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AIIMS
New Delhi

**List of publications of AIIMS, New Delhi
for the month of OCTOBER, 2014
[Source: www.pubmed.com].**

1: Aathira R, Jain V. Advances in management of type 1 diabetes mellitus. *World J Diabetes*. 2014 Oct 15;5(5):689-96. doi: 10.4239/wjd.v5.i5.689. Review. PubMed PMID: 25317246; PubMed Central PMCID: PMC4138592.

Treatment of type 1 diabetes mellitus has always posed a challenge to balance hyperglycemia control with hypoglycemia episodes. The quest for newer therapies is continuing and this review attempts to outline the recent developments. The insulin molecule itself has got moulded into different analogues by minor changes in its structure to ensure well controlled delivery, stable half-lives and lesser side effects. Insulin delivery systems have also consistently undergone advances from subcutaneous injections to continuous infusion to trials of inhalational delivery. Continuous glucose monitoring systems are also becoming more accurate and user friendly. Smartphones have also made their entry into therapy of diabetes by integrating blood glucose levels and food intake with calculated adequate insulin required. Artificial pancreas has enabled to a certain extent to close the loop between blood glucose level and insulin delivery with devices armed with meal and exercise announcements, dual hormone delivery and pramlintide infusion. Islet, pancreas-kidney and stem cells transplants are also being attempted though complete success is still a far way off. Incorporating insulin gene and secretory apparatus is another ambitious leap to achieve insulin independence though the search for the ideal vector and target cell is still continuing. Finally to stand up to the statement, prevention is better than cure, immunological methods are being investigated to be used as vaccine to prevent the onset of diabetes mellitus.

2: Acharya G, Arora KK, Kumar D. Nasogastric tube coiled around endotracheal tube. *J Anaesthesiol Clin Pharmacol*. 2014 Oct;30(4):584-6. doi: 10.4103/0970-9185.142891. PubMed PMID: 25425802; PubMed Central PMCID: PMC4234813.

3: Agarwala S, Mittal D, Bhatnagar V, Srinivas M, Bakhshi S, Bajpai M, Gupta DK, Iyer VK, Mohanti BK, Thulkar S. Management and outcomes in massive bilateral Wilms' tumors. *J Indian Assoc Pediatr Surg*. 2014 Oct;19(4):208-12. doi: 10.4103/0971-9261.142005. PubMed PMID: 25336802; PubMed Central PMCID: PMC4204245.

PURPOSE: To evaluate the outcome of children with bilateral Wilms' tumor (BWT) treated on All India Institute of Medical Sciences-Wilms Tumor-99 (AIIMS-WT-99) protocol.

MATERIALS AND METHODS: All children with BWT, registered in our solid tumor clinic from August 1999 through December 2010 were included.

RESULTS: Of the 178 fresh cases of Wilms Tumor (WT) treated during this period, 11 (6.2%) had bilateral involvement. All patients except one (12 and 3 cm), had massive bilateral tumors of more than 10 cm on each side. There were eight boys and three girls in the age range 6-30 months. One patient had Denys-Drash syndrome. Twenty renal units were operated upon (12 tumorectomy, five partial nephrectomy, and three nephrectomies), while one patient with inferior vena cava (IVC) thrombus died of renal failure. Tumor spill occurred in three units, lymphnode was positive in two patients. Local recurrence occurred in four patients (six of 18 renal units (33%)-two bilateral and two unilateral). There was one recurrence in the liver that was treated with radio-frequency ablation. The 5-year overall survival (OS) was 90% (95% confidence interval (CI) = 50.8-98.6) and the relapse free survival (RFS) was 38% (95% CI = 6.1-71.6).

CONCLUSION: Massive BWT respond poorly to preoperative chemotherapy, are often

not amenable to partial nephrectomy/tumorectomy and have a higher local recurrence rate, giving a poor RFS.

4: Agarwala S. Pediatric surgical oncology in India. *J Indian Assoc Pediatr Surg.* 2014 Oct;19(4):187-8. doi: 10.4103/0971-9261.141992. PubMed PMID: 25336798; PubMed Central PMCID: PMC4204241.

5: Aggarwal D, Mohapatra PR. Non-invasive positive pressure ventilation for severe COPD. *Lancet Respir Med.* 2014 Oct;2(10):e18-9. doi: 10.1016/S2213-2600(14)70199-7. PubMed PMID: 25298062.

6: Aggarwal S, Modi S, Jose T. Laparoscopic sleeve gastrectomy leads to reduction in thyroxine requirement in morbidly obese patients with hypothyroidism. *World J Surg.* 2014 Oct;38(10):2628-31. doi: 10.1007/s00268-014-2646-4. PubMed PMID: 24844659.

BACKGROUND: The impact of laparoscopic sleeve gastrectomy (LSG) on various co-morbidities including type II diabetes mellitus, hypertension, and sleep apnea is well established. However, its effect on hypothyroidism has not been given due attention evidenced by the scant literature on the subject. The purpose of this report is to assess the change in thyroxine (T4) requirement in morbidly obese patients with clinical hypothyroidism after LSG.

METHODS: We conducted a retrospective review of morbidly obese patients on T4 replacement therapy for clinical hypothyroidism who underwent LSG from August 2009 to July 2012 at our institution.

RESULTS: Of the 200 patients who underwent LSG during this period, 21 (10.5 %) were on T4 replacement therapy preoperatively for clinical hypothyroidism. Two patients were lost to follow-up. The remaining 19 patients were categorized into two groups. Group 1 comprised 13 patients with decreased T4 requirements after LSG. Group 2 comprised six patients in whom the T4 dose remained unaltered. The mean change in T4 requirement in group 1 was 42.07 % (12-100 %). Group 1 patients had a significantly higher mean preoperative body mass index (48.7 vs. 43.0 kg/m²; p = 0.03) than the group 2 patients. There was a significant correlation between the percentage excess weight loss and the percentage change in T4 requirement in group 1 (r = 0.607, p = 0.028).

