 hydroxy Vitamin D (25(OH)D) levels. A total of 53 patients with baseline 25(OH)D <75 nmol/L were randomised into two arms. One received vitamin D and calcium supplementation along with usual care (n=25) and the other received usual care alone (n=28). Primary outcome was the proportion of patients achieving a good outcome [modified Rankin Scale score 0-2] at 6 months and all cause mortality at 6 months.
RESULTS: The age (mean±SD) of participants was 60.4±11.3 years, 69.8% were males. The proportion of patients achieving good outcome was higher in the intervention arm (Adjusted OR 1.9, 95% CI 0.6-6.4; P=.31). The survival probability was greater in the intervention arm (83.8%, CI 62.4-93.6) as compared with the control arm (59.5%, CI 38.8-75.2; P=.049) with adjusted Hazard ratio (HR) of 0.26 (95% CI 0.08-0.9; P=.03).
CONCLUSIONS: This is the first randomised controlled study assessing the effect of vitamin D and calcium supplementation on ischaemic stroke outcomes and points towards a potential benefit. Findings need to be validated by a larger trial.

DOI: 10.1111/ijcp.12866
PMID: 27561415 [PubMed - in process]

32: Gupta A, Kumar S, Kothari SS. Congenital absence of infrarenal inferior vena cava and deep veins of the lower limbs: a case report. J Med Case Rep. 2016 Aug 10;10(1):218. doi: 10.1186/s13256-016-1015-3. PubMed PMID: 27510154; PubMed Central PMCID: PMC4980794.

BACKGROUND: Congenital anomalies of the venous system are known but congenital absence of infrarenal inferior vena cava with absent deep venous system of the lower limbs is extremely rare.
CASE PRESENTATION: We report the case of an 11-year-old Indian girl who presented with large venous collaterals on her anterior abdominal wall and recurrent non-healing venous ulcers on her left leg with complete absence of infrarenal inferior vena cava and absent deep veins of her lower limbs.
CONCLUSIONS: Congenital absence of infrarenal inferior vena cava may occur with absence of the deep venous system of the lower limbs. We have reported this case because of its extreme rarity and to enhance awareness of this entity that has no treatment currently.

DOI: 10.1186/s13256-016-1015-3
PMCID: PMC4980794
PMID: 27510154 [PubMed - in process]

33: Gupta MP, Sagar P, Hota A, Kumar R, Kumar R. Diplopia as a sequel of unilateral neck dissection. Head Neck. 2016 Aug;38(8):E2475-8. doi: 10.1002/hed.24428. PubMed PMID: 27044014.

BACKGROUND: The purpose of this study was to discuss the underlying etiology of raised intracranial pressure and its sequel after unilateral internal jugular vein ligation. In addition, the management protocol for such rare cases has been discussed along with literature review.
METHODS: PubMed and Google were used to search the literature for cases of raised intracranial pressure with complications after unilateral internal jugular vein (IJV) ligation. Twelve case reports with 17 patients were identified.
RESULTS: There were 13 male and 4 female patients ranging between the ages of 26 and 61 years. Headache (n = 12/17; 70.5%), diplopia (n = 10/17; 58.8%), impaired vision (n = 9/17; 52.9%), and aplasia or hypoplasia of the transverse sinus were seen in these patients.
CONCLUSION: Although very rare, this potential complication after unilateral IJV ligation should be kept in mind. Magnetic resonance venogram (MRV) is the investigation of choice to ascertain the underlying etiology. Conservative management should be started immediately. Surgical options are reserved for patients with progressive symptoms. © 2016 Wiley Periodicals, Inc. Head Neck, 2016 © 2016 Wiley Periodicals, Inc. Head Neck 38:E2475-E2478, 2016.

DOI: 10.1002/hed.24428
PMID: 27044014 [PubMed - in process]

34: Gupta N, Shastri S, Singh PK, Jana M, Mridha A, Verma G, Kabra M. Nasopharyngeal teratoma, congenital diaphragmatic hernia and Dandy-Walker malformation - a yet uncharacterized syndrome. Clin Genet. 2016 Nov;90(5):470-471. doi: 10.1111/cge.12830. PubMed PMID: 27506516.

An association of congenital diaphragmatic hernia, dandy walker malformation and nasopharyngeal teratoma is very rare. Here, we report a fourth case with this association where chromosomal microarray and whole exome sequencing (WES) was performed to understand the underlying genetic basis. Findings of few variants especially a novel variation in HIRA provided some insights. An association of

congenital diaphragmatic hernia, dandy walker malformation and nasopharyngeal teratoma is very rare. Here, we report a fourth case with this association where chromosomal microarray and whole exome sequencing (WES) was performed to understand the underlying genetic basis. Findings of few variants especially a novel variation in HIRA provided some insights.

DOI: 10.1111/cge.12830
PMID: 27506516 [PubMed - in process]

35: Gupta S, Chaurasia AK, Chawla R, Kapoor KS, Mahalingam K, Swamy DR, Gupta V. Long-term outcomes of glaucoma drainage devices for glaucoma post-vitreoretinal surgery with silicone oil insertion: a prospective evaluation. Graefes Arch Clin Exp Ophthalmol. 2016 Dec;254(12):2449-2454. PubMed PMID: 27538908.

PURPOSE: To evaluate long-term success of the Ahmed glaucoma valve (AGV) for refractory glaucoma after vitreoretinal surgery with silicone oil insertion.
METHODS: Prospective non-comparative evaluation of patients who underwent AGV insertion for management of post-vitreoretinal surgery glaucoma, post-silicone oil removal. Intraocular pressure (IOP), visual acuity, and glaucomatous neuropathy status were evaluated preoperatively and at multiple follow-up visits postoperatively. Success, using Kaplan-Meier analysis, was determined at the 12-month follow-up visit and at the last follow-up. Factors associated with failure were analysed.
RESULTS: Twenty-seven eyes of 27 patients with a mean age of 28.3±15.2 years underwent a superior AGV implantation. The average follow-up after AGV implantation was 17.11±8.36 months (range: 9-60 months). Kaplan-Meier survival analysis revealed a 62 % success at 12 months and 37 % at 5 years. A 48 % rate of complications was noted, 22 % of which were vision-threatening. Factors analysed, including patient age, interval between vitreoretinal surgery and silicone oil removal, interval between vitreoretinal surgery and AGV implantation, and phakic status, were not found to be associated with higher failure rates.
CONCLUSION: Long-term success of AGV implantation for glaucoma after vitreoretinal surgery with silicone oil insertion is better than that reported for trabeculectomy, though complication rates remain high.

DOI: 10.1007/s00417-016-3469-9
PMID: 27538908 [PubMed - in process]

36: Gupta S, Jangra RS, Gupta S, Mahendra A, Gupta S. Creating a guard with a needle cover to control the depth of intralesional injections. J Am Acad Dermatol. 2016 Aug;75(2):e67-8. doi: 10.1016/j.jaad.2016.01.042. PubMed PMID: 27444093.

37: Gupta S, Kumaran SS, Saxena R, Gudwani S, Menon V, Sharma P. BOLD fMRI and DTI in strabismic amblyopes following occlusion therapy. Int Ophthalmol. 2016 Aug;36(4):557-68. doi: 10.1007/s10792-015-0159-2. PubMed PMID: 26659010.

Evaluation of brain cluster activation using the functional magnetic resonance imaging (fMRI) and diffusion tensor imaging (DTI) was sought in strabismic amblyopes. In this hospital-based case-control cross-sectional study, fMRI and DTI were conducted in strabismic amblyopes before initiation of any therapy and after visual recovery following the administration of occlusion therapy. FMRI was performed in 10 strabismic amblyopic subjects (baseline group) and in 5 left strabismic amblyopic children post-occlusion therapy after two-line visual improvement. Ten age-matched healthy children with right ocular dominance formed control group. Structural and functional MRI was carried out on 1.5T MR scanner. The visual task consisted of 8 Hz flickering checkerboard with red dot and occasional green dot. Blood-oxygen-level-dependent (BOLD) fMRI was analyzed using statistical parametric mapping and DTI on NordicIce (NordicNeuroLab) softwares. Reduced occipital activation was elicited when viewing with the amblyopic eye in amblyopes. An 'ipsilateral to viewing eye' pattern of calcarine BOLD activation

was observed in controls and left amblyopes. Activation of cortical areas associated with visual processing differed in relation to the viewing eye. Following visual recovery on occlusion therapy, enhanced activity in bilateral hemispheres in striate as well as extrastriate regions when viewing with either eye was seen. Improvement in visual acuity following occlusion therapy correlates with hemodynamic activity in amblyopes.

DOI: 10.1007/s10792-015-0159-2
PMID: 26659010 [PubMed - in process]

38: Gupta V, Bhatia R, Ramam M, Khanna N. Hypopigmented macules and papules following the lines of Blaschko: a novel variant of Darier's disease. Int J Dermatol. 2016 Dec;55(12):e623-e625. doi: 10.1111/ijd.13382. PubMed PMID: 27495924.

39: Gupta V, Yadav S. Bullous striae distensae. Postgrad Med J. 2016 Aug 5. pii: postgradmedj-2016-134345. doi: 10.1136/postgradmedj-2016-134345. [Epub ahead of print] PubMed PMID: 27496531.

40: Gupta V, Saginatham H, Arava S, Sethuraman G. Goltz syndrome: a rare case of father-to-daughter transmission. BMJ Case Rep. 2016 Aug 16;2016. pii: bcr2016216599. doi: 10.1136/bcr-2016-216599. PubMed PMID: 27530877.

An 8-year-old girl presented to us with skin-coloured to yellowish soft compressible papules, intermixed with hypopigmented and hyperpigmented macules in a Blaschkoid pattern, and 'lobster-claw deformity' affecting her bilateral feet. Additional examination findings included short stature, facial asymmetry, low-set ears, hypodontia, enamel hypoplasia, tonsillar enlargement and spina-bifida occulta at S1-3 vertebral level. A diagnosis of Goltz syndrome was suspected clinically, which was confirmed on skin biopsy. Her father also had hypopigmented and hyperpigmented macules in a Blaschkoid distribution, 'lobster-claw' deformity and kyphoscoliosis. None of the other family members were affected.

DOI: 10.1136/bcr-2016-216599
PMID: 27530877 [PubMed - in process]

41: Gupta VG, Gogia A. DDGP versus SMILE in NK/T-Cell Lymphoma-Letter. Clin Cancer Res. 2016 Aug 15;22(16):4271. doi: 10.1158/1078-0432.CCR-16-1076. PubMed PMID: 27528735.

42: Hada M, Chandra P, Gangwe A. An unusual case of protruding retro-orbital metallic foreign body. Indian J Ophthalmol. 2016 Aug;64(8):604-6. doi: 10.4103/0301-4738.191511. PubMed PMID: 27688286; PubMed Central PMCID: PMC5056552.

A 34-year-old female presented with firecracker injury with curved metallic foreign body embedded in the left orbit and protruding out through the upper eyelid. The report highlights notable aspects in diagnosis, decision-making, and successful removal of this unusual case of retro-orbital foreign body.

DOI: 10.4103/0301-4738.191511
PMCID: PMC5056552
PMID: 27688286 [PubMed - in process]

43: Harbada RK, Sorabjee JS, Surya N, Jadhav KA, Mirgh S. Cerebellar Toxoplasmosis in an Immunocompetent Patient with G6PD Deficiency. J Assoc Physicians India. 2016 Aug;64(8):79-82. PubMed PMID: 27762116.

We report a case of an immunocompetent patient who presented with a short history

of unilateral cerebellar lesion later proven as toxoplasmosis on histopathology. The case highlights that patients with G6PD deficiency are more prone to develop fatal toxoplasma infections than those individuals with normal G6PD activity.

PMID: 27762116 [PubMed - in process]

44: Harlalka GV, McEntagart ME, Gupta N, Skrzypiec AE, Mucha MW, Chioza BA, Simpson MA, Sreekantan-Nair A, Pereira A, Günther S, Jahic A, Modarres H, Moore-Barton H, Trembath RC, Kabra M, Baple EL, Thakur S, Patton MA, Beetz C, Pawlak R, Crosby AH. Novel Genetic, Clinical, and Pathomechanistic Insights into TFG-Associated Hereditary Spastic Paraplegia. Hum Mutat. 2016 Nov;37(11):1157-1161. doi: 10.1002/humu.23060. PubMed PMID: 27492651.

Hereditary spastic paraplegias (HSPs) are genetically and clinically heterogeneous axonopathies primarily affecting upper motor neurons and, in complex forms, additional neurons. Here, we report two families with distinct recessive mutations in TFG, previously suggested to cause HSP based on findings in a single small family with complex HSP. The first carried a homozygous c.317G>A (p.R106H) variant and presented with pure HSP. The second carried the same homozygous c.316C>T (p.R106C) variant previously reported and displayed a similarly complex phenotype including optic atrophy. Haplotyping and bisulfate sequencing revealed evidence for a c.316C>T founder allele, as well as for a c.316_317 mutation hotspot. Expression of mutant TFG proteins in cultured neurons revealed mitochondrial fragmentation, the extent of which correlated with clinical severity. Our findings confirm the causal nature of bi-allelic TFG mutations for HSP, broaden the clinical and mutational spectra, and suggest mitochondrial impairment to represent a pathomechanistic link to other neurodegenerative conditions.

DOI: 10.1002/humu.23060
PMID: 27492651 [PubMed - in process]

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47: Jayaraj P, Sen S, Bhattacharya T, Arora J, Yadav S, Chhoker V, Kumar A, Dhanaraj PS, Yadavilli KS, Verma M. Clinical relevance of cyclooxygenase 2 and peroxisome proliferator-activated receptor γ in eyelid sebaceous gland carcinoma. Histopathology. 2016 Aug;69(2):268-75. doi: 10.1111/his.12932. PubMed PMID: 26791964.

AIMS: Sebaceous gland carcinoma (SGC) is a malignancy associated with the pilosebaceous unit, and occurs at ocular or non-ocular sites. Cyclooxygenases (COXs) are enzymes that are crucial for lipid metabolism. COX-2 is overexpressed in various cancers, and its inhibition by non-steroidal anti-inflammatory drugs is known to reduce the risk of many cancers. Peroxisome proliferator-activated receptor (PPAR)-γ is a transcription factor involved in adipogenesis. PPAR-γ is a potential therapeutic target for the treatment of malignant tumours, including colon carcinoma. The aim of this study was to explore the status of COX-2 and PPAR-γ as prognostic markers in human eyelid SGC.
METHODS AND RESULTS: The immunohistochemical expression of COX-2 and PPAR-γ was evaluated in 31 SGC cases. Cytoplasmic expression of COX-2 was detected in 80% of the SGC cases, and nuclear expression of PPAR-γ in 87%. There were significant correlations of PPAR-γ expression with well-differentiated SGC [19/21 (90%)] and

of COX-2 overexpression with reduced disease-free survival (P = 0.0441, log rank analysis). COX-2 expression [odds ratio (OR) 3.82, 95% confidence interval (CI) 1.02-14.33, P = 0.046] and lymph node metastasis (OR 0.17, 95% CI 0.04-0.65, P = 0.009) emerged as significant risk factors in the univariate analysis. However, COX-2 expression did not emerge as a significant independent prognostic factor in multivariate analysis.
CONCLUSIONS: COX-2 is a potential marker for identifying high-risk SGC patients. Expression of PPAR-γ in eyelid SGC cases reflects terminal sebaceous differentiation. Inhibitors of COX-2 signalling and PPAR-γ agonists are both prospective novel therapeutic targets in the management of eyelid SGC patients.

DOI: 10.1111/his.12932
PMID: 26791964 [PubMed - in process]

48: Kakkar A, Majumdar A, Kumar A, Tripathi M, Pathak P, Sharma MC, Suri V, Tandon V, Chandra SP, Sarkar C. Alterations in BRAF gene, and enhanced mTOR and MAPK signaling in dysembryoplastic neuroepithelial tumors (DNTs). Epilepsy Res. 2016 Nov;127:141-151. doi: 10.1016/j.eplepsyres.2016.08.028. PubMed PMID: 27599148.