CONCLUSIONS: Sleeve gastrectomy has a favorable impact on hypothyroid status as seen by a reduction in T4 requirement in the majority of morbidly obese patients with overt hypothyroidism.

7: Agrawal N, Pal S, Dash NR, Madhusudhan K, Srivastava DN. Asymptomatic transhiatal pancreatic herniation after oesophagectomy. *J Clin Diagn Res.* 2014 Oct;8(10):ND24-5. doi: 10.7860/JCDR/2014/9881.5017. Epub 2014 Oct 20. PubMed PMID: 25478403; PubMed Central PMCID: PMC4253221.

Transhiatal herniation of abdominal organs after oesophageal resection and reconstruction is rare and sparsely described in the literature. The commonest organ to herniate is the colon. Pancreatic herniation has been reported twice before. We report a case of postoesophagectomy transhiatal pancreatic herniation in an asymptomatic patient.

8: Ambekar A, Rao R, Mishra AK, Agrawal A. Type of opioids injected: Does it matter? A multicentric cross-sectional study of people who inject drugs. *Drug Alcohol Rev.* 2015 Jan;34(1):97-104. doi: 10.1111/dar.12208. Epub 2014 Oct 10.

PubMed PMID: 25302827.

INTRODUCTION AND AIMS: Injecting pharmaceutical opioids for non-medical purposes is a major concern globally. Though pharmaceutical opioids injection is reported in India, the exact proportion of people who inject drugs (PWID) using pharmaceutical opioids is unknown. The objectives of this study were to describe the various types of drugs that are injected by people in India and to analyse the differences between the commonly injected drugs.

DESIGN AND METHODS: A cross-sectional, multicentric study covering 22 harm-reduction sites from different regions of the country was conducted. First 50 subjects, chosen randomly from a list of PWIDs accessing services from each site and fulfilling study criteria, were interviewed using a structured questionnaire. Data from 902 male subjects are presented here.

RESULTS: Pharmaceutical opioid injectors (POI) accounted for 65% of PWIDs (buprenorphine: 30.8%, pentazocine: 21.8% and dextropropoxyphene: 11.9%). Heroin, injected by 34.3%, was prevalent in most states surveyed. Buprenorphine and pentazocine were not injected in the north-east region, whereas dextropropoxyphene was injected in the north-east alone. Univariate and multivariate logistic regression showed that, compared with heroin injectors, the POI group was more likely to consume alcohol and pharmaceutical opioids orally, inject frequently, share needle/syringes and develop injection-site complications. Among individual POIs, buprenorphine injectors had significantly higher proportion of subjects injecting frequently, sharing needle/syringes and developing local complications. Irrespective of the opioid type, majority of subjects were opioid dependent.

DISCUSSION AND CONCLUSIONS: Pharmaceutical opioids are the most common drugs injected in India currently and have greater injection-related risks and complications. Significant differences exist between different pharmaceutical opioids, which would be important considerations for interventions. [Ambekar A, Rao R, Mishra AK, Agrawal A. Type of opioids injected: Does it matter? A multicentric cross-sectional study of people who inject drugs. *Drug Alcohol Rev* 2015;34:97-104].

9: Arora S, Agarwal KK, Karunanithi S, Tripathi M, Kumar R. Recurrent malignant pheochromocytoma with unusual omental metastasis: (68)Ga-DOTANOC PET/CT and (131)I-MIBG SPECT/CT scintigraphy findings. *Indian J Nucl Med*. 2014 Oct;29(4):286-8. doi: 10.4103/0972-3919.142654. PubMed PMID: 25400380; PubMed Central PMCID: PMC4228604.

Pheochromocytomas are rare catecholamine-secreting tumors derived from the sympathetic nervous system. The most common sites of metastasis for pheochromocytoma or extra-adrenal paraganglioma are lymph nodes, bones, lungs, and liver. Patients with known or suspected malignancy should undergo staging with computed tomography (CT) or magnetic resonance imaging as well as functional imaging (e.g. with (123)I/(131)I-MIBG ((131)I-metaiodobenzylguanidine) and (68)Ga-DOTANOC ((68)Ga-labeled [1,4,7,10-tetraazacyclododecane-1,4,7,10-tetraacetic acid]-1-NaI3-octreotide) positron emission tomography (PET)/CT) to determine the extent and location of disease. We present a case of recurrent malignant pheochromocytoma with unusual site of metastasis in omentum, which was positive on (68)Ga-DOTANOC PET/CT and (131)I-MIBG single-photon emission computed tomography (SPECT)/CT scintigraphy.

10: Arora T, Sharma N, Arora S, Titiyal JS. Fulminant herpetic keratouveitis with flap necrosis following laser in situ keratomileusis: Case report and review of literature. *J Cataract Refract Surg*. 2014 Dec;40(12):2152-6. doi:

10.1016/j.jcrs.2014.09.018. Epub 2014 Oct 12. PubMed PMID: 25311411.

A 25-year-old woman presented with redness, pain, and diminution of vision that occurred 2 weeks after microkeratome-assisted laser in situ keratomileusis (LASIK). On presentation, corneal edema, Descemet membrane folds, keratic precipitates, stromal infiltrates, and flap necrosis were observed. Delayed post-LASIK microbial keratitis was diagnosed. The patient had no history of ocular herpes. Culture and scraping showed no organisms. Immunofluorescence stain was positive for the herpes simplex virus antigen. The patient was started on oral valacyclovir, and progress was monitored through serial clinical photographs and anterior segment optical coherence tomography. Resolution began within 3 days of initiating treatment and was complete in 4 weeks.

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11: Arunabha DC, Sumit RT, Sourin B, Sabyasachi C, Subhasis M. Kartagener's syndrome: a classical case. *Ethiop J Health Sci.* 2014 Oct;24(4):363-8. PubMed PMID: 25489202; PubMed Central PMCID: PMC4248037.

BACKGROUND: Recurrent lower respiratory tract infection (LRTI) is a very common problem we encounter in our clinical practice. Failure to recognize the specific cause of this condition may subject the patients to unnecessary and inappropriate treatment.

CASE DETAILS: among the various causes of recurrent LRTI, the most frequent causes are abnormalities of general or local impairment of immune mechanism and abnormalities of cilia or mucus of respiratory tract. We report an adult case of recurrent upper and lower respiratory tract infections since childhood along with situs inversus totalis which was diagnosed as Kartagener's syndrome. He had all the classical clinical and radiological features of Kartagener's syndrome which is a rare inherited disorder which is seen in nearly half of the cases of primary ciliary dyskinesia (PCD).

CONCLUSION: One should always keep in mind the possibilities of Kartagener's syndrome in patients presenting with recurrent upper and lower respiratory tract infections, sinusitis or bronchiectasis. Inability to diagnose this condition may subject the patient to unnecessary and repeated hospital admissions, investigations and treatment failure.

PMCID: PMC4248037

PMID: 25489202 [PubMed - in process]

12: Arya A, Jindal A. Acute kidney injury and rhabdomyolysis due to multiple wasp stings. *Indian J Crit Care Med.* 2014 Oct;18(10):697-8. doi: 10.4103/0972-5229.142181. PubMed PMID: 25316982; PubMed Central PMCID: PMC4195202.

13: Asati DP, Tiwari A. Bullous mastocytosis in a 3-month-old infant. *Indian Dermatol Online J.* 2014 Oct;5(4):497-500. doi: 10.4103/2229-5178.142520. PubMed PMID: 25396140; PubMed Central PMCID: PMC4228652.

Mastocytosis is a rare myeloid neoplasm characterized by abnormal proliferation and accumulation of mast cells in one or more organ systems including the skin, bone marrow, liver, spleen, lymph nodes and gastrointestinal tract. An infant presenting with bullous lesions is an even rarer clinical presentation of cutaneous mastocytosis. The symptoms and complications are mostly in proportion to the mast cell degranulation in tissues. Management is focused on preventing

and treating this event. We report a three-month-old infant with bullous mastocytosis to enhance awareness about this rare diagnosis.

PMCID: PMC4228652

PMID: 25396140 [PubMed]

14: Ashima N, Harsimarpreet K. Appreciation of the study on mentally retarded children and their mothers in Madhya Pradesh, India. *Indian J Psychiatry*. 2014 Oct;56(4):405. doi: 10.4103/0019-5545.146514. PubMed PMID: 25568488; PubMed Central PMCID: PMC4279305.

15: Azad SV, Salman A, Mahajan D, Sain S, Azad R. Comparative evaluation between ranibizumab combined with laser and bevacizumab combined with laser versus laser alone for macular oedema secondary to branch retinal vein occlusion. *Middle East Afr J Ophthalmol*. 2014 Oct-Dec;21(4):296-301. doi: 10.4103/0974-9233.142264. PubMed PMID: 25371633; PubMed Central PMCID: PMC4219219.

PURPOSE: To evaluate the anatomical and functional efficacy of combination therapy of intravitreal ranibizumab with laser or intravitreal bevacizumab with laser treatment compared to only laser treatment for macular edema due to branch retinal vein occlusion (BRVO).

MATERIALS AND METHODS: Thirty eyes of 30 patients with BRVO of at least 6 weeks duration were randomized into three groups: Group 1 received a single dose of intravitreal Ranibizumab followed by grid laser treatment, Group 2 received a single dose of intravitreal Bevacizumab followed by grid laser treatment, and Group 3 received grid laser alone. Outcomes at 6 months follow-up were reported. Data were collected on best corrected visual acuity (BCVA), central foveal thickness (CFT), and gain in lines of Snellen acuity.

RESULTS: At 6 month follow-up, the difference in the mean BCVA and CFT between the three treatment groups was not statistically significant ($P > 0.05$, all comparisons). Six eyes (60%) in Group 1, four eyes (40%) in Group 2 and two eyes (20%) in Group 3 had a statistically significant gain of ≥ 3 lines of Snellen acuity ($P < 0.05$).

CONCLUSION: Both ranibizumab and bevacizumab combined with laser photocoagulation, resulted in better outcomes than grid laser treatment.

PMCID: PMC4219219

PMID: 25371633 [PubMed - indexed for MEDLINE]

16: Bagchi S, Sachdev SS, Nalwa A, Das CJ, Sinha S, Suri V, Mahajan S, Bhowmik D, Agarwal S. Multiple intracranial space-occupying lesions in a renal transplant recipient from an area endemic for tuberculosis (TB): TB vs. toxoplasmosis. *Transpl Infect Dis*. 2014 Oct;16(5):838-42. doi: 10.1111/tid.12262. Epub 2014 Jul 7. PubMed PMID: 25040057.

Renal transplant recipients may present with intracranial space-occupying lesions (SOLs) due to infections as well as a post-transplant lymphoproliferative disorder (PTLD). Here, we discuss a renal transplant recipient who presented with neurologic symptoms and magnetic resonance imaging (MRI) of the brain showed multiple focal SOLs. Tuberculosis (TB), toxoplasmosis, nocardiosis, fungal infections, and PTLD were considered in the differential diagnosis. MRI spectroscopy was suggestive of an infectious cause, such as toxoplasmosis or TB. Serologic tests using *Toxoplasma* were negative. A brain biopsy followed by immunohistochemical staining using *Toxoplasma* antibody demonstrated multiple intravascular cysts of toxoplasma. This case highlights the diagnostic dilemma in an immunocompromised patient with multiple focal brain lesions, especially in areas where TB is endemic.