OBJECTIVE: Recently, BRAF V600E mutation, and activation of mTOR and MAPK pathways have been identified in various glial/glioneuronal tumors. Dysembryoplastic neuroepithelial tumors (DNTs) are epilepsy-associated glioneuronal neoplasms which have not been analyzed extensively in this respect.
METHODS: Sequencing for BRAF V600E mutation, analysis of BRAF copy number by qRT-PCR, and immunohistochemistry for mTOR (p-S6, p-4EBP1) and MAPK (p-MAPK) pathways were performed.
RESULTS: Sixty-four DNTs were identified, accounting for 15.1% of patients with drug-refractory epilepsy (mean age: 15.5 years). Duration of seizures ranged from 1 to 22 years. BRAF V600E mutation was identified in 3.7% of DNTs, while BRAF copy number gain was observed in 33.3%. mTOR-pathway activation indicated by p-S6 or p-4EBP1 immunopositivity was seen in 89.7% cases. Interestingly, p-S6 positivity was also seen in adjacent dysplastic cortex. p-MAPK immunopositivity was seen in 50% cases. MAPK and mTOR pathway activation was independent of BRAF alterations. All patients that underwent incomplete resection had Engel grade II-III outcomes (p<0.001).
CONCLUSION: BRAF alterations are frequent in DNTs, particularly BRAF copy number gain which is being reported for the first time in these tumors. Evidence of activation of mTOR and MAPK pathways suggests a role for altered signalling in DNT pathogenesis, and will pave the way for development of targeted therapies, particularly relevant for patients having persistent seizures after incomplete resection.

DOI: 10.1016/j.eplepsyres.2016.08.028
PMID: 27599148 [PubMed - in process]

49: Kakkar A, Nambirajan A, Suri V, Sarkar C, Kale SS, Singh M, Sharma MC. Primary Bone Tumors of the Skull: Spectrum of 125 Cases, with Review of Literature. J Neurol Surg B Skull Base. 2016 Aug;77(4):319-25. doi: 10.1055/s-0035-1570347. PubMed PMID: 27441157; PubMed Central PMCID: PMC4949064.

AIMS: Primary skull bone tumors, benign or malignant, are rare, and include a vast repertoire of lesions. These tumors are not reported systematically in the literature, with most studies being on individual entities or as single case reports.
METHODS: Primary bone tumors diagnosed over a period of 12 years were retrieved, histological diagnoses reviewed, and clinical parameters noted.
RESULTS: We identified 125 primary skull bone tumors. The mean age at diagnosis was 32 years (range: 2-65 years). Majority of patients were adults (82.4%); male preponderance was noted (72.8%). Malignant tumors were more frequent than benign

tumors. Most common malignant tumor was chordoma (n=37), while most common benign tumor was osteoma (n=7). Tumors were most frequently located at the skull base, of which clivus was most common location. Chordomas accounted for majority of clival tumors, while chondrosarcoma predominated at other skull base locations. Benign tumors were extremely rare in skull base. Tumors of the vault bones were infrequent; with chondrosarcoma and osteoma being the most common malignant and benign tumors, respectively.
CONCLUSIONS: This is the largest series of primary skull bone tumors from India. Documentation of such a series will aid in approaching differential diagnosis of skull tumors in a systematic manner.

DOI: 10.1055/s-0035-1570347
PMCID: PMC4949064 [Available on 2017-08-01]
PMID: 27441157 [PubMed]

50: Kakkar A, Sharma MC, Yadav R, Panwar R, Mathur SR, Iyer VK, Sahni P. Pancreatic mixed serous neuroendocrine neoplasm with clear cells leading to diagnosis of von Hippel Lindau disease. Pathol Res Pract. 2016 Aug;212(8):747-50. doi: 10.1016/j.prp.2016.04.008. PubMed PMID: 27161305.

Mixed serous neuroendocrine neoplasms are extremely rare tumors that are usually seen in female patients and are often associated with von Hippel Lindau (VHL) disease. We describe the case of a 38-year-old male who presented with complaints of anorexia, weight loss, and abdominal pain. CT abdomen showed a mass in the head of the pancreas, multiple small nodules in the body of pancreas, and bilateral adrenal masses. Fine needle aspiration cytology (FNAC) from the mass showed features of a neuroendocrine tumor, with many of the cells demonstrating abundant clear cytoplasm. Histopathological examination of the pancreaticoduodenectomy specimen showed a mixed serous neuroendocrine neoplasm with two components viz. serous cystadenoma and neuroendocrine tumor (NET) World Health Organization (WHO) grade 2. In addition, he was diagnosed to have bilateral pheochromocytomas and a paraganglioma. The synchronicity of these tumors suggested the possibility of VHL disease. Thus, identification of a NET with clear cells or of a mixed serous neuroendocrine neoplasm should raise suspicion of VHL disease. In a mixed tumor, FNAC may identify only one of the two components. Thorough processing of all pancreatic serous tumors for pathological examination is recommended, as NET may occur as a small nodule within the serous cystadenoma.

DOI: 10.1016/j.prp.2016.04.008
PMID: 27161305 [PubMed - in process]

51: Kandwal P, Vijayaraghavan G, Goswami A, Jayaswal A. Back Pain in Children-How Sinister? Indian J Pediatr. 2016 Aug;83(8):834-43. doi: 10.1007/s12098-015-1886-0. Review. PubMed PMID: 26411731.

Incidence of back pain among children and adolescents is gradually increasing. Children undergo extensive diagnostic workup that ultimately results in a nonconfirmative diagnosis. A good history and clinical examination can, to a large extent help differentiate non-specific from organic causes of backache. Diagnostic workup may be initiated if symptoms are severe and/or persistant. The authors review some of the common causes of back pain in pediatric population, clinical presentations, and the relevant investigations along with their management.

DOI: 10.1007/s12098-015-1886-0
PMID: 26411731 [PubMed - in process]

52: Kant S, Haldar P, Singh AK, Archana S, Misra P, Rai S. Profile of pregnant women using delivery hut services of the Ballabgarh Health and Demographic Surveillance System in rural north India. Int J Gynaecol Obstet. 2016

Aug;134(2):173-6. doi: 10.1016/j.ijgo.2016.01.012. PubMed PMID: 27180279.

OBJECTIVE: To describe women who attended two delivery huts in rural Haryana, India.
METHODS: The present observational study assessed routinely collected service provision data from two delivery huts located at primary health centers in the district of Faridabad. Data on sociodemographic characteristics, prenatal care, use of free transport services, and maternal and neonatal indicators at delivery were assessed for all pregnant women who used the delivery hut services from January 2012 to June 2014.
RESULTS: During the study period, 1796 deliveries occurred at the delivery huts. The mean age of the mothers was 23.3 ± 3.3 years (95% confidence interval 23.1-23.5). Of 1648 mothers for whom data were available, 1039 (63.0%) had travelled less than 5 km to the delivery hut. The proportion of mothers who belonged to a lower caste increased from 31.0% (193/622) in 2012 to 41.1% (162/394) in 2014. The proportion of mothers who were illiterate also increased, from 8.1% (53/651) in 2012 to 26.4% (104/394) in 2014.
CONCLUSION: Belonging to a disadvantaged social group (in terms of caste or education) was not an obstacle to use of delivery hut services. The delivery huts might have satisfied some unmet needs of community members in rural India.

DOI: 10.1016/j.ijgo.2016.01.012
PMID: 27180279 [PubMed - in process]

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Medulloblastoma (MB) is a childhood tumor comprising four molecular subgroups: WNT, SHH, group 3 and group 4, with diagnostic and prognostic connotations. Very few studies are available on molecular subgrouping of adult MBs due to their rarity. Recently, loss of chromosome14q has been reported in SHH MBs, with downregulation of miR-379/miR-656 cluster (C14MC) in pediatric SHH MBs. Hence, the present study on adult MBs was undertaken to enumerate clinicopathological characteristics and molecular subgroups, and to analyze expression of C14MC and its transcriptional regulators, MEF2, JUN and ESRRG. Immunohistochemistry for β-catenin, GAB1 and YAP1 was performed to identify molecular subgroups. MYC amplification was evaluated by FISH. Expression profiling of 47 miRNAs from C14MC was performed using customized Taqman low-density array. Expression of transcriptional regulators was examined using RT-PCR. Seventy-one adult MBs were analyzed. They had male predominance and majority were located laterally (52%). A significant proportion of cases were of Desmoplastic/nodular histology (32%); MBEN was not seen. WNT tumors constituted 4.2%, SHH 62%, and non-WNT/non-SHH 33.8%. MYC amplification was identified in 11.1% cases. Patient outcome was worse in adults. Significant downregulation of C14MC was observed in all MB subgroups, and MEF-2 expression was downregulated. Adult MBs are distinct from childhood MBs in terms of location, histopathological subtypes, molecular subgroups, as well as prognosis. Silencing of C14MC in all MB subgroups suggests its role as a tumor suppressor locus in tumorigenesis. Deregulation of C14MC can possibly be attributed to repression of MEF2.

DOI: 10.1007/s11060-016-2250-6
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Two-component systems, comprising histidine kinases and response regulators, empower bacteria to sense and adapt to diverse environmental stresses. Some histidine kinases are bifunctional; their phosphorylation (kinase) and dephosphorylation (phosphatase) activities toward their cognate response regulators permit the rapid reversal of genetic responses to an environmental stimulus. DevR-DevS/DosR-DosS is one of the best-characterized two-component systems of Mycobacterium tuberculosis. The kinase function of DevS is activated by gaseous stress signals, including hypoxia, resulting in the induction of ~ 48-genes DevR dormancy regulon. Regulon expression is tightly controlled and lack of expression in aerobic Mtb cultures is ascribed to the absence of phosphorylated DevR. Here we show that DevS is a bifunctional sensor and possesses a robust phosphatase activity toward DevR. We used site-specific mutagenesis to generate substitutions in conserved residues in the dimerization and histidine phosphotransfer domain of DevS and determined their role in kinase/phosphatase functions. In vitro and in vivo experiments, including a novel in vivo phosphatase assay, collectively establish that these conserved residues are critical for regulating kinase/phosphatase functions. Our findings establish DevS phosphatase function as an effective control mechanism to block aerobic expression of the DevR dormancy regulon. Asp-396 is essential for both kinase and phosphatase functions, whereas Gln-400 is critical for phosphatase function. The positive and negative functions perform opposing roles in DevS: the kinase function triggers regulon induction under hypoxia, whereas its phosphatase function prevents expression under aerobic conditions. A finely tuned balance in these opposing activities calibrates the dormancy regulon response output.

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INTRODUCTION: This study provides vital insight in assessing anchorage loss when miniscrews are indirectly loaded.
METHODS: The study sample comprised 18 patients with bimaxillary protrusion (14 girls, 4 boys; mean age, 17.3 ± 4.6 years) selected from a database of 89 patients treated with miniscrews. All subjects who were selected required

extraction of all first premolars and maximum anchorage. After initial leveling and aligning, miniscrews were placed between the first molar and the second premolar in all 4 quadrants and loaded by the indirect method at 3 weeks after placement with 200-g nickel-titanium alloy closed-coil springs for en-masse retraction. Mean treatment duration was 29.7 ± 6.8 months. Pretreatment and posttreatment lateral cephalograms were analyzed to measure the amount of anchorage loss, incisor retraction, and the incisors' angular change in reference to the pterygoid vertical reference line and were evaluated by the structural superimposition method.
RESULTS: The ratio of incisor retraction to molar protraction was 4.2 in the maxilla and 4.7 in the mandible. The first molars showed mean extrusion of 0.20 mm in the maxilla and 0.57 mm in the mandible; these were statistically insignificant. The mean angular change of the first molars was -2.43° in the maxilla and -0.03° in the mandible. The mean anchorage loss in reference to the pterygoid vertical was 1.3 mm in the maxilla and 1.1 mm in the mandible; these were statistically significant. Structural superimpositions showed mean change in molar position of 0.83 mm in the maxilla and 0.87 mm in the mandible, and 5.77 mm in the maxillary incisor and 5.43 mm in the mandibular incisor. These results were compared with the direct anchorage method reported in the literature.
CONCLUSIONS: Indirect miniscrew anchorage can be a viable alternative to direct anchorage.

DOI: 10.1016/j.ajodo.2016.02.014
PMID: 27476360 [PubMed - in process]

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Humans have limited capacity of processing just up to 4 integrated items of information in the working memory. Thus, it is inevitable to commit more errors when challenged with high memory loads. However, the neural mechanisms that determine the accuracy of response at high memory loads still remain unclear. High temporal resolution of Electroencephalography (EEG) technique makes it the best tool to resolve the temporal dynamics of brain networks. EEG-defined microstate is the quasi-stable scalp electrical potential topography that represents the momentary functional state of brain. Thus, it has been possible to assess the information processing currently performed by the brain using EEG microstate analysis. We hypothesize that the EEG microstate preceding the trial could determine its outcome in a visuospatial working memory (VSWM) task. Twenty-four healthy participants performed a high memory load VSWM task, while their brain activity was recorded using EEG. Four microstate maps were found to represent the functional brain state prior to the trials in the VSWM task. One pre-trial microstate map was found to determine the accuracy of subsequent behavioural response. The intracranial generators of the pre-trial microstate map that determined the response accuracy were localized to the visuospatial processing areas at bilateral occipital, right temporal and limbic cortices. Our results imply that the behavioural outcome in a VSWM task could be determined by the intensity of activation of memory representations in the visuospatial processing brain regions prior to the trial.

DOI: 10.1016/j.bbr.2016.08.020
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Earlier studies reported accumulation of mitochondrial DNA mutations in ageing and age-related macular degeneration. To know about the mitochondrial status with

age, we examined immunoreactivity (IR) to markers of mitochondria (anti-mitochondrial antibody and voltage-dependent anion channel-1) and complex I-V (that mediate oxidative phosphorylation, OXPHOS) in donor human retinas (age: 19-94years; N=26; right eyes). In all samples, at all ages, IR to anti-mitochondrial antibody and voltage-dependent anion channel-1 was prominent in photoreceptor cells. Between second and seventh decade of life, strong IR to complex I-V was present in photoreceptors over macular to peripheral retina. With progressive ageing, the photoreceptors showed a decrease in complex I-IR (subunit NDUFB4) at eighth decade, and a weak or absence of IR in 10 retinas between ninth and tenth decade. Patchy IR to complex III and complex IV was detected at different ages. IR to ND1 (complex I) and complex II and V remained unaltered with ageing. Nitrosative stress (evaluated by IR to a nitro-tyrosine antibody) was found in photoreceptors. Superoxide dismutase-2 was found upregulated in photoreceptors with ageing. Mitochondrial ultrastructure was examined in two young retinas with intact complex IR and six aged retinas whose counterparts showed weak to absence of IR. Observations revealed irregular, photoreceptor inner segment mitochondria in aged maculae and mid-peripheral retina between eighth and ninth decade; many cones possessed autophagosomes with damaged mitochondria, indicating age-related alterations. A trend in age-dependent reduction of complex I-IR was evident in aged photoreceptors, whereas patchy complex IV-IR (subunits I and II) was age-independent, suggesting that the former is prone to damage with ageing perhaps due to oxidative stress. These changes in OXPHOS system may influence the energy budget of human photoreceptors, affecting their viability.