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PMID: 25040057 [PubMed - in process]

17: Balhara YP, Mishra A. A study exploring attributes and nature of the retracted literature on mental disorders. *Indian J Med Ethics*. 2014 Oct 1;11(4):1-12. [Epub ahead of print] PubMed PMID: 25376921.

This study was aimed at assessing the retracted medical literature on mental disorders. Another aim was to test the hypothesis that the weak research infrastructure in certain countries and the rising pressure to publish in Asia due to the progress of science in that continent may have contributed to the increase in the number of retractions. A bibliometric search was carried out using the PubMed database. The data were analysed using SPSS version 21. The retraction rate for articles on mental disorders (number of retracted articles per 100,000 published articles on mental disorders) varied from a low of 3.56 (for 2005) to a high of 49.25 (for 2012). Of the 38 articles for which the reasons for retraction could be accessed, 10 (26.31%) were retracted for fraud. Overall, 0.0138% of all articles on the biomedical sciences were retracted. Of the articles on mental disorders, 0.0095% were retracted. There was a disproportionately greater number of retractions in the case of articles originating from low- and middle-income countries than high-income countries. Similarly, there was a disproportionately greater number of retractions in the case of articles originating in Asian countries than non-Asian countries.

PMID: 25376921 [PubMed - as supplied by publisher]

18: Balhara YP, Mathur S. Bhang - beyond the purview of the narcotic drugs and psychotropic substances act. *Lung India*. 2014 Oct;31(4):431-2. doi: 10.4103/0970-2113.142109. PubMed PMID: 25378867; PubMed Central PMCID: PMC4220341.

19: Barik M, Bajpai M, Panda SS, Malhotra A, Samantaray JC, Dwivedi SN. Strengthening molecular genetics and training in craniosynostosis: The need of the hour. *J Neurosci Rural Pract*. 2014 Oct;5(4):428-32. doi: 10.4103/0976-3147.140014. PubMed PMID: 25288859; PubMed Central PMCID: PMC4173254.

Craniosynostosis (CS) is premature fusion of skull. It is divided into two groups: Syndromic craniosynostosis (SCS) and non-syndromic craniosynostosis (NSC). Its incidence in Indian population is 1:1000 live births where as in the USA it is 1:2500 live births. Its incidence varies from country to country. Molecular genetics having great interest and relevance in medical students, faculty, scientist, pediatric neurosurgeon and staff nurses, our objective was to educate the medical students, residents, researchers, clinicians, pediatric neurosurgeon, anesthetists, pediatricians, staff nurses and paramedics. We summarized here including with diagnosis, investigations, surgical therapy, induction therapy, and molecular therapy. Molecular genetics training is needed to know the information regarding development of skull, cranial connective tissue, craniofacial dysplasia, frame work, network of receptors and its etiopathogenesis. The important part is clinically with molecular therapy (MT) how to manage CS in rural sector and metropolitan cities need a special attention.

PMCID: PMC4173254

PMID: 25288859 [PubMed]

20: Basu S, Kumar R, Ranade R. Assessment of treatment response using PET. *PET Clin.* 2015 Jan;10(1):9-26. doi: 10.1016/j.cpet.2014.09.002. Epub 2014 Oct 14. PubMed PMID: 25455877.

This article reviews the major treatment response evaluation guidelines in the domain of cancer imaging and how the potential of PET imaging, particularly with fluorodeoxyglucose, is increasingly explored in this important aspect of cancer management. Certain disease-specific response criteria (such as in lymphoma) are also reviewed with emphasis on the changes made over time and the main areas of concern in PET interpretation. The major present clinical applications are illustrated and potential new areas are discussed with regard to clinical applications in the future. Finally, the evolving role of newer and novel PET metrics, which hold promise in treatment response evaluation, is illustrated with examples.

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PMID: 25455877 [PubMed - in process]

21: Bhat DK, Kanga U, Kumar N, Agrawal RP, Mourya M, Kalaivani M, Kaur T, Mehra NK. The Raikas - a unique combination of high prevalence of type 1 diabetes susceptibility genes and near zero incidence of the disease. *Hum Immunol.* 2014 Dec;75(12):1252-8. doi: 10.1016/j.humimm.2014.09.009. Epub 2014 Oct 13. PubMed PMID: 25312801.

The Raikas, a camel rearing tribal group living in the Thar desert of Rajasthan has been reported with a very low incidence of diabetes. We analysed the frequency distribution of HLA alleles in this community and compared the same with the non-Raika group living in the same geographic location and also that of the healthy North Indian (NI) population. The data revealed an exceptionally high phenotype frequency of HLA-DRB1*03 in this community (53%) as compared to the non-Raika group (27.73%, $p=7.9E-05$) and the NI population (14.6%, $p=7.65E06$). Further analysis revealed the occurrence of four major DRB1*03 haplotypes in the Raikas: (i) A*26-B*08-DRB1*03 (AH8.2, 11.76%); (ii) A*24-B*08-DRB1*03 (AH8.3, 8.82%); (iii) A*02-B*08-DRB1*03 (3.78%); (iv) A*01-B*08-DRB1*03 (AH8.1v, 0.84%); all of which occurred with a several fold higher frequency in the Raikas than the other two groups. These haplotypes have been reported to be positively associated with T1D in the NI population. The apparent lack of T1D and/or other autoimmune diseases in the Raikas despite the higher occurrence of known disease associated HLA alleles/haplotypes is intriguing and highlights the quintessential role of the environmental factors, food habits and level of physical activity in the manifestation of T1D. Possible influence of other protection conferring genes located on, as yet undefined chromosomal locations cannot be ruled out.

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PMID: 25312801 [PubMed - in process]

22: Bhatia HK, Singh H, Grewal N, Natt NK. Sofosbuvir: A novel treatment option for chronic hepatitis C infection. *J Pharmacol Pharmacother.* 2014 Oct;5(4):278-84. doi: 10.4103/0976-500X.142464. PubMed PMID: 25422576; PubMed Central PMCID: PMC4231565.

Hepatitis C currently infects more than 170 million people around the world, leading to significant morbidity and mortality. The current standard of care for HCV infection, including one of the two protease inhibitors, telaprevir or

boceprevir, for 12-32 weeks, along with pegylated interferon alfa-2a (PEG-IFN- α) and ribavirin for up to 48 weeks, is unsatisfactory in many cases, either because of lack of efficacy or because of treatment-related adverse effects. There is an urgent need of new drugs with improved efficacy as well as a safety profile. Sofosbuvir, a recently approved nucleotide analog, is a highly potent inhibitor of the NS5B polymerase in the Hepatitis C virus (HCV), and has shown high efficacy in combination with several other drugs, with and without PEG-INF, against HCV. It offers many advantages due to its high potency, low side effects, oral administration, and high barrier to resistance. The efficacy and safety were demonstrated in many large and well-designed phase 2 and phase 3 clinical trials like NEUTRINO, PROTON, ELECTRON, ATOMIC, COSMOS, FUSION, FISSION, NUCLEAR, POSITRON, and the like. It is generally well-tolerated. Adverse events that occurred include: Headache, insomnia, fatigue, nausea, dizziness, pruritis, upper respiratory tract infections, rash, back pain, grade 1 anemia, and grade 4 lymphopenia; however, the exact safety profile can only be judged when this drug is actually used on a large scale.

PMCID: PMC4231565

PMID: 25422576 [PubMed]

23: Bhattacharjee S, Layek A, Maitra S, Sen S, Pal S, Gozi NK. Perioperative glycemic status of adult traumatic brain injury patients undergoing craniotomy: a prospective observational study. *J Neurosurg Anesthesiol.* 2014 Oct;26(4):313-9. doi: 10.1097/ANA.000000000000057. PubMed PMID: 24633214.

BACKGROUND: Patients of traumatic brain injury (TBI) may have hyperglycemia and when they undergo craniotomy, hyperglycemia may be exacerbated and worsen outcome. However, epidemiology of perioperative hyperglycemia in these patients is unknown. The epidemiological study has been undertaken to address the correlation between intraoperative blood glucose variability in nondiabetic adult TBI patients undergoing craniotomy with the severity and type of brain trauma and patients' demographic variables.

METHODS: A total of 200 adult nondiabetic patients undergoing emergency craniotomy for TBI were recruited in this prospective single-group observational study. Baseline capillary blood glucose (CBG) measurement was performed immediately before induction of anesthesia and then at half hourly interval until the end of surgery and 1 hour after the end of surgery.

RESULTS: Incidence of at least 1 episode of intraoperative hyperglycemia (CBG \geq 180 mg/dL) is 20% in patients with TBI during emergency craniotomy. Independent predictors of intraoperative hyperglycemia are severe head injury (Glasgow-Coma score [GCS] <9) and acute subdural hemorrhage. Baseline CBG also correlates with subsequent intraoperative and postoperative CBG.

CONCLUSIONS: Hyperglycemia is common during emergency craniotomy in TBI patients. We recommend routine monitoring of blood glucose in the intraoperative and postoperative period at least in severe head injury patients.

PMID: 24633214 [PubMed - in process]

24: Bhattacharyya S, Kumar D. Small colony variants of *Staphylococcus aureus*: enemies with hidden weapons. *Indian J Med Microbiol.* 2014 Oct-Dec;32(4):460-1. doi: 10.4103/0255-0857.142237. PubMed PMID: 25297043.

25: Bindra A, Chouhan RS, Prabhakar H, Chandra PS, Tripathi M. Perioperative anesthetic implications of epilepsy surgery: a retrospective analysis. *J Anesth.* 2014 Oct 7. [Epub ahead of print] PubMed PMID: 25288505.

PURPOSE: Drug-resistant epilepsy (DRE) occurs in about 30 % of individuals with

epilepsy. For seizure control, a wide range of surgical procedures are performed, depending on the underlying pathology. To address the anesthetic and perioperative concerns in these patients, we analyzed the data of persons with DRE who underwent epilepsy surgery at our institute.

METHODS: A retrospective analysis of patients who underwent epilepsy surgery from 2005-2010 was performed. For data collection and analysis, patients were divided into three groups: Group I (temporal lobe epilepsy), Group II (extratemporal lobe epilepsy), and Group III (multilobar epilepsy and others).

RESULTS: A total of 241 surgical procedures were performed on 235 persons with DRE. The procedures included temporal (149) and extratemporal (47) lobe resection, hemispherotomy (31), corpus callosotomy (5), vagus nerve stimulation (3), and implantation of invasive cerebral electrodes (6). General anesthesia was the more common anesthetic technique; awake craniotomy was performed in only five cases. Intraoperative neuromonitoring was used most frequently in Group II. Patients in Group III had the longest intraoperative course and the greatest blood loss. The overall incidence of postoperative mechanical ventilation was 17.84 %, with 53.84 % of patients in Group III alone. At one-year follow-up, a good outcome was seen in 78 % of temporal lobe resection, 55 % of extratemporal cortical resection, 82 % of hemispherotomy, and 80 % of corpus callosotomy procedures.

CONCLUSIONS: Careful preoperative selection and meticulous perioperative management are the most significant factors for success of epilepsy surgery. Although temporal and extratemporal lobe surgeries have a fairly stable perioperative course, multilobar epilepsy requiring disconnective surgery poses a greater challenge.