DOI: 10.1016/j.mito.2016.08.016
PMID: 27581213 [PubMed - in process]

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Myoepitheliomas (MEs) are uncommon tumours of the soft tissue with an intermediate biological behaviour and uncertain differentiation. Primary intra-osseous MEs are rare and occur predominantly in the axial and proximal appendicular skeleton in middle-aged patients. The morphological variation of the tumour cells and stromal metaplasia may cause considerable diagnostic confusion, especially when it occurs in an unusual location. A wide panel of immunohistochemical markers is required to exclude other histological mimics. A 37-year-old male presented with a recurrent swelling in the right middle finger for 1-month duration. Radiographic images showed an expansile, lytic, intra-osseous lesion with high signal intensity on T2W fat-suppressed MR images in the proximal phalanx of the right middle finger without cortical breach, highly suggestive of an enchondroma. Histopathology revealed a lobulated tumour comprising of polygonal to spindle cells in groups and cords in a chondromyxoid stroma. No cellular atypia was noted. The tumour cells were immunopositive for epithelial membrane antigen (EMA), p63, S100 and smooth muscle actin (SMA), compatible with the diagnosis of an intraosseous ME. The proximal phalanx of the right middle finger was excised, revealing a similar tumour, and the patient has been on regular follow-up for the last 18 months without any recurrence. Primary intra-osseous MEs are extremely rare, and this is the second reported occurrence in small bones. A differential diagnosis of ME should be kept for enchondroma-like lesions of the bone for proper histopathological assessment and accurate diagnosis. Documentation of such cases and follow-up will enhance our understanding of their clinical course and prognosis.

DOI: 10.1007/s00256-016-2452-1
PMID: 27524490 [PubMed - in process]

91: Oo MM, Gupta V, Aung TK, Kyaw NT, Oo HN, Kumar AM. Alarming attrition rates among HIV-infected individuals in pre-antiretroviral therapy care in Myanmar, 2011-2014. Glob Health Action. 2016 Aug 24;9:31280. doi: 10.3402/gha.v9.31280. PubMed PMID: 27562473; PubMed Central PMCID: PMC4999509.

BACKGROUND: High retention rates have been documented among patients receiving antiretroviral therapy (ART) in Myanmar. However, there is no information on human immunodeficiency virus (HIV)-infected individuals in care before initiation of ART (pre-ART care). We assessed attrition (loss-to-follow-up [LTFU] and death) rates among HIV-infected individuals in pre-ART care and their associated factors over a 4-year period.
DESIGN: In this retrospective cohort study, we extracted routinely collected data of HIV-infected adults (>15 years old) entering pre-ART care (June 2011-June 2014) as part of an Integrated HIV Care (IHC) programme, Myanmar. Attrition rates per 100 person-years and cumulative incidence of attrition were calculated. Factors associated with attrition were examined by calculating hazard ratios (HRs).
RESULTS: Of 18,037 HIV-infected adults enrolled in the IHC programme, 11,464 (63%) entered pre-ART care (60% men, mean age 37 years, median cluster of differentiation 4 (CD4) cell count 160 cells/μL). Of the 11,464 eligible participants, 3,712 (32%) underwent attrition of which 43% were due to deaths and 57% were due to LTFU. The attrition rate was 78 per 100 person-years (95% CI, 75-80). The cumulative incidence of attrition was 70% at the end of a 4-year follow-up, of which nearly 90% occurred in the first 6 months. Male sex (HR 1.5, 95% CI 1.4-1.6), WHO clinical Stage 3 and 4, CD4 count <200 cells/μL, abnormal BMI, and anaemia were statistically significant predictors of attrition.
CONCLUSIONS: Pre-ART care attrition among persons living with HIV in Myanmar was alarmingly high - with most attrition occurring within the first 6 months. Strategies aimed at improving early HIV diagnosis and initiation of ART are needed. Suggestions include comprehensive nutrition support and intensified monitoring to prevent pre-ART care attrition by tracking patients who do not return for pre-ART care appointments. It is high time that Myanmar moves towards a 'test and treat' approach and ultimately eliminates the need for pre-ART care.

PMCID: PMC4999509
PMID: 27562473 [PubMed - in process]

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Preclinical Research The antidiabetic drug, metformin, can inhibit the release of inflammatory mediators in several disease conditions. The present study was carried out to evaluate the efficacy of metformin in ameliorating edema formation, oxidative stress, mediator release and vascular changes associated with acute inflammation in the rat carrageenan model. Metformin dose-dependently inhibited paw swelling induced by carrageenan and normalized the tissue levels of the inflammatory markers myeloperoxidase and nitrite. It also maintained oxidative homeostasis as indicated by near normal levels of the oxidative stress markers glutathione, thiobarbituric acid reactive substances, catalase and superoxide dismutase. The histopathology of the paw tissue in metformin-treated animals was similar to that in normal paw and had similar effects to diclofenac. In a rat peritonitis model, metformin reduced vascular permeability and cellular infiltration. In conclusion, this study shows that metformin has a potential for use in treating various inflammatory conditions.

DOI: 10.1002/ddr.21322
PMID: 27510757 [PubMed - in process]

94: Panwar R, Pal S, Dash NR, Shalimar, Sahni P, Acharya SK, Pande GK, Chattopadhyay TK, Nundy S. Hepatic resection for predominantly large size hepatocellular carcinoma: Early and long-term results from a tertiary care center in India. Indian J Gastroenterol. 2016 Jul;35(4):280-6. doi: 10.1007/s12664-016-0678-4. Erratum in: Indian J Gastroenterol. 2016 Sep;35(5):403-404. PubMed PMID: 27515744.

BACKGROUND AND AIM: There are no large series on hepatic resection for hepatocellular carcinoma (HCC) from India. We present the results of consecutive patients of HCC treated with hepatic resection at a tertiary care center in India.
METHODS: The records of all patients who underwent hepatic resection for HCC in the Department of Gastrointestinal Surgery, All India Institute of Medical Sciences (New Delhi), were reviewed. The relevant perioperative and follow up data were extracted from a prospectively maintained database.
RESULTS: Between January 1987 and December 2013, 81 patients [71 males; mean age: 49.2±15.6 years] underwent hepatic resection for HCC. Of these, 23 (28 %) were cirrhotic and 36 (49 %) had hepatitis B. Hepatitis B was significantly more common in cirrhotic (77 % vs. 37 %; p=0.001). Most patients had locally advanced disease at presentation [tumor size ≥10 cm in 61 (75 %); vascular tumor thrombus in 10 (12 %)]. Anatomical resection was done in 61 (75 %) including 56 major hepatic resections (≥3 segments). Overall in-hospital mortality was 13 (16 %) [cirrhotic 5 (22 %) vs. noncirrhotic 8 (14 %), p=0.503]. Grade III-V complications (modified Clavien-Dindo classification) occurred in 25 (31 %) patients (cirrhotic 48 % vs. noncirrhotic 24 %; p=0.037). Follow up information was available for 51 (75 %) patients. The median time to recurrence was 12 months, and most (86 %) occurred within 1 year. The recurrence-free survival at 1, 3, and 5 years was 48 %, 40 %, and 36 %, respectively. Positive resection margin and vascular invasion were significantly associated with very poor prognosis.
CONCLUSION: Majority of Indian HCC patients present with locally advanced disease. Despite this, surgical resection provides a chance for long-term recurrence-free survival in a third of them.

DOI: 10.1007/s12664-016-0678-4
PMID: 27515744 [PubMed - in process]

95: Parida GK, Bal C, Dada R, Tripathi M, Dwivedi S. Study of cytogenetic toxicity of low-dose radioiodine therapy in hyperthyroid patients using a micronuclei assay. Nucl Med Commun. 2016 Aug;37(8):800-4. doi: 10.1097/MNM.0000000000000519. PubMed PMID: 27081713.

OBJECTIVE: Radioiodine, in low doses, has been used as a treatment modality for hyperthyroidism worldwide for a long time. However, there is little information available on the severity of cytotoxicity of radioiodine at these low doses. The present investigation aimed to study the cytogenetic toxicity of low-dose radioiodine in hyperthyroid patients using a cytokinesis-blocked micronuclei (MN) assay.
MATERIALS AND METHODOLOGY: All of the patients received radioiodine in the form of sodium iodine (oral form). Blood samples of these patients were collected before therapy and 3 months after therapy, and lymphocytes were analysed for MN assay.
RESULTS: Peripheral blood lymphocytes were analysed in 74 hyperthyroid patients (52 men, 22 women). The results indicated a positive relationship between age and the frequency of MN. However, there was no statistically significant difference in MN frequency at 3 months after therapy in comparison with that before therapy.
CONCLUSION: This study showed that the cytogenetic damage produced by low-dose radioiodine was transient and reversible. Thus, patients can be motivated to undergo this safe and easy procedure as a modality of treatment for hyperthyroidism.

DOI: 10.1097/MNM.0000000000000519

PMID: 27081713 [PubMed - in process]

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99: Pooniya S, Behera C, Mridha AR, Bhardwaj DN, Millo T. Fatal ovarian hyperstimulation syndrome in an anonymous egg donor. Med Leg J. 2016 Dec;84(4):219-223. PubMed PMID: 27542392.

Ovarian hyperstimulation syndrome is a rare, but potentially life-threatening iatrogenic disorder arising from ovulation induction or ovarian hyperstimulation for assisted reproduction techniques. We report a case of a 26-year-old multiparous woman, an anonymous egg donor, who died a few hours after undergoing a procedure to donate eggs at an in vitro fertilization clinic. Her husband alleged that medical negligence had led to her death. The autopsy confirmed death due to ovarian hyperstimulation syndrome. We know of no previous descriptions of fatal ovarian hyperstimulation syndrome in an anonymous egg donor in medico-legal literature.

DOI: 10.1177/0025817216665074
PMID: 27542392 [PubMed - in process]

100: Prajapati S, Upadhyay K, Mukherjee A, Kabra SK, Lodha R, Singh V, Grewal HM, Singh S; Delhi Pediatric TB Study Group.. High prevalence of primary drug resistance in children with intrathoracic tuberculosis in India. Paediatr Int Child Health. 2016 Aug;36(3):214-8. doi: 10.1179/2046905515Y.0000000041. PubMed PMID: 26052730.

BACKGROUND: Drug susceptibility testing (DST) of Mycobacterium tuberculosis (Mtb) isolates is crucial for the effective treatment of tuberculosis. Data on DST patterns in Mtb isolates in childhood tuberculosis are scanty.
AIMS: To determine drug resistance patterns in Mtb isolates from a paediatric TB cohort in North India.
METHODS: 403 children aged 6 months to14 year with probable intrathoracic tuberculosis were enrolled prospectively. All were treatment-naïve. 802 ambulatory-induced sputa (IS) and 787 gastric aspirate (GA) samples were cultured in BACTEC-MGIT960 system, and DST of the Mtb isolates was undertaken using the automated BACTEC-MGIT960 SIRE kit.
RESULTS: Of the 403 children, 147 (36.4%) were culture-confirmed: 132 (89.8%) isolates were Mtb and 15 (10.2%) non-tuberculous mycobacteria (NTM). Five Mtb isolates were contaminated and the remaining 127 were subjected to in-vitro drug susceptibility testing against streptomycin, isoniazid, rifampicin and ethambutol. Twenty-six (20.47%) isolates were resistant to one or more drugs, seven (5.5%) were resistant to rifampicin singly or in combination, and 11 (8.7%) were resistant to isoniazid singly or in combination. Mono-resistance to isoniazid, rifampicin, streptomycin and ethambutol was detected in four (3.1%), one (0.8%), four (3.1%) and two (1.6%), respectively. Five children (3.9%) had MDR-TB; 101 (79.9%) children had Mtb isolates which were sensitive to all four

drugs.
CONCLUSIONS: The rifampicin and isoniazid resistance rates were much higher than those in the adult TB population in India.

DOI: 10.1179/2046905515Y.0000000041
PMID: 26052730 [PubMed - in process]

101: Praveen PA, Madhu SV, Mohan V, Das S, Kakati S, Shah N, Chaddha M, Bhadada SK, Das AK, Shukla DK, Kaur T, Tandon N. Registry of Youth Onset Diabetes in India (YDR): Rationale, Recruitment, and Current Status. J Diabetes Sci Technol. 2016 Aug 22;10(5):1034-41. doi: 10.1177/1932296816645121. PubMed PMID: 27179010; PubMed Central PMCID: PMC5032954.

BACKGROUND: With the aim of addressing the relative scarcity of information on youth-onset diabetes in India, the Indian Council of Medical Research (ICMR) decided to establish the Registry of People with Diabetes with Young Age at Onset (YDR) in 2006. The major objectives of YDR are to generate information on disease pattern or types of youth-onset diabetes including their geographical variations within India and to estimate the burden of diabetes complications.
METHODS: YDR is an observational multicenter clinic based registry enlisting physician diagnosed diabetes in individuals below 25 years of age. Diabetes was classified using symptom based clinical criteria. YDR data collection is coordinated through regional collaborating centers and their interacting reporting centers across India. A baseline and an annual follow-up proformas are used to obtain information on sociodemographic details, clinical profile, and anthropometric and laboratory measurements of the patients.
RESULTS: In phase 1, the registry has enrolled 5546 patients, in which type 1 diabetes mellitus (T1DM) was the most prevalent (63.9%), followed by youth-onset type 2 diabetes mellitus (T2DM) (25.3%).
CONCLUSION: This registry provides a unique opportunity to study the natural history of youth-onset diabetes in India.

DOI: 10.1177/1932296816645121
PMCID: PMC5032954 [Available on 2017-05-12]
PMID: 27179010 [PubMed - in process]

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103: Purkait S, Mallick S, Sharma V, Kumar A, Pathak P, Jha P, Biswas A, Julka PK, Gupta D, Suri A, Datt Upadhyay A, Suri V, Sharma MC, Sarkar C. Prognostic Stratification of GBMs Using Combinatorial Assessment of IDH1 Mutation, MGMT Promoter Methylation, and TERT Mutation Status: Experience from a Tertiary Care Center in India. Transl Oncol. 2016 Aug;9(4):371-6. doi: 10.1016/j.tranon.2016.06.005. PubMed PMID: 27567961; PubMed Central PMCID: PMC5006811.

This study aims to establish the best and simplified panel of molecular markers for prognostic stratification of glioblastomas (GBMs). One hundred fourteen cases of GBMs were studied for IDH1, TP53, and TERT mutation by Sanger sequencing; EGFR and PDGFRA amplification by fluorescence in situ hybridization; NF1expression by quantitative real time polymerase chain reaction (qRT-PCR); and MGMT promoter methylation by methylation-specific PCR. IDH1 mutant cases had significantly longer progression-free survival (PFS) and overall survival (OS) as compared to IDH1 wild-type cases. Combinatorial assessment of MGMT and TERT emerged as independent prognostic markers, especially in the IDH1 wild-type GBMs. Thus, within the IDH1 wild-type group, cases with only MGMT methylation (group 1) had the best outcome (median PFS: 83.3 weeks; OS: not reached), whereas GBMs with only TERT mutation (group 3) had the worst outcome (PFS: 19.7 weeks; OS: 32.8 weeks). Cases with both or none of these alterations (group 2) had intermediate

prognosis (PFS: 47.6 weeks; OS: 89.2 weeks). Majority of the IDH1 mutant GBMs belonged to group 1 (75%), whereas only 18.7% and 6.2% showed group 2 and 3 signatures, respectively. Interestingly, none of the other genetic alterations were significantly associated with survival in IDH1 mutant or wild-type GBMs. Based on above findings, we recommend assessment of three markers, viz., IDH1, MGMT, and TERT, for GBM prognostication in routine practice. We show for the first time that IDH1 wild-type GBMs which constitute majority of the GBMs can be effectively stratified into three distinct prognostic subgroups based on MGMT and TERT status, irrespective of other genetic alterations.