PMID: 25288505 [PubMed - as supplied by publisher]

26: Bindra A, Chauhan M, Kumar N, Jain V, Chauhan V, Goyal K. Severe barotrauma resulting from subtle migration of tracheal tube: A nightmare. Saudi J Anaesth. 2014 Oct;8(4):572-3. doi: 10.4103/1658-354X.140917. PubMed PMID: 25422627; PubMed Central PMCID: PMC4236956.

27: Biswas B, Thakar A, Mohanti BK, Vishnubhatla S, Bakhshi S. Prognostic factors in head and neck Ewing sarcoma family of tumors. Laryngoscope. 2014 Oct 27. doi: 10.1002/lary.24985. [Epub ahead of print] PubMed PMID: 25345585.

OBJECTIVES/HYPOTHESIS: Data on the Ewing sarcoma family of tumors (ESFT) of the head and neck region with uniform chemotherapy protocols are minimal. We evaluated outcome and prognostic factors in these patients treated with a uniform chemotherapy protocol.

STUDY DESIGN: Single institution observational study.

METHODS: This is a single-institution review of patients treated between June 2003 and November 2011. Patients received neoadjuvant chemotherapy (NACT), surgery, and/or radiotherapy as a local treatment followed by adjuvant chemotherapy.

RESULTS: Thirty-five cases of head and neck ESFT were treated with a uniform chemotherapy protocol. The median age was 12 years (range, 1-43 years); three (9%) had metastases. Nine patients underwent surgery, of which eight received adjuvant radiotherapy; 23 received definitive radiotherapy post-NACT. At a median follow-up of 58 months (range. 3.7-133.7 months), 5-year event-free survival (EFS), overall survival (OS), and local control rate were 55.1±9.2%,

68.3±8.3%, and 74.1±8.5%, respectively. Multivariate analysis showed that baseline white blood cell (WBC) count independently prognosticated EFS (P=.04), with patients who had WBC ≤11,000/μL had superior EFS, although no difference for OS was observed.

CONCLUSIONS: This is one of the largest studies of head and neck ESFT treated with a uniform chemotherapy protocol with intent-to-treat analysis. Within the limitations of the small size, baseline low WBC count appeared to have a superior outcome.

LEVEL OF EVIDENCE: 2b Laryngoscope, 2014.

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PMID: 25345585 [PubMed - as supplied by publisher]

28: Chauhan NK, Mishra M, Singh S. Drug-resistant pulmonary tuberculosis presenting as mass lesion. *BMJ Case Rep.* 2014 Oct 29;2014. pii: bcr2014205207. doi: 10.1136/bcr-2014-205207. PubMed PMID: 25355747.

A 33-year-old woman presented with a 1-month history of dry cough, fever, reduced appetite and weight loss. She had taken antitubercular therapy about a year prior with partial improvement in symptoms. At initial presentation, a plain chest X-ray followed by a contrast-enhanced chest CT scan was advised. The CT scan image was suggestive of a right upper lobe mass lesion. Since the patient had no sputum production, a diagnostic flexible bronchoscopy was performed. The bronchoalveolar lavage fluid analysis along with ultrasonography-guided lung biopsy was diagnostic of multidrug-resistant tuberculosis.

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PMID: 25355747 [PubMed - in process]

29: Chauhan VK, Manchanda RK, Narang A, Marwaha RK, Arora S, Nagpal L, Verma SK, Sreenivas V. Efficacy of homeopathic intervention in subclinical hypothyroidism with or without autoimmune thyroiditis in children: an exploratory randomized control study. *Homeopathy.* 2014 Oct;103(4):224-31. doi: 10.1016/j.homp.2014.08.004. Epub 2014 Sep 27. PubMed PMID: 25439038.

INTRODUCTION: The decision to treat subclinical hypothyroidism (SCH) with or without autoimmune thyroiditis (AIT) in children, presents a clinical dilemma. This study was undertaken to evaluate the efficacy of individualized homeopathy in these cases.

METHODS: The study is an exploratory, randomized, placebo controlled, single blind trial. Out of 5059 school children (06-18 years) screened for thyroid disorders, 537 children had SCH/AIT and 194 consented to participate. Based on primary outcome measures (TSH and/or antiTPOab) three major groups were formed: Group A - SCH + AIT (n = 38; high TSH with antiTPOab+), Group B - AIT (n = 47; normal TSH with antiTPOab+) and Group C - SCH (n = 109; only high TSH) and were further randomized to two subgroups-verum and control. Individualized homeopathy or identical placebo was given to respective subgroup. 162 patients completed 18 months of study.

RESULTS: Baseline characteristics were similar in all the subgroups. The post treatment serum TSH (Group A and C) returned to normal limits in 85.94% of verum and 64.29% of controls (p < 0.006), while serum AntiTPOab titers (Group A and B) returned within normal limits in 70.27%of verum and 27.02%controls (p < 0.05). Eight children (10.5%) progressed to overt hypothyroidism (OH) from control group.

CONCLUSION: A statistically significant decline in serum TSH values and antiTPOab

titers indicates that the homeopathic intervention has not only the potential to treat SCH with or without antiTPOab but may also prevent progression to OH.

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PMID: 25439038 [PubMed - in process]

30: Chinna S, Das CJ, Sharma S, Singh P, Seth A, Purkait S, Mathur SR. Peripheral primitive neuroectodermal tumor of the kidney presenting with pulmonary tumor embolism: A case report. *World J Radiol.* 2014 Oct 28;6(10):846-9. doi: 10.4329/wjr.v6.i10.846. PubMed PMID: 25349668; PubMed Central PMCID: PMC4209430.