DOI: 10.1016/j.tranon.2016.06.005
PMCID: PMC5006811
PMID: 27567961 [PubMed]

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Elastance is a distinguished marker in diagnosing various arterial diseases as studies have reported carotid artery-related diseases linked with stiffness index (β) values greater than 5. This study was to estimate elasticity of common carotid artery by measuring the diameter during systolic and diastolic phases using pixel tracing of successive frames and blood pressure. The B-mode ultrasonography video containing arterial wall motion was captured and fragmented into image frames. Each pixel on the greyscale image was converted into RGB intensity values. The diameter of the artery as well as the thickness of the wall was measured by tracing the pixel displacements from successive frames during arterial pulsation. The study was conducted on 19 subjects aged 25-40 years. The systolic and diastolic carotid artery lumen diameters and carotid intima-media thickness were calculated as 7.1 ± 0.7, 6.3 ± 0.6 and 0.5 ± 0.05 mm (mean ± standard deviation), respectively. The mean stiffness index (β), Peterson's modulus and Young's modulus of elasticity were 5.2 ± 1.1, 69 ± 15 kPa and 453 ± 99 kPa, respectively. The pixel displacements in tunica intima, tunica media and tunica adventitia were not homogeneous, due to varied macro-constituents such as endothelial tissues, smooth muscle cells, elastin lamina, fibrous tissue and micro-constituents such as collagen, fibroblast and elastin. We found that women have smaller arteries, and the stiffness increased during the systolic phase.

DOI: 10.1177/0954411916650220
PMID: 27246916 [PubMed - in process]

105: Rajeshwari M, Kakkar A, Nalwa A, Suri V, Sarkar C, Satyarthee GD, Garg A, Sharma MC. WNT-activated medulloblastoma with melanotic and myogenic differentiation: Report of a rare case. Neuropathology. 2016 Aug;36(4):372-5. doi: 10.1111/neup.12281. PubMed PMID: 26869281.

Medulloblastoma (MB) with melanotic and myogenic differentiation, previously known as melanotic medullomyoblastoma, is an extremely rare histological variant of MB showing melanocytic as well as skeletal muscle differentiation. Only 10 cases of this rare tumor have been reported in the literature to date. We report this case of a 2-year-old male child who presented with a midline cerebellar mass, which on histopathological examination showed classic MB intermixed with cells containing melanin pigment, along with rhabdomyoblasts, spindle cells and occasional strap cells, which corresponded to WNT subgroup on molecular classification. The cell of origin of this MB variant is likely to be neural crest-derived stem cells which are capable of multilineage differentiation. Significant findings from previous reports and important differential diagnoses are discussed. Documentation of these tumors is important to characterize the

clinical behaviour and to identify distinct genetic features, if any.

DOI: 10.1111/neup.12281
PMID: 26869281 [PubMed - in process]

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107: Ranjan A, Dhua AK, Maddur S, Kandasamy D, Kashyap L. Thoracoscopic removal of an intrapulmonary foreign body in a child. Asian J Endosc Surg. 2016 Aug;9(3):215-7. doi: 10.1111/ases.12274. PubMed PMID: 27255976.

A 9-year-old boy presented to our institution 6 months after falling on a needle that pierced his left chest wall. He presented to us after multiple unsuccessful attempts to have this foreign body removed at other hospitals. A thoracoscopic removal was successfully undertaken aided by fluoroscopy. This report shows how the needle's position and location were precisely defined by fluoroscopy, despite the needle being invisible on thoracoscopy.

DOI: 10.1111/ases.12274
PMID: 27255976 [PubMed - in process]

108: Rufai SB, Sankar MM, Singh J, Singh S. Predominance of Beijing lineage among pre-extensively drug-resistant and extensively drug-resistant strains of Mycobacterium tuberculosis: A tertiary care center experience. Int J Mycobacteriol. 2016 Dec;5 Suppl 1:S197-S198. doi: 10.1016/j.ijmyco.2016.07.005. PubMed PMID: 28043550.

OBJECTIVE/BACKGROUND: Increasing resistance to various first-line and second-line drugs has become a major concern in India. However, it is not known if some genotypes are more associated with second-line drug resistance. Thus, the main aim of this study was to find out the predominant genotype associated with second-line drug resistance.
METHODS: During the study, a total of 234 multidrug resistant (MDR) strains of Mycobacterium tuberculosis, isolated between 2008 and 2015, were randomly selected and screened for pre-extensively drug-resistant (XDR) and XDR patterns using second-drug susceptibility testing with BACTEC MGIT 960. All the MDR isolates were tested against ofloxacin (2µg/mL), kanamycin (2.5µg/mL), amikacin (1µg/mL), and capreomycin (2.5µg/mL). Based on the resistance pattern pre-XDR was defined as M. tuberculosis isolates resistant to fluoroquinolone alone. The identified pre-XDR and XDR isolates were further characterized using spoligotyping. The spoligo patterns obtained were compared and analyzed using SITVIT_WEB Unweighted Pair Group Method with Arithmetic Mean, and Minimum Spanning Tree was derived using MIRU-VNTRplus.
RESULTS: Among the 234 MDR strains of M. tuberculosis, 85 (36.3%) were detected as pre-XDRs and 15 (6.4%) as XDRs. All the pre-XDR strains were ofloxacin resistant, whereas among the XDR strains, 10 (66.6%) were resistant to ofloxacin, kanamycin, and capreomycin, four (26.6%) were resistant to ofloxacin, kanamycin, and amikacin, and one (6.6%) isolate was resistant to ofloxacin and kanamycin. Upon spoligotyping analysis, the Beijing lineage was found to be the single most dominant lineage among the pre-XDR strains (38.8%) followed by CAS (30.5%), X (7%), T (5.8%), Haarlem (3.5%), EAI (2.3%), and MANU (2.3%). Among the XDR isolates, seven (46.6%) belonged to Beijing, three (20%) belonged to CAS, and one (6.6%) to each of the EAI, T, URAL, and X lineages. Within the Beijing family, ST1 was the most common in both pre-XDR (94%) and XDR isolates. All the isolates belonged to the ST1 sublineage.

CONCLUSION: The Beijing lineage was found to be the single most dominant genotype among the pre-XDR and XDR isolates.

DOI: 10.1016/j.ijmyco.2016.07.005
PMID: 28043550 [PubMed]

109: Sankaranarayanan R, Bhatla N, Basu P. Current global status & impact of human papillomavirus vaccination: Implications for India. Indian J Med Res. 2016 Aug;144(2):169-180. doi: 10.4103/0971-5916.195023. Review. PubMed PMID: 27934795.

This review addresses the effectiveness and safety of human papillomavirus (HPV) vaccines, the current status of its introduction in the National Immunization Programmes (NIPs) and its relevance to India, which contributes a fifth of the global burden of cervical cancer. The vast literature on efficacy, acceptability and safety of HPV vaccination and its impact after population level introduction was reviewed and discussed. The efficacy of HPV vaccines in preventing high-grade precancerous lesions caused by vaccine-targeted HPV infections was 90 per cent or higher in HPV naove women in randomized clinical trials. Two doses at 6 or 12 months apart are recommended for 9-14 yr old girls and three doses over six months to one year period for those aged above 15 yr. More than 80 countries or territories have introduced HPV vaccination in their NIPs, of which 33 are low- and middle-income countries (LMICs); in addition, 25 LMICs have introduced pilot programmes before a phased national expansion. Significant reductions in the frequency of HPV 16 and 18 infections, genital warts and cervical premalignant lesions in vaccinated cohorts and herd immunity in general populations have been reported from countries that introduced vaccination in NIPs as early as 2007. More than 280 million doses of HPV vaccines have been administered worldwide with the excellent safety profile with no serious adverse events linked to it. The high burden of cervical cancer and the high efficacy and safety of HPV vaccination justify its introduction in the Indian NIP at the earliest possibility to substantially reduce the cervical cancer burden in future.

DOI: 10.4103/0971-5916.195023
PMID: 27934795 [PubMed - in process]

110: Sarkar S, Sinha A, Lakshmy R, Agarwala A, Saxena A, Hari P, Bagga A. Ambulatory Blood Pressure Monitoring in Frequently Relapsing Nephrotic Syndrome. Indian J Pediatr. 2017 Jan;84(1):31-35. doi: 10.1007/s12098-016-2207-y. PubMed PMID: 27538980.

OBJECTIVES: To screen patients with frequently relapsing nephrotic syndrome (FRNS) for the presence of ambulatory hypertension and left ventricular hypertrophy.
METHODS: Following ethical and parental approvals, consecutive patients with FRNS of ≥2 y duration were enrolled. Those with estimated glomerular filtration rate <60 ml/min/1.73 m(2) and known familial hypercholesterolemia or diabetes mellitus were excluded. Clinic blood pressure was measured by oscillometry and 24-h ambulatory blood pressure was recorded by Spacelab 90207; echocardiography was done for left ventricular mass. Ambulatory hypertension was defined as the presence of clinic blood pressure >95th centile for age, sex and height, and systolic blood pressure load exceeding 25 %.
RESULTS: Of 99 patients, 73 were boys; their median (IQR) age was 120 (84-156) mo. Clinic blood pressure was >95th percentile in 63 (63.6 %) patients. Ambulatory hypertension was present in 33 (33.3 %), including 14 patients with severe hypertension; 16 (16.1 %) had masked hypertension and 30 (30.3 %) had white coat hypertension. Non-dipping was seen in 72 and 55 patients had high nocturnal systolic blood pressure load. Of 21 patients with increased left ventricular mass index, 9 (42.9 %) had ambulatory hypertension, 3 (14.3 %) had masked hypertension and 6 (28.6 %) patients had white coat hypertension. Compared to those with normal blood pressure, patients with ambulatory hypertension were younger at onset of nephrotic syndrome (odds ratio, OR 0.94; 95 % CI 0.91-0.98; P = 0.002), longer duration of frequently relapsing disease (OR 1.05; 95 % CI

1.00-1.10; P = 0.034) and higher body mass index (BMI) (OR 1.61; 95 % CI 1.07-4.40; P = 0.020). BMI was positively correlated with 24-h systolic blood pressure load (r = 0.23; P = 0.002) and with the left ventricular mass index (r = 0. 57; P = 0.001).
CONCLUSIONS: Many patients with FRNS showed high prevalence of clinic, ambulatory and white coat hypertension, emphasizing the need to carefully screen these patients in order to ensure their appropriate management. While clinic blood pressure monitoring detects most patients with hypertension, it misses a significant proportion with masked hypertension, underscoring the need for ambulatory blood pressure monitoring and screening for end organ damage. High BMI was the chief risk factor for hypertension, suggesting that control of overweight and hypertension might improve cardiovascular outcomes.

DOI: 10.1007/s12098-016-2207-y
PMID: 27538980 [PubMed - in process]

111: Sehgal R, Gulati S, Sapra S, Tripathi M, Pandey RM, Kabra M. Prognostic Utility of Clinical Epilepsy Severity Score Versus Pretreatment Hypsarrhythmia Scoring in Children With West Syndrome. Clin EEG Neurosci. 2016 Aug 31. pii: 1550059416662425. [Epub ahead of print] PubMed PMID: 27582501.

This cross-sectional study assessed the impact of clinical epilepsy severity and pretreatment hypsarrhythmia severity on epilepsy and cognitive outcomes in treated children with West syndrome. Thirty-three children, aged 1 to 5 years, with infantile spasms were enrolled if pretreatment EEG records were available, after completion of ≥1 year of onset of spasms. Neurodevelopment was assessed by Development Profile 3 and Gross Motor Function Classification System. Epilepsy severity in the past 1 year was determined by the Early Childhood Epilepsy Severity Score (E-Chess). Kramer Global Score of hypsarrhythmia severity was computed. Kramer Global Score (≤8) and E-Chess (≤9) in the past 1 year were associated with favorable epilepsy outcome but not neurodevelopmental or motor outcome.

DOI: 10.1177/1550059416662425
PMID: 27582501 [PubMed - as supplied by publisher]

112: Sharma JB, Singh N, Dharmendra S, Singh UB, P V, Kumar S, Roy KK, Hari S, Iyer V, Sharma SK. Six months versus nine months anti-tuberculous therapy for female genital tuberculosis: a randomized controlled trial. Eur J Obstet Gynecol Reprod Biol. 2016 Aug;203:264-73. doi: 10.1016/j.ejogrb.2016.05.035. PubMed PMID: 27391900.

OBJECTIVE: To compare six months versus nine months anti-tuberculous therapy in patients of female genital tuberculosis.
STUDY DESIGN: It was a randomized controlled trial in a tertiary referral center teaching institute on 175 women presenting with infertility and found to have female genital tuberculosis on clinical examination and investigations. Group I women (86 women) were given 9 months of intermitted anti-tuberculous therapy under directly observed treatment short course (DOTS) strategy while Group II (89 women) were given 6 months of anti-tuberculous therapy under DOTS. Patients were evaluated for primary end points (complete cure, partial response, no response) and secondary end points (recurrence rate, pregnancy rate) during treatment. All patients were followed up further for one year after completion of therapy to assess recurrence of disease and further pregnancies.
RESULTS: Baseline characteristics were similar between two randomized groups. There was no difference in the complete clinical response rate (95.3% vs 97.7%, p=0.441) between 9-months and 6-months groups. Four patients in 9-months group and two patients in 6-months group had recurrence of disease and required category II anti tuberculous therapy (p=0.441). Pregnancy rate during treatment and up to one year follow up was also similar in the two groups (23.2% vs 21.3%, p=0.762). Side effects occurred in 27(31.4%) and 29(32.6%) in 9-months and 6-months of therapy and were similar (p=0.866).

CONCLUSIONS: There was no difference in complete cure rate, recurrent rate and pregnancy rate for either 6-months or 9-months of intermittent directly observed treatment short course anti-tuberculous therapy in female genital tuberculosis. CLINICAL TRIAL REGISTRATION: The trial was registered in clinicaltrials.gov with registration no: CTRI/2009/091/001088.

DOI: 10.1016/j.ejogrb.2016.05.035
PMID: 27391900 [PubMed - in process]

113: Sharma JB, Bumma SD, Saxena R, Kumar S, Roy KK, Singh N, Vanamail P. Cross sectional, comparative study of serum erythropoietin, transferrin receptor, ferritin levels and other hematological indices in normal pregnancies and iron deficiency anemia during pregnancy. Eur J Obstet Gynecol Reprod Biol. 2016 Aug;203:99-103. doi: 10.1016/j.ejogrb.2016.05.022. PubMed PMID: 27267870.

OBJECTIVE: To test the correlation of the serum erythropoietin levels, serum transferrrin receptor levels and serum ferritin levels along with other hematological parameters in normal pregnant and anemic pregnant patients.
STUDY DESIGN: In a prospective study, 120 pregnant women were recruited between 18 and 36 weeks of gestation; 53 normal pregnant patients, 67 anemic pregnant patients, in which, 17 had mild, 30 had moderate anemia, 20 had severe anemia. A blood sample was taken. The various hematological parameters, hemoglobin (Hb), mean corpuscular volume (MCV), mean corpuscular hemoglobin concentration (MCHC), total iron binding capacity (TIBC), serum ferritin, percentage saturation of iron, serum erythropoietin (SEPO) levels, serum transferrin receptors (STfRS) were performed. For statistics, Student's 't' test, Pearson's Chi test, Mann Whitney test and Bartlett test were used as per data.
RESULTS AND CONCLUSION: MCV was significantly reduced in anemic pregnancies as compared to non-anemic pregnancies (80.2±9.6 vs 94.12±9.8fl, p=0.001), MCHC was also reduced in them (30.2±3.38% vs 34.2±2.33%, p=0.176), TIBC was significantly increased in anemic pregnancies (343.31±28.54% vs 322.88±23.84%, p=0.001), serum ferritin was significantly reduced (24.9±10.48µg/L vs 31.03±9.98µg/L, p=0.001), percentage saturation of iron was also reduced (53.85±13.21% vs 62.04±15.79%, p=0.0024), serum erythropoietin levels were significantly higher in anemic women (26.24±26.61mU/ml vs 18.12±19.08mU/ml, p=0.064). The levels were significantly higher in severe anemia (46.5±46.8mU/ml than in moderate anemia 27.4±28.1mU/ml and mild anemia 22.8±22.8mU/ml. Serum transferrin receptors were significantly higher in anemic pregnancies than in non-anemic pregnancies (1.40±0.0802µg/ml vs 1.08±0.641µg/ml, p=0.019) with rise being higher in severe anemia (2.28±0.986µg/ml) than in moderate (1.4±0.816µg/ml) and mild anemia (1.16±0.702µg/ml).
CONCLUSION: Various hematological parameters especially sTfR, serum erythropoietin, serum ferritin and sTfR/log ferritin levels correlate with the severity of anemia.

DOI: 10.1016/j.ejogrb.2016.05.022
PMID: 27267870 [PubMed - in process]

114: Sharma M, Sinha R, Trikha A, Ramachandran R, Chandralekha C. Comparison of effects of ProSeal LMA™ laryngeal mask airway cuff inflation with air, oxygen, air:oxygen mixture and oxygen:nitrous oxide mixture in adults: A randomised, double-blind study. Indian J Anaesth. 2016 Aug;60(8):566-72. doi: 10.4103/0019-5049.187787. PubMed PMID: 27601739; PubMed Central PMCID: PMC4989807.

BACKGROUND AND AIMS: Laryngeal mask airway (LMA) cuff pressure increases when the air is used for the cuff inflation during oxygen: nitrous oxide (O2:N2O) anaesthesia, which may lead to various problems. We compared the effects of different gases for ProSeal LMA™ (PLMA) cuff inflation in adult patients for various parameters.

METHODS: A total of 120 patients were randomly allocated to four groups, according to composition of gases used to inflate the PLMA cuff to achieve 40 cmH2 O cuff pressure, air (Group A), 50% O2 :air (Group OA), 50% O2:N2O (Group ON) and 100% O2 (Group O). Cuff pressure, cuff volume and ventilator parameters were monitored intraoperatively. Pharyngolaryngeal parameters were assessed at 1, 2 and 24 h postoperatively. Statistical analysis was performed using ANOVA, Fisher's exact test and step-wise logistic regression.
RESULTS: Cuff pressure significantly increased at 10, 15 and 30 min in Group A, OA and O from initial pressure. Cuff pressure decreased at 5 min in Group ON (36.6 ± 3.5 cmH2 O) (P = 0.42). PLMA cuff volume increased in Group A, OA, O, but decreased in Group ON (6.16 ± 2.8 ml [P < 0.001], 4.7 ± 3.8 ml [P < 0.001], 1.4 ± 3.19 ml [P = 0.023] and - 1.7 ± 4.9 ml [P = 0.064], respectively), from basal levels. Ventilatory parameters were comparable in all four groups. There was no significant association between sore throat and cuff pressure, with odds ratio 1.002.
CONCLUSION: Cuff inflation with 50% O2:N2O mixture provided more stable cuff pressure in comparison to air, O2 :air, 100% O2 during O2:N2O anaesthesia. Ventilatory parameters did not change with variation in PLMA cuff pressure. Post-operative sore throat had no correlation with cuff pressure.

DOI: 10.4103/0019-5049.187787
PMCID: PMC4989807
PMID: 27601739 [PubMed]

115: Sharma N, Arora T, Jain V, Agarwal T, Jain R, Jain V, Yadav CP, Titiyal J, Satpathy G. Reply. Cornea. 2016 Aug;35(8):e23. doi: 10.1097/ICO.0000000000000896. PubMed PMID: 27387406.

116: Sharma N, Singh D, Maharana PK, Kriplani A, Velpandian T, Pandey RM, Vajpayee RB. Comparison of Amniotic Membrane Transplantation and Umbilical Cord Serum in Acute Ocular Chemical Burns: A Randomized Controlled Trial. Am J Ophthalmol. 2016 Aug;168:157-63. doi: 10.1016/j.ajo.2016.05.010. PubMed PMID: 27210276.

PURPOSE: To compare the efficacy of topical umbilical cord serum drops (UCS) and amniotic membrane transplantation (AMT) in acute ocular chemical burns.
DESIGN: Randomized controlled trial.
METHODS: setting: Tertiary care hospital.
STUDY POPULATION: Forty-five eyes with acute chemical burns of grade III, IV, and V (Dua's classification) presenting within the first week of injury were randomized into 3 groups (15 each). Patients with perforation/impending corneal perforation were excluded from the study.
INTERVENTION: Groups 1, 2, and 3 received UCS with medical therapy (MT), AMT with MT, and MT alone, respectively.
MAIN OUTCOME MEASURE: Time to complete epithelialization.
RESULTS: The mean time to complete epithelialization was 56.7 ± 14.9, 22.0 ± 10.2, and 22.9 ± 10.1 days in MT, AMT, and UCS groups, respectively, with a significant difference between MT and AMT (P = .001) and between MT and UCS (P = .001), but not between UCS and AMT (P = .9). Improvement in pain score was better with UCS than AMT (P value: .012, .002, and .012 on days 7, 14, and 21, respectively). Corneal clarity was better in the UCS group at 21 (P = .008) and 30 days (P = .002), but not at 3 months (P = .9). By month 3, visual outcome, symblepharon, tear film status, and lid abnormalities were comparable between the 3 groups.
CONCLUSIONS: UCS and AMT, as an adjuvant to standard medical therapy in acute chemical injury, are equally efficacious. UCS has the advantage of faster improvement in corneal clarity, better pain control, and avoidance of surgery in an inflamed eye.

DOI: 10.1016/j.ajo.2016.05.010
PMID: 27210276 [PubMed - in process]

117: Sharma P, Tiwari V, Khan SA, Rastogi S. An unusual case of Pigmented Villo-Nodular Synovitis of the second toe: A case report and review of literature. Foot (Edinb). 2016 Aug;28:61-63. doi: 10.1016/j.foot.2016.08.001. PubMed PMID: 27720630.

Pigmented villo-nodular synovitis (PVNS) is a common disease entity particularly in the knee joint but its incidence in the foot is quite rare. A case of PVNS of the second toe that presented at the outpatient department with an insidious onset and slowly progressive painful swelling of the toe associated with stiffness is presented. The mass was subsequently excised and the diagnosis confirmed by histo-pathology samples. The patient's symptoms improved significantly after the operation. This case is one of the very few reported cases of PVNS involvement of flexor tendon sheath of the foot. It also signifies the importance of clinical suspicions based on the symptoms and examination in reaching to the presumptive diagnosis of the foot pathology and its confirmation by histo-pathological evaluation.

DOI: 10.1016/j.foot.2016.08.001
PMID: 27720630 [PubMed - in process]

118: Sharma P, Sagar R, Patra B, Saini L, Gulati S, Chakrabarty B. Psychotic symptoms in anti-N-methyl-d-aspartate (NMDA) receptor encephalitis: A case report and challenges. Asian J Psychiatr. 2016 Aug;22:135-7. doi: 10.1016/j.ajp.2016.06.010. PubMed PMID: 27520914.

Anti-N-methyl-d-aspartate (NMDA) receptor encephalitis, only recently first described, is an increasingly well-recognized inflammatory encephalitis that is seen in children and adults. An 11-year old girl admitted to the psychiatry ward with a presentation of acute psychosis was diagnosed with NMDA receptor encephalitis following neurology referral and was treated accordingly. This case highlights psychiatric manifestations in encephalitis and the need for the psychiatrist to have high index of suspicion when atypical symptoms (e.g., dyskinesia, seizure, fever etc.) present in acutely psychotic patients.

DOI: 10.1016/j.ajp.2016.06.010
PMID: 27520914 [PubMed - in process]

119: Sharma S, Tyagi JS. Mycobacterium tuberculosis DevR/DosR Dormancy Regulator Activation Mechanism: Dispensability of Phosphorylation, Cooperativity and Essentiality of α10 Helix. PLoS One. 2016 Aug 4;11(8):e0160723. doi: 10.1371/journal.pone.0160723. PubMed PMID: 27490491; PubMed Central PMCID: PMC4973870.

DevR/DosR is a well-characterized regulator in Mycobacterium tuberculosis which is implicated in various processes ranging from dormancy/persistence to drug tolerance. DevR induces the expression of an ~48-gene dormancy regulon in response to gaseous stresses, including hypoxia. Strains of the Beijing lineage constitutively express this regulon, which may confer upon them a significant advantage, since they would be 'pre-adapted' to the environmental stresses that predominate during infection. Aerobic DevR regulon expression in laboratory-manipulated overexpression strains is also reported. In both instances, the need for an inducing signal is bypassed. While a phosphorylation-mediated conformational change in DevR was proposed as the activation mechanism under hypoxia, the mechanism underlying constitutive expression is not understood. Because DevR is implicated in bacterial dormancy/persistence and is a promising drug target, it is relevant to resolve the mechanistic puzzle of hypoxic activation on one hand and constitutive expression under 'non-inducing' conditions on the other. Here, an overexpression strategy was employed to elucidate the DevR activation mechanism. Using a panel

of kinase and transcription factor mutants, we establish that DevR, upon overexpression, circumvents DevS/DosT sensor kinase-mediated or small molecule phosphodonor-dependent activation, and also cooperativity-mediated effects, which are key aspects of hypoxic activation mechanism. However, overexpression failed to rescue the defect of C-terminal-truncated DevR lacking the α10 helix, establishing the α10 helix as an indispensable component of DevR activation mechanism. We propose that aerobic overexpression of DevR likely increases the concentration of α10 helix-mediated active dimer species to above the threshold level, as during hypoxia, and enables regulon expression. This advance in the understanding of DevR activation mechanism clarifies a long standing question as to the mechanism of DevR overexpression-mediated induction of the regulon in the absence of the normal environmental cue and establishes the α10 helix as an universal and pivotal targeting interface for DevR inhibitor development.

DOI: 10.1371/journal.pone.0160723
PMCID: PMC4973870
PMID: 27490491 [PubMed - in process]

120: Singh A, Seth R, Gupta A, Shalimar, Nayak B, Acharya SK, Das P. Chronic hepatitis E - an emerging disease in an immunocompromised host. Gastroenterol Rep (Oxf). 2016 Aug 10. pii: gow024. [Epub ahead of print] PubMed PMID: 27516529.

Chronic hepatitis E virus (HEV) infection is increasingly being reported in immunosuppressed individuals with HIV, patients with haematological malignancy and transplant recipients. The diagnosis of cirrhosis and liver failure post chronic HEV is controversial due to lack of standard diagnostic criteria. The treatment benefits of ribavirin in chronic HEV of genotype 1 are not well reported. We report a case of chronic HEV infection of genotype 1 leading to chronic liver disease in a child cured of acute leukaemia. Our report also highlights the successful use of ribavirin for eradicating chronic HEV infection and its subsequent survival benefits. Chronic hepatitis E may be an emerging disease of immunosuppressed patients and should be suspected in the presence of cryptogenic transaminitis. Ribavirin is an effective therapy for controlling HEV.

DOI: 10.1093/gastro/gow024
PMID: 27516529 [PubMed - as supplied by publisher]

121: Singh A, Nandan D, Dewan V, Sankar J. Comparison of clinical effects of beclomethasone dipropionate & budesonide in treatment of children with mild persistent asthma: A double-blind, randomized, controlled study. Indian J Med Res. 2016 Aug;144(2):250-257. doi: 10.4103/0971-5916.195040. PubMed PMID: 27934805.

BACKGROUND & OBJECTIVES: Various inhaled corticosteroids (ICSs) are available to control the symptoms of asthma. Although beclomethasone dipropionate (BDP) and budesonide (BUD) are one of the oldest ICSs, their wide availability and low cost make them attractive options in developing countries. Due to lack of consensus on which of the two drugs is better for controlling mild persistent asthma, we undertook this study to compare the efficacy of these two drugs by measuring the change in percentage predicted forced expiratory volume in one second (FEV 1) from baseline in children with mild persistent asthma.
METHODS: A double-blind, randomized, parallel group study was conducted in children 7-15 yr of age with newly diagnosed asthma. Of the 85 cases of mild persistent asthma, 42 received BUD while 43 received BDP at a dose of 400 µg/day using pressurized metered-dose inhaler with valved spacer for two months. The outcomes measured were change in FEV 1 , symptom scores and side effects.
RESULTS: There was a significant ($P < 0.05$) improvement in FEV 1 in BUD group (98.43 ± 4.63%) than in BDP group (95.65 ± 5.66%) at the end of two months of treatment. The mean symptom scores in BUD group (0.28 ± 1.22) and BDP group (0.43 ± 1.52) were comparable after two months. No side effects were seen in either

group.
INTERPRETATION & CONCLUSIONS: FEV 1 was significantly greater in BUD group than BDP group. Improvement in symptoms and incidence of side effects were similar. Our findings indicate that both BDP and BUD can be used effectively in the management of children with mild persistent asthma. [CTRI No: CTRI/2013/03/003495].

DOI: 10.4103/0971-5916.195040
PMID: 27934805 [PubMed - in process]

122: Singh K, Ranjani H, Rhodes E, Weber MB. International Models of Care that Address the Growing Diabetes Prevalence in Developing Countries. Curr Diab Rep. 2016 Aug;16(8):69. doi: 10.1007/s11892-016-0768-9. Review. PubMed PMID: 27313071.

Diabetes care involves a complex interaction between patients, physicians, the health care system, and society. In low- and middle-income countries (LMICs), where the majority of individuals with diabetes live, there is a shortage of resources and infrastructure for diabetes care. Translation of proven interventions for diabetes prevention and care from experimental settings to the real world is a major challenge, and there is limited evidence from LMICs. To curtail the diabetes burden in LMICs, it is crucial to develop and execute innovative diabetes care models that improve access to care, knowledge, and outcomes. Additionally, adequate training of local health professionals and community engagement can help LMICs become self-sufficient in delivery of diabetes care. In this paper, we reviewed the existing models of diabetes care and prevention in LMICs and provided recommendations to guide the development of a comprehensive and effective future model for diabetes care in LMICs.

DOI: 10.1007/s11892-016-0768-9
PMID: 27313071 [PubMed - in process]

123: Singh L, Saini N, Pushker N, Sen S, Sharma A, Kashyap S. Prognostic significance of NADPH oxidase-4 as an indicator of reactive oxygen species stress in human retinoblastoma. Int J Clin Oncol. 2016 Aug;21(4):651-7. doi: 10.1007/s10147-016-0951-7. PubMed PMID: 26857459.

BACKGROUND: Reactive oxygen species (ROS) have been shown to enhance the proliferation of cancer cells. NADPH oxidases (NOX4) are a major intracellular source of ROS and are found to be associated with cancer and tumor cell invasion. Therefore, the purpose of this study is to evaluate the expression of NOX4 protein in human retinoblastoma.
METHODS: Immunohistochemical expression of NOX4 protein was analyzed in 109 specimens from prospective cases of retinoblastoma and then correlated with clinicopathological parameters and patient survival. Western blotting confirmed and validated the immunoreactivity of NOX4 protein.
RESULTS: In our study we found a male preponderance (55.9 %), and 25/109 (22.9 %) were bilateral. Massive choroidal invasion was the histopathological high-risk factor (HRF) most frequently observed, in 42.2 % of the cases. NOX4 protein was expressed in 67.88 % (74/109) of primary retinoblastoma cases and was confirmed by Western blotting. NOX4 was statistically significant with massive choroidal invasion and pathological TNM staging. There was a statistically significant difference in overall survival in patients with NOX4 expression (p = 0.0461).
CONCLUSION: This is the first study to show the expression of NOX4 protein in retinoblastoma tumors. Hence, a retinoblastoma tumor may exhibit greater ROS stress. This protein may prove to be useful as a future therapeutic target for improving the management of retinoblastoma.

DOI: 10.1007/s10147-016-0951-7
PMID: 26857459 [PubMed - in process]

124: Singh N, Malik N, Malhotra N, Vanamail P, Gupta M. Impact of progesterone (on hCG day)/oocyte ratio on pregnancy outcome in long agonist non donor fresh IVF/ICSI cycles. Taiwan J Obstet Gynecol. 2016 Aug;55(4):503-6. doi: 10.1016/j.tjog.2015.09.005. PubMed PMID: 27590371.