Peripheral primitive neuroectodermal tumor (PNET) of the kidney is a rare, aggressive tumor known for its recurrence and metastatic potential. Despite the frequency of venous extension to the renal veins and inferior vena cava, pulmonary tumor embolism at the initial presentation is not common. We report a case of 22-year-old female with PNET of the kidney who presented with tumor embolism in the inferior vena cava (IVC) and bilateral pulmonary artery. The patient underwent surgical resection and histopathological analysis confirmed the presence of tumor within the IVC and pulmonary arteries. The patient received adjuvant chemotherapy and is currently doing well on follow-up.

PMCID: PMC4209430

PMID: 25349668 [PubMed]

31: Dar L, Choudhary A. Ebola virus re-emergence: is it really knocking at our door? *Indian J Med Microbiol.* 2014 Oct-Dec;32(4):363. doi: 10.4103/0255-0857.142229. PubMed PMID: 25297017.

32: Darlong V, Biyani G, Baidya DK, Pandey R, Punj J. Air-Q blocker: A novel supraglottic airway device for patients with difficult airway and risk of aspiration. *J Anaesthesiol Clin Pharmacol.* 2014 Oct;30(4):589-90. doi: 10.4103/0970-9185.142904. PubMed PMID: 25425806; PubMed Central PMCID: PMC4234817.

33: Das P, Gahlot GP. A unique anal hepatoid adenoma in a human. *Histopathology.* 2014 Oct 3. doi: 10.1111/his.12571. [Epub ahead of print] PubMed PMID: 25284737.

34: Das P, Makharia GK. Gut-liver axis and disease infidelity: A subject worth exploring. *Indian J Gastroenterol.* 2014 Oct 3. [Epub ahead of print] PubMed PMID: 25274296.

35: Das U, Pogenberg V, Subhramanyam UK, Wilmanns M, Gourinath S, Srinivasan A. Crystal structure of the VapBC-15 complex from *Mycobacterium tuberculosis* reveals a two-metal ion dependent PIN-domain ribonuclease and a variable mode of toxin-antitoxin assembly. *J Struct Biol.* 2014 Oct 22;188(3):249-258. doi: 10.1016/j.jsb.2014.10.002. [Epub ahead of print] PubMed PMID: 25450593.

Although PIN (PilT N-terminal)-domain proteins are known to have ribonuclease activity, their specific mechanism of action remains unknown. VapCs form a family of ribonucleases that possess a PIN-domain assembly and are known as toxins. The activities of VapCs are impaired by VapB antitoxins. Here we present the crystal

structure of the VapBC-15 toxin-antitoxin complex from *Mycobacterium tuberculosis* determined to 2.1Å resolution. The VapB-15 and VapC-15 components assemble into one heterotetramer (VapB2C2) and two heterotrimers (VapBC2) in each asymmetric unit of the crystal. The active site of VapC-15 toxin consists of a cluster of acidic amino acid residues and two divalent metal ions, forming a well organised ribonuclease active site. The distribution of the catalytic-site residues of the VapC-15 toxin is similar to that of T4 RNase H and of *Methanococcus jannaschii* FEN-1, providing strong evidence that these three proteins share a similar mechanism of activity. The presence of both VapB2C2 and VapBC2 emphasizes the fact that the same antitoxin can bind the toxin in 1:1 and 1:2 ratios. The crystal structure determination of the VapBC-15 complex reveals for the first time a PIN-domain ribonuclease protein that shows two metal ions at the active site and a variable mode of toxin-antitoxin assembly. The structure further shows that VapB-15 antitoxin binds to the same groove meant for the binding of putative substrate (RNA), resulting in the inhibition of VapC-15's toxicity.

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PMID: 25450593 [PubMed - as supplied by publisher]

36: Dasgupta A, Mahapatra M, Saxena R. A study for proposal of use of regulatory T cells as a prognostic marker and establishing an optimal threshold level for their expression in chronic lymphocytic leukemia. *Leuk Lymphoma*. 2014 Oct 28;1-8. [Epub ahead of print] PubMed PMID: 25263321.

Although regulatory T cells (Tregs) have been extensively studied in chronic lymphocytic leukemia, there is no uniform guideline or consensus regarding their use as a prognostic marker. This study describes the methodology used to develop an optimal threshold level for Tregs in these patients. Treg levels were assessed in the peripheral blood of 130 patients and 150 controls. Treg frequencies were linked to established prognostic markers as well as overall survival and time to first treatment. The cut-offs for Treg positivity were assessed by receiver operating characteristic (ROC) analysis. A cut-off of 5.7% for Treg cell percentage and of 35 cells/ μ L for absolute Treg cell count were determined as optimal in patients with CLL along with a median Treg percentage of 15.5% used to separate patients with low- and high-risk disease. The experiments presented here will possibly aid in the use of Treg frequencies as a potential prognostic marker in CLL.

PMID: 25263321 [PubMed - as supplied by publisher]

37: de-Madaria E, Garg PK. Fluid therapy in acute pancreatitis - aggressive or adequate? Time for reappraisal. *Pancreatology*. 2014 Nov-Dec;14(6):433-5. doi: 10.1016/j.pan.2014.09.008. Epub 2014 Oct 2. PubMed PMID: 25455538.

38: Deorari A, Vidyasagar D. Editorial: current status and future prospects of neonatal care in India. *Indian J Pediatr*. 2014 Nov;81(11):1196-7. doi: 10.1007/s12098-014-1597-y. Epub 2014 Oct 15. PubMed PMID: 25316529.

39: Dhingra R, Srivastava S, Behra S, Vadiraj PK, Venuthurimilli A, Shalimar, Dash NR, Madhusudhan KS, Gamanagatti SR, Garg PK. Single or multiport percutaneous endoscopic necrosectomy performed with the patient under conscious sedation is a safe and effective treatment for infected pancreatic necrosis (with video). *Gastrointest Endosc*. 2015 Feb;81(2):351-9. doi: 10.1016/j.gie.2014.07.060. Epub 2014 Oct 5. PubMed PMID: 25293824.