OBJECTIVE: To assess the role of progesterone (P) on [human chorionic gonadotropin (hCG) day]/oocyte ratio rather than a single cut-off value of serum P on hCG day to predict in vitro fertilization (IVF) outcomes.
MATERIALS AND METHODS: A Retrospective, single center, cohort study in 687 infertile women undergoing fresh IVF/intracytoplasmic sperm injection (ICSI) treatment with long agonist protocol. The data was categorized into three groups according to serum P levels (Group A < 1.0, Group B: 1.0-1.5, Group C ≥ 1.5) and two groups on the basis of P/oocyte ratio (Group A ≤ 0.15; Group B > 0.15) determined using receiver operating characteristic (ROC). For comparing categorical data, χ(2)/Fishers exact test was carried out as appropriate. ROC analysis was performed to determine cut-off value for P and P/oocyte, which may discriminate between pregnancy and nonpregnancy.
RESULTS: The mean age of participants was 31.6 ± 3.7 years and overall pregnancy rate was 26.1%. Elevation of both serum P levels and P/oocyte ratio was found to significantly reduce the pregnancy potential in IVF without affecting fertilization and cleavage rates. The detrimental cut-off value for P and P/oocyte was found to be >1.0 ng/mL (sensitivity 56%; specificity 52%) and >0.15 (sensitivity 62%; specificity 61%) respectively. Pregnancy rate (35.3%) among the patients having ≤0.15 P/oocyte ratio was significantly higher (p < 0.001) compared with 18.8% observed among the patients having value >0.15.
CONCLUSION: P/oocyte ratio may be considered as a valuable tool to predict IVF outcomes when compared with serum P levels alone, but more evidence from randomized studies is required.

DOI: 10.1016/j.tjog.2015.09.005
PMID: 27590371 [PubMed - in process]

125: Singh PM, Borle A, Goudra BG. Use of computer-assisted drug therapy outside the operating room. Curr Opin Anaesthesiol. 2016 Aug;29(4):506-11. doi: 10.1097/ACO.0000000000000345. PubMed PMID: 27054414.

PURPOSE OF REVIEW: The number of procedures performed in the out-of-operating room setting under sedation has increased many fold in recent years. Sedation techniques aim to achieve rapid patient turnover through the use of short-acting drugs with minimal residual side-effects (mainly propofol and opioids). Even for common procedures, the practice of sedation delivery varies widely among providers. Computer-based sedation models have the potential to assist sedation providers and offer a more consistent and safer sedation experience for patients.
RECENT FINDINGS: Target-controlled infusions using propofol and other short-acting opioids for sedation have shown promising results in terms of increasing patient safety and allowing for more rapid wake-up times. Target-controlled infusion systems with real-time patient monitoring can titrate drug doses automatically to maintain optimal depth of sedation. The best recent example of this is the propofol-based Sedasys sedation system. Sedasys redefined individualized sedation by the addition of an automated clinical parameter that monitors depth of sedation. However, because of poor adoption and cost issues, it has been recently withdrawn by the manufacturer.
SUMMARY: Present automated drug delivery systems can assist in the provision of sedation for out-of-operating room procedures but cannot substitute for anesthesia providers. Use of the available technology has the potential to improve patient outcomes, decrease provider workload, and have a long-term economic impact on anesthesia care delivery outside of the operating room.

DOI: 10.1097/ACO.0000000000000345
PMID: 27054414 [PubMed - in process]

126: Singhal KK, Prasad K, Bhatia R, Kumar A, Singh MB. Prescription of "ineffective neuroprotective" drugs to stroke patients: a cross sectional study in North Indian population. Int J Neurosci. 2016 Aug;126(8):723-8. doi: 10.3109/00207454.2015.1057726. PubMed PMID: 26287434.

In a developing country, where patient access to tertiary care is limited and most patients have to pay out of pocket, it is imperative for the physicians to practice evidence-based medicine. Reports on prescription details and surveys are not available. The aim of this study is to describe the prescribing patterns for various medications used in the treatment of stroke among the first contact physicians in North India; to estimate the proportion of patients being prescribed the non-recommended drugs and to determine any relationship between the economic status of the patient and the prescription pattern. Details of economic status, education level, type of stroke, type of hospital, qualification of treating physician and the number and nature of medications were noted from the prescriptions and patients. Two hundred and sixteen patients with ischemic stroke (71.3% males, average age 51.5 years) were included. Among poor patients, N = (36.8%) received any of the neuroprotective drugs including citicoline 19 (27.5%), piracetam 11(15.9%) and edaravone 2(2.9%). Both specialist and private hospitals are associated with higher prescription of "ineffective neuroprotective" drugs in both poor and rich patients. Reasons for overprescribing neuroprotective medications need to be studied and remedial measures need to be taken to practice evidence-based medicine.

DOI: 10.3109/00207454.2015.1057726
PMID: 26287434 [PubMed - in process]

127: Sinha S, Raheja A, Samson N, Bhoi S, Selvi A, Sharma P, Sharma BS. Blood mitochondrial enzymatic assay as a predictor of long-term outcome in severe traumatic brain injury. J Clin Neurosci. 2016 Aug;30:31-8. doi: 10.1016/j.jocn.2015.10.051. PubMed PMID: 27262871.

Recent studies have observed the central role of mitochondrial dysfunction in severe traumatic brain injury (sTBI). One hundred and seven sTBI patients (18-65years old, presenting within 8hours of injury) were randomised for a placebo controlled phase II trial of progesterone with or without hypothermia. We serially analysed blood mitochondrial enzymes (Complex I [C1], Complex IV [C4] and pyruvate dehydrogenase complex [PDH]) using a dipstick assay at admission and 7days later for 37 patients, irrespective of assigned group. Favorable Glasgow Outcome Scale (GOS) at 1year was associated with admission C1 levels above 0.19μg, admission C4 levels above 0.19μg and day 7 C1 levels above 0.17μg, all per 25μl of blood. Unfavorable GOS at 1year was associated with admission serum PDH levels above 0.23μg/25μl of blood. Survivors at 1year had significantly higher admission serum C1 levels above 0.19μg/25μl and day 7 C1 levels above 0.17μg/25μl. To our knowledge this is the first clinical trial associating blood mitochondrial enzymes with long-term outcome in sTBI. Serial monitoring and optimisation of blood C1, C4 and PDH levels could aid in prognostication and potentially guide in using mitochondrial targeted therapies. Blood mitochondrial enzymatic assay might suggest global reduction-oxidation status.

DOI: 10.1016/j.jocn.2015.10.051
PMID: 27262871 [PubMed - in process]

128: Sondhi V, Chakrabarty B, Kumar A, Kohli S, Saxena R, Verma IC, Gulati S. RANBP2 mutation in an Indian child with recurrent acute necrotizing encephalopathy. Brain Dev. 2016 Nov;38(10):937-942. doi: 10.1016/j.braindev.2016.05.007. PubMed PMID: 27591117.

BACKGROUND: Acute necrotizing encephalopathy (ANE) is a rare disorder characterized by encephalopathy following a febrile illness, mostly viral. Most cases are sporadic; however, recurrent and familial cases have been linked to RANBP2 mutation.

DESCRIPTION OF THE CASE: This is a description of a three and half years old girl with recurrent ANE with RANBP2 mutation (c.1754 C>T (p.T585M)). She had two episodes of encephalopathy, each following a short non-specific febrile illness. Neuroradiologically, she had typical findings involving bilateral thalami during the first episode and involving bilateral temporal and occipital lobes, bilateral cerebellar hemispheres and brainstem during the second episode. She was managed with intravenous gamma globulin and dexamethasone during both the episodes. She recovered significantly with residual deficits in her cognitive and language domains.
CONCLUSIONS: In relevant clinic-radiological scenarios both isolated and recurrent ANE should be considered because of treatment and long-term outcome related implications.

DOI: 10.1016/j.braindev.2016.05.007
PMID: 27591117 [PubMed - in process]

129: Suchal K, Malik S, Gamad N, Malhotra RK, Goyal SN, Bhatia J, Arya DS. Kampeferol protects against oxidative stress and apoptotic damage in experimental model of isoproterenol-induced cardiac toxicity in rats. Phytomedicine. 2016 Nov 15;23(12):1401-1408. doi: 10.1016/j.phymed.2016.07.015. PubMed PMID: 27765360.

BACKGROUND: Myocardial infarction (MI) continues to be associated with high morbidity and mortality worldwide despite the availability of current therapeutic modalities. Kaempferol (KMP), a dietary flavonoid, possesses good antioxidant, immunomodulatory and anti-apoptotic properties and has been evaluated in the present study for its role in mitigating myocardial injury following MI.
PURPOSE: In this study, the ability of KMP to protect heart against isoproterenol (ISO) induced oxidative stress and myocardial infarction was evaluated.
MATERIAL AND METHODS: Male Wistar rats (n=48) were administered KMP (5, 10 & 20mg/kg/day, i.p.) or vehicle for 15 days with ISO, 85mg/kg, subcutaneously, for 2 consecutive days was also administered at 24h interval on the 13th and 14th days. On the 15th day, rats were anaesthetized and right coronary artery was cannulated to record hemodynamic parameters. Later on blood sample was collected and heart was removed to estimate biochemical, histopathological, ultrastructural and immuohistochemical studies respectively.
RESULTS: ISO-treated rats showed a significant reduction in arterial pressure, maximum rate of development of left ventricular pressure and increase in left ventricular end-diastolic pressure. Also, there was a significant decrease in antioxidant enzyme levels such as superoxide dismutase, catalase and glutathione and increase in the level of malondialdehyde and serum TNF-α and IL-6 levels. In addition, the cardiac injury markers such as creatine kinase-MB and lactate dehydrogenase were increased in the serum. Furthermore, immunohistochemistry revealed an increased Bax/Bcl-2 ratio in the myocardium. KMP (5, 10 and 20mg/kg) dose dependently restored hemodynamic, left ventricular functions, decreased cardiac injury marker enzymes in serum, increased antioxidant levels, reduced lipid peroxidation and TNF-α level and apoptosis. Histopathological and ultrastructural studies support the protective effect of KMP in ISO-induced myocardial infarcted rats.
CONCLUSION: Thus, the present study revealed that KMP mitigates myocardial damage in ISO-induced cardiac injury by maintaining hemodynamic and biochemical parameters and reducing inflammation owing to its anti-apoptotic, anti-inflammatory and antioxidant activities. It may be concluded that a diet containing KMP may be beneficial in those who are at the risk of myocardial injury.

DOI: 10.1016/j.phymed.2016.07.015
PMID: 27765360 [PubMed - in process]

130: Sudhaman S, Muthane UB, Behari M, Govindappa ST, Juyal RC, Thelma BK. Evidence of mutations in RIC3 acetylcholine receptor chaperone as a novel cause of autosomal-dominant Parkinson's disease with non-motor phenotypes. J Med Genet. 2016 Aug;53(8):559-66. doi: 10.1136/jmedgenet-2015-103616. PubMed PMID: 27055476.

BACKGROUND: The known genetic determinants of Parkinson's disease (PD) do not explain all cases investigated to date. Contemporary sequencing technologies hold promise for enhanced causal variant discovery. We attempted to identify the putative causal variant in an Indian PD family by whole exome sequencing (WES).
METHODS: WES data generated for two affected cousins from a 14-member PD family with some non-motor phenotypes were analysed. Variants prioritised were checked for segregation with disease by targeted sequencing. An independent PD cohort (n=280) was screened for additional mutations in the prioritised gene. Variants were functionally validated in PC12 cells differentiated into neurons.
RESULTS: A heterozygous mutation c.169C>A, p.P57T in RIC3 acetylcholine receptor chaperone (11p15) segregated with disease in the family confirming an autosomal-dominant mode of inheritance. Another heterozygous mutation c.502G>C, p.V168L was detected in an unrelated PD case. Both mutations were absent in 144 healthy control and in 74 non-PD WES data available in-house and in 186 age and sex-matched controls screened by PCR sequencing. RIC3 is a known chaperone of neuronal nicotinic acetylcholine receptor subunit α-7 (CHRNA7). Dominant negative effect of RIC3 mutants in transfected PC12 cells was reflected by the reduced levels of endogenous CHRNA7 in the membrane fractions in western blots and lower colocalisation profiles in confocal micrographs.
CONCLUSION: The novel demonstration of a chaperone-mediated receptor density alteration due to RIC3 mutants provides strong evidence for the role of cholinergic pathway for the first time in PD aetiology. This may also be insightful for some non-motor symptoms and personalised treatment.

DOI: 10.1136/jmedgenet-2015-103616
PMID: 27055476 [PubMed - in process]

131: Takkar B, Venkatesh P, Azad SV, Temkar S. Comments on outcomes of transconjunctival sutureless 27-gauge vitrectomy with silicone oil infusion. Graefes Arch Clin Exp Ophthalmol. 2016 Nov;254(11):2281-2282. PubMed PMID: 27507137.

132: Talukdar R, Sareen A, Zhu H, Yuan Z, Dixit A, Cheema H, George J, Barlass U, Sah R, Garg SK, Banerjee S, Garg P, Dudeja V, Dawra R, Saluja AK. Release of Cathepsin B in Cytosol Causes Cell Death in Acute Pancreatitis. Gastroenterology. 2016 Oct;151(4):747-758.e5. doi: 10.1053/j.gastro.2016.06.042. PubMed PMID: 27519471; PubMed Central PMCID: PMC5037034.

BACKGROUND & AIMS: Experimental studies in acute pancreatitis (AP) suggest a strong association of acinar cell injury with cathepsin B-dependent intracellular activation of trypsin. However, the molecular events subsequent to trypsin activation and their role, if any, in cell death is not clear. In this study, we have explored intra-acinar events downstream of trypsin activation that lead to acinar cell death.
METHODS: Acinar cells prepared from the pancreas of rats or mice (wild-type, trypsinogen 7, or cathepsin B-deleted) were stimulated with supramaximal cerulein, and the cytosolic activity of cathepsin B and trypsin was evaluated. Permeabilized acini were used to understand the differential role of cytosolic trypsin vs cytosolic cathepsin B in activation of apoptosis. Cell death was evaluated by measuring specific markers for apoptosis and necrosis.
RESULTS: Both in vitro and in vivo studies have suggested that during AP cathepsin B leaks into the cytosol from co-localized organelles, through a mechanism dependent on active trypsin. Cytosolic cathepsin B but not trypsin activates the intrinsic pathway of apoptosis through cleavage of bid and

activation of bax. Finally, excessive release of cathepsin B into the cytosol can lead to cell death through necrosis.
CONCLUSIONS: This report defines the role of trypsin in AP and shows that cytosolic cathepsin B but not trypsin activates cell death pathways. This report also suggests that trypsin is a requisite for AP only because it causes release of cathepsin B into the cytosol.

DOI: 10.1053/j.gastro.2016.06.042
PMCID: PMC5037034 [Available on 2017-10-01]
PMID: 27519471 [PubMed - in process]

133: Thottian AG, Benson R, Kashyap S, Haresh KP, Gupta S, Sharma D, Rath GK. Orbital medulloepithelioma in an adult patient: Radiation-induced second neoplasia? Orbit. 2016 Dec;35(6):313-316. PubMed PMID: 27715363.

Second cancers in survivors of hereditary retinoblastoma occur much more commonly than in the general population. This can be attributed both to the germline mutation of the RB gene and chemoradiation used for treatment of this paediatric cancer. Medulloepithelioma is an uncommon tumor of neuroectodermal origin, seen largely in the paediatric population and rarely reported in adults. Though the incidence of second malignancies is common in retinoblastoma, medulloepithelioma as a second malignancy in retinoblastoma survivors is rare, with only one case reported so far. Herein, we present a case of a 29-year-old patient presenting with medulloepithelioma of the right orbit, arising in the radiation field of previously treated retinoblastoma. This case was also peculiar in that though the origin of tumor was in the eyeball it had a very aggressive clinical course.

DOI: 10.1080/01676830.2016.1193536
PMID: 27715363 [PubMed - in process]

134: Titiyal JS, Agarwal E, Angmo D, Sharma N, Kumar A. Comparative evaluation of outcomes of phacoemulsification in vitrectomized eyes: silicone oil versus air/gas group. Int Ophthalmol. 2016 Aug 2. [Epub ahead of print] PubMed PMID: 27486022.

The purpose of this study is to comparatively evaluate the morphology of cataract, intraoperative and postoperative complications (IPC), and surgical outcomes of phacoemulsification in post 23G vitrectomized eyes in silicone oil versus air/gas group. This prospective interventional clinical study took place in the Dr. RP Centre for Ophthalmic Sciences, AIIMS, New Delhi, India. Eighty-nine eyes of 89 consecutive vitrectomized patients with cataract were included. All underwent phacoemulsification and evaluated for cataract morphology, surgical difficulties, IPC, visual acuity, and specular count. Mean age of patients was 50.24 ± 15.19 years. There were 65 males and 24 females and 48 eyes in silicone oil group and 41 in air/gas group. Combination type was the commonest morphology seen in both silicone oil (52.08 %) and air/gas group (70.33 %) followed by posterior subcapsular cataract (PSC) in 31.25 % silicone group and 12.2 % air/gas group. Posterior capsular plaque (PCP) was seen in 41.67 % of silicone oil versus 7.32 % air/gas group; $p < 0.005$. Pupillary abnormalities were significantly more in oil (31.25 %) than in air/gas group (9.76 %); $p = 0.014$. Mean duration between vitrectomy and phacoemulsification in oil group versus air/gas group was 8.39 ± 4.7 months and 10.9 ± 5.22 months, respectively; $p < 0.005$. Mean postoperative logMAR visual acuity was better in air/gas (0.43 ± 0.25) than in oil (0.66 ± 0.29) group, $p < 0.005$. There was no significant difference in mean endothelial cell loss postoperatively in either groups ($p = 0.25$). Morphology of cataract differs in the two groups with PSC being more common in oil group. The mean time of cataract onset was significantly less in patients with oil group, and poor visual outcome in oil group may be attributable to the increased PCP noted.

DOI: 10.1007/s10792-016-0305-5
PMID: 27486022 [PubMed - as supplied by publisher]

135: Tong A, Samuel S, Zappitelli M, Dart A, Furth S, Eddy A, Groothoff J, Webb NJ, Yap HK, Bockenhauer D, Sinha A, Alexander SI, Goldstein SL, Gipson DS, Hanson CS, Evangelidis N, Crowe S, Harris T, Hemmelgarn BR, Manns B, Gill J, Tugwell P, Van Biesen W, Wheeler DC, Winkelmayer WC, Craig JC; SONG-Kids Investigators.. Standardised Outcomes in Nephrology-Children and Adolescents (SONG-Kids): a protocol for establishing a core outcome set for children with chronic kidney disease. Trials. 2016 Aug 12;17:401. doi: 10.1186/s13063-016-1528-5. PubMed PMID: 27519274; PubMed Central PMCID: PMC4982996.

BACKGROUND: Children with chronic kidney disease (CKD), requiring dialysis or kidney transplantation, have a mortality rate of up to 30-fold higher than the general aged-matched population, and severely impaired quality of life. Symptoms such as fatigue and pain are prevalent and debilitating. Children with CKD are at risk of cognitive impairment, and poorer educational, vocational, and psychosocial outcomes compared with their well peers, which have consequences through to adulthood. Treatment regimens for children with CKD are long-term, complex, and highly intrusive. While many trials have been conducted to improve outcomes in children with CKD, the outcomes measured and reported are often not relevant to patients and clinicians, and are highly variable. These problems can diminish the value of trials as a means to improve the lives of children with CKD. The Standardised Outcomes in Nephrology-Children and Adolescents (SONG-Kids) study aims to develop a core outcome set for trials in children and adolescents with any stage of CKD that is based on the shared priorities of all stakeholders.
METHODS/DESIGN: SONG-Kids involves five phases: a systematic review to identify outcomes (both domains and measures) that have been reported in randomised controlled trials involving children aged up to 21 years with CKD; focus groups (using nominal group technique) with adolescent patients and caregivers of paediatric patients (all ages) to identify outcomes that are relevant and important to patients and their family and the reasons for their choices; semistructured key informant interviews with health professionals involved in the care of children with CKD to ascertain their views on establishing core outcomes in paediatric nephrology; an international three-round online Delphi survey with patients, caregivers, clinicians, researchers, policy-makers, and members from industry to develop consensus on important outcome domains; and a stakeholder workshop to review and finalise the set of core outcome domains for trials in children with CKD (including nondialysis-dependent, dialysis, and kidney transplantation).
DISCUSSION: Establishing a core outcome set to be reported in all trials conducted in children with any stage of CKD will enhance the relevance, transparency, and impact of research to improve the lives of children and adolescents with CKD.

DOI: 10.1186/s13063-016-1528-5
PMCID: PMC4982996
PMID: 27519274 [PubMed - in process]

136: Tripathi M, Yadav S, Kumar V, Kumar R, Tripathi M, Gaikwad S, Kumar P, Bal C. HIV encephalitis with subcortical tau deposition: imaging pathology in vivo using F-18 THK 5117. Eur J Nucl Med Mol Imaging. 2016 Dec;43(13):2456-2457. PubMed PMID: 27488858.

137: Tripathy K, Chawla R, Sharma YR. Intravitreal Bevacizumab for Choroidal Neovascular Membrane at the Edge of a Healed Choroidal Tuberculoma. Ocul Immunol Inflamm. 2016 Aug 19:1-3. [Epub ahead of print] PubMed PMID: 27541084.

The authors present a 36-year-old female with pulmonary tuberculosis who developed a choroidal tuberculoma in the left eye. The choroidal tuberculoma successfully resolved with visual gain following oral anti-tubercular and oral steroid therapy leaving behind a chorioretinal scar. One year after the completion of anti-tubercular treatment, she developed visual loss due to the development of a secondary choroidal neovascular membrane at the fovea. This was treated successfully with one intravitreal injection of bevacizumab in the left

eye. The fovea remained free of fluid until the last follow-up 10 months after the intravitreal injection. Intravitreal bevacizumab may be an effective modality for treating secondary choroidal neovascular membranes that may form at the edge of a healed choroidal tuberculoma.

DOI: 10.1080/09273948.2016.1206205
PMID: 27541084 [PubMed - as supplied by publisher]

138: Vallonthaiel AG, Kaushal S, Gogia A, Mathur SR. Bilateral Myeloid Sarcoma of Breast in a Young Male Occurring after 11 Years of Chronic Myeloid Leukemia Diagnosis: A Unique Pattern of Relapse. Breast J. 2016 Nov;22(6):692-693. doi: 10.1111/tbj.12655. PubMed PMID: 27488267.

139: Vallonthaiel AG, Mridha AR, Gamanagatti S, Jana M, Sharma MC, Khan SA, Bakhshi S. Unusual presentation of Erdheim-Chester disease in a child with acute lymphoblastic leukemia. World J Radiol. 2016 Aug 28;8(8):757-63. doi: 10.4329/wjr.v8.i8.757. PubMed PMID: 27648170; PubMed Central PMCID: PMC5002507.

Erdheim-Chester disease (ECD) is an uncommon, non-familial, non-Langerhans cell histiocytosis, which involves skeletal system and soft tissue usually in middle aged and elderly patients. The characteristic radiologic features include bilateral, symmetric cortical osteosclerosis of the diaphyseal and metaphyseal parts of the long bones, or bilateral symmetrically abnormal intense (99m)Technetium labelling of the metaphyseal-diaphyseal region of the long bones, and computed tomography scan findings of "coated aorta" or "hairy kidneys". ECD in childhood with osteolytic lesion is extremely rare. We describe an unusual case with an expansile lytic bone lesion at presentation in a case of acute lymphoblastic leukemia.

DOI: 10.4329/wjr.v8.i8.757
PMCID: PMC5002507
PMID: 27648170 [PubMed]

140: Vallonthaiel AG, Singh MK, Dinda AK, Kakkar A, Thakar A, Das SN. Prognostic significance of cytoplasmic p27 in oral squamous cell carcinoma. J Oral Pathol Med. 2016 Aug;45(7):475-80. doi: 10.1111/jop.12392. PubMed PMID: 26750594.

OBJECTIVE: p27 is a cell cycle-dependent kinase inhibitor whose presence in nucleus is associated with good prognosis. Recent studies propose that when localized to cytoplasm, it functions as an oncogene and confers a poorer prognosis. This study aimed at analysing the subcellular localization of p27 and its prognostic significance in oral squamous cell carcinomas (OSCCs).
METHODS: Immunohistochemistry for p27 was carried out on 60 cases of OSCC (30 cases each of those with lymph node metastasis [LN+ve SCC] and without lymph node metastasis [LN-ve SCC]) and 30 normal mucosa. The relationship between p27 localization and prognosis was analysed statistically.
RESULTS: Nuclear immunopositivity was seen in 15%, 23%, 7% and 60%, while cytoplasmic immunopositivity was seen in 80%, 63%, 97% and 43% of all SCC, LN+ve OSCC, LN-ve SCC cases and normal mucosa, respectively. There was a significant inverse correlation between nuclear and cytoplasmic p27 immunopositivity (P = 0.001). Nodal status and tumour stage were the only two parameters that correlated with disease-free survival (DFS) in OSCC cases. However, in LN+ve SCC, a significantly shortened DFS was seen in cases with cytoplasmic p27 expression compared to those without (P = 0.02). Conversely, LN+ve SCC with nuclear p27 had longer DFS on comparison with those without (P = 0.04).
CONCLUSIONS: To the best of our knowledge, this is the first study to analyse cytoplasmic localization of p27 in OSCC and correlate with prognosis. Cytoplasmic localization is associated with poor prognosis in OSCC with lymph node metastasis allowing the consideration of cytoplasmic p27 in predicting prognosis and targeted therapeutic approaches.

DOI: 10.1111/jop.12392
PMID: 26750594 [PubMed - in process]

141: Venkatesh P, Temkar S, Tripathy K, Chawla R. Intralesional antibiotic injection using 41G needle for the management of subretinal abscess in endogenous endophthalmitis. Int J Retina Vitreous. 2016 Aug 1;2:17. PubMed PMID: 27847635; PubMed Central PMCID: PMC5088442.

BACKGROUND: Presence of subretinal abscess in endogenous endophthalmitis indicates a more severe form of infection. Available reports indicate variable response to standard treatment with systemic, intravitreal pharmacotherapy and vitreous surgery. There are no reports citing the possible role of intralesional antibiotic therapy in managing subretinal abscess.
CASE PRESENTATION: A 30 year old lady presented with features of endogenous endophthalmitis and subretinal abscess. Presenting vision was finger counting close to face. Despite prompt initiation of systemic antibiotics and intravitreal injection, no response was noted. 25G pars plana vitrectomy was performed along with injection of vancomycin directly into the subretinal abscess, using a 41G needle. Postoperative course was uneventful and the abscess showed signs of rapid resolution. Visual acuity improved to 6/24.
CONCLUSION: Intralesional pharmacotherapy may be safe and effective in the treatment of subretinal abscess associated with endogenous endophthalmitis.

DOI: 10.1186/s40942-016-0043-x
PMCID: PMC5088442
PMID: 27847635 [PubMed - in process]

142: Venugopal R, Satpathy G, Sangwan S, Kapil A, Aron N, Agarwal T, Pushker N, Sharma N. Conjunctival Microbial Flora in Ocular Stevens-Johnson Syndrome Sequelae Patients at a Tertiary Eye Care Center. Cornea. 2016 Aug;35(8):1117-21. doi: 10.1097/ICO.0000000000000857. PubMed PMID: 27124779.

PURPOSE: To evaluate the conjunctival microbial flora in cases of ocular Stevens-Johnson Syndrome (SJS) in a tertiary eye care center.
METHODS: This prospective study comprised 176 eyes of 88 patients with ocular SJS compared with 124 eyes of normal subjects. The conjunctival swabs were collected and sent for microbiological analysis for bacterial isolation and antibiotic sensitivity examination. The type of bacteria isolated and its antibiotic sensitivity pattern were studied.
RESULTS: Of 176 eyes, 104 (59%) had positive cultures for bacteria in cases of SJS and 16 (12.9%) had positive culture in the control group, the difference being statistically significant (P = 0.001). In the SJS group, 14 different types of bacterial isolates were identified. The most common isolate was coagulase-negative staphylococci (CNS) (30/104, 28.8%) followed by Corynebacteria species (35/104, 33.6%) and Staphylococcus aureus (19/104, 18.2%). More than 1 bacteria were isolated in 7 eyes (6.7%). Most of the isolates showed resistance to ciprofloxacin with no resistance to gatifloxacin and moxifloxacin. In the control group, only 2 bacteria were isolated, which included CNS (14/16, 87.5%) and Streptococcus pneumoniae (2/16, 12.5%). CNS showed resistance to ciprofloxacin, and S. pneumoniae was resistant to tobramycin and gentamycin.
CONCLUSIONS: Ocular SJS is associated with alteration of the normal microbial flora residing in the conjunctival sac. The study of which is vital in cases of infection in these eyes with compromised ocular surface. Mixed flora are seen more often in cases of ocular SJS as compared with controls.

DOI: 10.1097/ICO.0000000000000857
PMID: 27124779 [PubMed - in process]

143: Verma P, Dalal K, Chopra M. Pharmacophore development and screening for discovery of potential inhibitors of ADAMTS-4 for osteoarthritis therapy. J Mol Model. 2016 Aug;22(8):178. doi: 10.1007/s00894-016-3035-8. PubMed PMID: 27401455.

In the development of osteoarthritis, aggrecan degrades prior to cartilage destruction. Aggrecanase-1 (ADAMTS-4) is considered to be the major enzyme responsible for cleaving the Glu373-Ala374 bond in the interglobular domain of aggrecan in humans. Therefore, inhibitors of ADAMTS-4 have therapeutic potential in the treatment of osteoarthritis. In the present work, we developed a chemical feature based pharmacophore model of ADAMTS-4 inhibitors using the HipHop module within the Catalyst program package in order to elucidate the structure-activity relationship and to carry out in-silico screening. The Maybridge database was screened using Hypo1 as a 3D query, and the best-fit hits that followed Lipinski's rule of five were subsequently screened to select the compounds. The hit compounds were then docked into the active site of ADAMTS-4, and interactions were visualized to determine the potential lead molecules. After subjecting all of the hits to various screening and filtering processes, 13 compounds were finally evaluated for their in vitro inhibitory activities. This study resulted in the identification of two lead compounds with potent inhibitory effects on ADAMTS-4 activity, with IC50 values of 0.042 μM and 0.028 μM, respectively. These results provide insight into the pharmacophoric requirements for the development of more potent ADAMTS-4 inhibitors. Graphical Abstract The aggrecan-degrading metalloprotease ADAMTS-4 has been identified as a novel therapeutic target for osteoarthritis. In this work, we used HipHop-based pharmacophore modeling and virtual screening of the Maybridge database to identify novel ADAMTS-4 inhibitors. These novel lead compounds act as potent and specific inhibitors for the ADAMTS-4 enzyme and could have therapeutic potential in the treatment of OA.

DOI: 10.1007/s00894-016-3035-8
PMID: 27401455 [PubMed - in process]

144: Verma P, Subodh S, Tiwari V, Rampal R, Tuteja A, Toteja GS, Gupta SD, Ahuja V. Correlation of Serum Vitamin A Levels with Disease Activity Indices and Colonic IL-23R and FOXP3 mRNA Expression in Ulcerative Colitis Patients. Scand J Immunol. 2016 Aug;84(2):110-7. doi: 10.1111/sji.12450. PubMed PMID: 27178149.

Genome-wide association studies have identified IL-23 receptor (IL-23R) as a susceptibility locus for the pathogenesis of ulcerative colitis (UC), which is characterized by exaggerated Th2/Th17 response. Studies have shown that vitamin A (VA) reduces disease progression by promoting $FOXP3^+$ T cells and curbing Th17 cells. In this study, we explored the association of colonic IL-23R and FOXP3 expression in fifty-one UC patients (23 in remission and 28 with active disease) with serum VA levels and disease activity. We observed that decreased serum VA levels were associated with increased disease activity. However, there was no significant difference in mucosal IL-23R and FOXP3 expression in UC patients with moderate-to-severe disease activity compared to those in remission. Also, no significant correlation was drawn between serum VA levels and mucosal IL-23R and FOXP3 expression. Our study suggests that even after an established role of VA in inhibiting Th17 responses in mice models and humans, serum VA levels and disease activity do not correlate with FOXP3 and IL-23R expression in colonic mucosa of UC patients.

DOI: 10.1111/sji.12450
PMID: 27178149 [PubMed - in process]

145: Wadhwani M, Mishra SK, Angmo D, Velpandian T, Sihota R, Kotnala A, Bhartiya S, Dada T. Evaluation of Physical Properties of Generic and Branded Travoprost Formulations. J Curr Glaucoma Pract. 2016 May-Aug;10(2):49-55. doi: 10.5005/jp-journals-10008-1201. Review. PubMed PMID: 27536047; PubMed Central PMCID: PMC4981658.

PURPOSE: Comparative evaluation of pharmaceutical characteristics of three marketed generic vs branded travoprost formulations.
MATERIALS AND METHODS: Three generic travoprost formulations and one branded (Travatan without benzalkonium chloride) formulation (10 vials each), obtained from authorized agents from the respective companies and having the same batch number, were used. These formulations were coded and labels were removed. At a standardized room temperature of 25°C, the drop size, pH, relative viscosity, and total drops per vial were determined for Travatan (Alcon, Fort Worth, TX, USA) and all the generic formulations. Travoprost concentration in all four brands was estimated by using liquid chromatography-coupled tandem mass spectrometry LCMS.
RESULTS: Out of the four formulations, two drugs (TP 1 and TP 4) were found to follow the United States Pharmacopoeia (USP) limits for ophthalmic formulation regarding drug concentration, while the remaining two drugs failed due to the limits being either above 110% (TP 2) or below 90% (TP 3). Two of them (TP 1 and TP 2) had osmolality of 313 and 262 mOsm respectively, which did not comply with the osmolality limits within 300 mOsm (+ 10%). The pH of all the formulations ranged between 4.7 and 5.9, and the mean drop size was 30.23 ± 6.03 uL. The total amount of drug volume in the bottles varied from 2.58 ± 0.15 to 3.38 ± 0.06 mL/bottle.
CONCLUSION: There are wide variations in the physical properties of generic formulations available in India. Although some generic drugs are compliant with the pharmacopeia standards, this study underscores the need for a better quality control in the production of generic travoprost formulations. How to cite this article: Wadhwani M, Mishra SK, Angmo D, Velpandian T, Sihota R, Kotnala A, Bhartiya S, Dada T. Evaluation of Physical Properties of Generic and Branded Travoprost Formulations. J Curr Glaucoma Pract. 2016;10(2):49-55.

DOI: 10.5005/jp-journals-10008-1201
PMCID: PMC4981658
PMID: 27536047 [PubMed]

146: Yadav AK, Sharma R, Kandasamy D, Pradhan RK, Garg PK, Bhalla AS, Gamanagatti S, Srivastava DN, Sahni P, Upadhyay AD. Perfusion CT - Can it resolve the pancreatic carcinoma versus mass forming chronic pancreatitis conundrum? Pancreatology. 2016 Nov - Dec;16(6):979-987. doi: 10.1016/j.pan.2016.08.011. PubMed PMID: 27568845.

OBJECTIVES: To evaluate the utility of perfusion CT (PCT) in differentiating pancreatic adenocarcinoma from mass forming chronic pancreatitis (MFCP).
METHODS: In this ethically approved study, PCT was performed in 122 patients with pancreatic masses of which 42 patients had pancreatic adenocarcinoma and 13 had MFCP on histopathology. Perfusion parameters studied included blood flow (BF), blood volume (BV), permeability surface area product (PS), time to peak (TTP), peak enhancement intensity (PEI) and mean transit time (MTT). Twenty five controls with no pancreatic pathology were also studied.
RESULTS: Amongst the perfusion parameters BF and BV were found to be the most reliable for differentiating between adenocarcinoma and mass forming pancreatitis. Although they were reduced in both pancreatic adenocarcinoma (BF- 16.6 ± 13.1 ml/100 ml/min and BV- 5 ± 3.5 ml/100 ml) and MFCP (BF- 30.4 ± 8.7 ml/100 ml/min and BV- 8.9 ± 3.1 ml/100 ml) as compared to normal controls (BF- 94.1 ± 24 ml/100 ml/min and BV- 36 ± 10.7 ml/100 ml) but the extent of reduction was greater in pancreatic adenocarcinoma than in MFCP. Based on ROC analysis cut off values of 19.1 ml/100 ml/min for BF and 5 ml/100 ml for BV yielded optimal sensitivity and specificity for differentiating pancreatic adenocarcinoma from MFCP.
CONCLUSIONS: PCT may serve as an additional paradigm for differentiating pancreatic adenocarcinoma from mass forming chronic pancreatitis and a useful tool for detecting masses which are isodense on conventional CT.

DOI: 10.1016/j.pan.2016.08.011
PMID: 27568845 [PubMed - in process]

147: 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. 2016 Aug 17. doi: 10.1111/jgh.13535. [Epub ahead of print] PubMed PMID: 27532624.

BACKGROUND: Crohn's disease (CD) and Intestinal tuberculosis (ITB) have close phenotypic resemblance. Mesenteric fat (a component of visceral fat) hypertrophy and fat wrapping, which is visible radiologically as fibrofatty proliferation, is seen more commonly in CD than ITB.
AIM: Present study was conducted to study the role of visceral fat in differentiating CD and ITB.
METHODS: Visceral fat (VF) area and subcutaneous (SC) fat area was measured on CT in 2 cohorts (development and validation). VF/SC ratio was also calculated for all patients. In the development cohort, retrospective data collection was done 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 was significantly higher in CD [(n=42: development), n=46: validation)] than 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 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: 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 [PubMed - as supplied by publisher]

148: Yadav K, Singh A, Jaryal AK, Coshic P, Chatterjee K, Deepak KK. Modulation of cardiac autonomic tone in non-hypotensive hypovolemia during blood donation. J Clin Monit Comput. 2016 Aug 2. [Epub ahead of print] PubMed PMID: 27484693.

Non-hypotensive hypovolemia, observed during mild haemorrhage or blood donation leads to reflex readjustment of the cardiac autonomic tone. In the present study, the cardiac autonomic tone was quantified using heart rate and blood pressure variability during and after non-hypotensive hypovolemia of blood donation. 86 voluntary healthy male blood donors were recruited for the study (age 35 ± 9 years; weight 78 ± 12 kg; height 174 ± 6 cms). Continuous lead II ECG and beat-to-beat blood pressure was recorded before, during and after blood donation followed by offline time and frequency domain analysis of HRV and BPV. The overall heart rate variability (SDNN and total power) did not change during or after blood donation. However, there was a decrease in indices that represent the parasympathetic component (pNN50 %, SDSD and HF) while an increase was observed in sympathetic component (LF) along with an increase in sympathovagal balance (LF:HF ratio) during blood donation. These changes were sustained for the period immediately following blood donation. No fall of blood pressure was observed during the period of study. The blood pressure variability showed an increase in the SDNN, CoV and RMSSD time domain measures in the post donation period. These results suggest that mild hypovolemia produced by blood donation is non-hypotensive but is associated with significant changes in the autonomic tone. The increased blood pressure variability and heart rate changes that are seen only in the later part of donation period could be because of the progressive hypovolemia associated parasympathetic withdrawal and sympathetic activation that

manifest during the course of blood donation.

DOI: 10.1007/s10877-016-9912-y
PMID: 27484693 [PubMed - as supplied by publisher]

149: Yadav MP, Ballal S, Tripathi M, Damle NA, Sahoo RK, Seth A, Bal C. (177)Lu-DKFZ-PSMA-617 therapy in metastatic castration resistant prostate cancer: safety, efficacy, and quality of life assessment. Eur J Nucl Med Mol Imaging. 2017 Jan;44(1):81-91. PubMed PMID: 27506431.

PURPOSE: The purpose of this study was to evaluate the efficacy and safety of a novel theranostic agent, (177)Lu-DKFZ-PSMA-617 therapy in metastatic castration resistant prostate cancer (mCRPC).
METHODS: Thirty-one mCRPC patients with progressive disease despite second-line hormonal therapy and/or docetaxel chemotherapy were recruited for the study. All patients underwent diagnostic(68)Ga-PSMA-HBED-CCPET/CT, prior to inclusion for therapy. Included patients then underwent quarterly (177)Lu-DKFZ-PSMA-617 therapy. Hematological, kidney function, liver function tests, and serum PSA levels were recorded before and after therapy at 2 weeks, 4 weeks, and 3 month intervals. Biochemical response was assessed with trend in serum PSA levels. Metabolic response was assessed by PERCIST 1 criteria. Clinical response was assessed by visual analogue score (VASmax) analgesic score (AS), Karanofsky performance status (KPS), and ttoxicity and response criteria of the Eastern Cooperative Oncology Group (ECOG) criteria.
RESULTS: The mean age of patients was 65.93±9.77 years (range: 38-81 years). The mean activity administered in the 31 patients was 5069±1845 MBq ranging from one to four cycles. There was a decline in the mean serum PSA levels from the baseline (baseline: 275 ng/mL, post 1st cycle therapy: 141.75 ng/mL). Based on biochemical response criteria 2/31, 20/31, 3/31, and 6/31 had complete response (CR), partial response(PR), stable disease (SD), and progressive disease (PD), respectively. Metabolic response revealed 2/6 patients with CR, and the remaining 3/6 patients with PR and 1/6 patients with SD. The mean VASmax score decreased from 7.5 to 3. The mean analgesic score decreased from 2.5 to 1.8 after therapy. The mean KPS score improved from 50.32 to 65.42 after therapies. The mean ECOG performance status improved from 2.54 to 1.78 after therapy. Two patients experienced grade I and grade II hemoglobin toxicity each. None of the patients experienced nephrotoxicity or hepatotoxicity.
CONCLUSION: (177)Lu-DKFZ-PSMA-617 radionuclide therapy is a safe and effective approach in the treatment of mCRPC patients.

DOI: 10.1007/s00259-016-3481-7
PMID: 27506431 [PubMed - in process]

150: Yadav P, Khalil S, Mirdha BR. Molecular appraisal of intestinal parasitic infection in transplant recipients. Indian J Med Res. 2016 Aug;144(2):258-263. doi: 10.4103/0971-5916.195041. PubMed PMID: 27934806.

BACKGROUND & OBJECTIVES: Diarrhoea is the main clinical manifestation caused by intestinal parasitic infections in patients, with special reference to transplant recipients who require careful consideration to reduce morbidity and mortality. Further, molecular characterization of some important parasites is necessary to delineate the different modes of transmission to consider appropriate management strategies. We undertook this study to investigate the intestinal parasitic infections in transplant recipients with or without diarrhoea, and the genotypes of the isolated parasites were also determined.
METHODS: Stool samples from 38 transplant recipients comprising 29 post-renal, two liver and seven bone marrow transplant (BMT) recipients presenting with diarrhoea and 50 transplant recipients (42 post-renal transplant, eight BMT) without diarrhoea were examined for the presence of intestinal parasites by light microscopy using wet mount, modified Ziehl-Neelsen staining for intestinal coccidia and modified trichrome staining for microsporidia. Genotypes of Cryptosporidium species were determined by multilocus genotyping using small subunit ribosomal (SSUrRNA), Cryptosporidium oocyst wall protein (COWP) and

dihydrofolate reductase (DHFR) as the target genes. Assemblage study for Giardia lamblia was performed using triose phosphate isomerase (TPI) as the target gene. Samples were also screened for bacterial, fungal and viral pathogens.
RESULTS: The parasites that were detected included Cryptosporidium species (21%, 8/38), Cystoisospora (Isospora) belli (8%, 3), Cyclospora cayetanensis (5%, 2), G. lamblia (11%, 4), Hymenolepis nana (11%, 4), Strongyloides stercoralis (3%, 1) and Blastocystis hominis (3%, 1). Multilocus genotyping of Cryptosporidium species at SSUrRNA, COWP and DHFR loci could detect four isolates of C. hominis; two of C. parvum, one of mixed genotype and one could not be genotyped. All the C. hominis isolates were detected in adult post-renal transplant (PRT) recipients, whereas the C. parvum isolates included a child with BMT and an adult with PRT. Clostridium difficle, cytomegalovirus and Candida albicans were found in 2, 3 and 2 patients, respectively.
INTERPRETATION & CONCLUSIONS: In the present study, C. hominis was observed as an important parasite causing intestinal infections in transplant recipients. Multilocus genotyping of Cryptosporidium species could detect four isolates of C. hominis; two of C. parvum, one of mixed genotype and one could not be genotyped. Genotyping of G. lamblia revealed that assemblage B was most common.

DOI: 10.4103/0971-5916.195041
PMID: 27934806 [PubMed - in process]

151: Yadav R, Kakkar A, Sharma A, Malik PS, Sharma MC. Study of clinicopathological features, hormone immunoexpression, and loss of ATRX and DAXX expression in pancreatic neuroendocrine tumors. Scand J Gastroenterol. 2016 Aug;51(8):994-9. doi: 10.3109/00365521.2016.1170195. PubMed PMID: 27162024.

OBJECTIVES: Neuroendocrine tumors of the pancreas (PanNETs) are rare neoplasms, and not much is known about their pathogenesis. We aimed to evaluate ATRX/DAXX immunoexpression in PanNETs a cohort of well-characterized PanNETs.
METHODS: PanNETs diagnosed over a 10-year period were retrieved and clinicopathogical features reviewed. Immuohistochemistry for pancreatic hormones, and for ATRX and DAXX was performed.
RESULTS: Sixty-eight PanNETs were included (30 males and 38 females) with median age of 39 years. Histologically, there were 37 Grade 1 (54.4%), 27 Grade 2 (39.7%), and 4 Grade 3 (5.9%) cases. On immunostaining for hormones, insulin expression was most frequent (22 cases; 38.6%), followed by gastrin (7 cases; 12.3%); 25 cases (43.9%) were negative for all hormones. Loss of ATRX/DAXX immunoexpression was noted in 18 cases (39.1%), and was significantly more frequent in tumors larger than 5 cm. Lymphovascular invasion, infiltrative borders, and infiltration of adjacent organs were also more frequent in tumors with loss of ATRX/DAXX immunoreactivity. A little over half the tumors with ATRX/DAXX loss showed negative immunostaining for all hormones (55.6%).
CONCLUSION: Loss of ATRX/DAXX expression is frequent in PanNETs, indicating a role in their pathogenesis. As ATRX/DAXX loss is more frequent in larger tumors, and in those with lymphovascular invasion, adjacent organ infiltration and infiltrative borders, this suggests that loss of ATRX/DAXX expression is a late event in pathogenesis and is associated with an aggressive phenotype. Immunohistochemical detection of ATRX/DAXX loss is a simple method for ATRX/DAXX evaluation and can easily be incorporated into routine pathological evaluation of PanNETs.

DOI: 10.3109/00365521.2016.1170195
PMID: 27162024 [PubMed - in process]