BACKGROUND: Infected pancreatic necrosis (IPN) is a dreaded adverse event of acute pancreatitis (AP). Most patients with IPN require drainage and necrosectomy, preferably by a minimally invasive method.

OBJECTIVE: To study the success and safety of an alternative form of minimally invasive necrosectomy for IPN.

DESIGN: Observational study.

SETTING: Tertiary care academic center.

PATIENTS: Consecutive patients with IPN formed the study group.

INTERVENTION: Patients with IPN were initially treated conservatively including percutaneous drainage. Those who failed to improve underwent percutaneous endoscopic necrosectomy (PEN). Single- or multiport PEN was performed by using a flexible endoscope through the percutaneous tract. PEN involved vigorous lavage and suction followed by necrosectomy. Multiple sessions were undertaken depending on the size and number of collections and the amount of necrotic debris.

MAIN OUTCOME MEASUREMENTS: Control of sepsis and resolution of collection(s) without the need for surgical necrosectomy.

RESULTS: During the period from October 2012 to July 2013, 165 patients (mean age, 38.82 ± 14.99 years; 119 male patients) were studied. Of them, 103 patients had necrotizing pancreatitis and IPN had developed in 74. Of these 74 patients with IPN, 15 underwent PEN after a mean interval of 39.2 days. Fourteen of the 15 patients improved after a mean of 5 sessions of PEN. Two of 15 patients had minor adverse events: self-limiting bleeding and pancreatic fistula in 1 patient each. One patient required surgery but died of organ failure.

LIMITATIONS: Lack of a control arm.

CONCLUSION: PEN is a safe and effective minimally invasive technique for necrosectomy for IPN.

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PMID: 25293824 [PubMed - in process]

40: Dhull VS, Karunanithi S, Arora S, Jain TK, Kumar R. Diuretic 68Ga DOTANOC PET/CT in imaging of bladder paraganglioma. Clin Nucl Med. 2014 Oct;39(10):915-6. doi: 10.1097/RLU.0000000000000389. PubMed PMID: 24566403.

Urinary bladder paragangliomas are exceedingly rare tumors. A 22-year-old woman with bladder paraganglioma underwent Ga DOTANOC PET/CT for proper localization of the primary tumor and to rule out locoregional and distant metastases. Ga DOTANOC-avid bladder mass was detected with no other abnormal site of radiotracer uptake elsewhere. Although radioactive urine can mask urinary paragangliomas, diuretic method can aid tumor detection by Ga DOTANOC PET/CT.

PMID: 24566403 [PubMed - in process]

41: Dwivedi R, Gupta YK, Singh M, Joshi R, Tiwari P, Kaleekal T, Tripathi M. Correlation of saliva and serum free valproic acid concentrations in persons with epilepsy. Seizure. 2014 Oct 24. pii: S1059-1311(14)00279-9. doi: 10.1016/j.seizure.2014.10.010. [Epub ahead of print] PubMed PMID: 25455060.

PURPOSE: Therapeutic drug monitoring (TDM) of antiepileptic drugs (AEDs) in serum is frequently used in clinical settings however saliva could be an alternative to measure free concentration of drugs. In the present study, we observed the possible correlation of VPA concentration between serum and saliva in persons

with epilepsy (PWE).

METHODS: A total of 59 paired serum and saliva samples were assayed from 65 consecutive PWE (51 males and 14 females; age range 9-65 years). Patients were subjected to either VPA monotherapy or its combination with other AEDs for at least three months. Steady state trough concentration of unbound VPA drug was quantified using HPLC. The correlation between serum and saliva free VPA concentration was evaluated.

RESULTS: Out of 65 patients, 27 were on monotherapy of VPA and 38 were on VPA with other antiepileptic drugs. Saliva VPA concentration significantly correlated with serum free VPA concentration ($p < 0.05$). Poor correlation was observed between serum and saliva VPA concentration with the daily dose ($p > 0.05$) respectively.

CONCLUSIONS: Our study reveals that serum and saliva VPA concentrations are significantly associated in PWE. These associations may facilitate monitoring and evaluation of VPA levels non-invasively for PWE.

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PMID: 25455060 [PubMed - as supplied by publisher]

42: Faiq MA, Ali M, Dada T, Dada R, Saluja D. A novel methodology for enhanced and consistent heterologous expression of unmodified human cytochrome P450 1B1 (CYP1B1). PLoS One. 2014 Oct 16;9(10):e110473. doi: 10.1371/journal.pone.0110473. eCollection 2014. PubMed PMID: 25329831; PubMed Central PMCID: PMC4199734.

Cytochrome P450 1B1 (CYP1B1) is a universal cancer marker and is implicated in many other disorders. Mutations in CYP1B1 are also associated with childhood blindness due to primary congenital glaucoma (PCG). To understand the CYP1B1 mediated etiopathology of PCG and pathomechanism of various cancers, it is important to carry out its functional studies. Heterologous expression of CYP1B1 in prokaryotes is imperative because bacteria yield a higher amount of heterologous proteins in lesser time and so the expressed protein is ideal for functional studies. In such expression system there is no interference by other eukaryotic proteins. But the story is not that simple as expression of heterologous CYP1B1 poses many technical difficulties. Investigators have employed various modifications/deletions of CYP N-terminus to improve CYP1B1 expression. However, the drawback of these studies is that it changes the original protein and, as a result, invalidates functional studies. The present study examines the role of various conditions and reagents in successful and consistent expression of sufficient quantities of unmodified/native human CYP1B1 in *E. coli*. We aimed at expressing CYP1B1 in various strains of *E. coli* and in the course developed a protocol that results in high expression of unmodified protein sufficient for functional/biophysical studies. We examined CYP1B1 expression with respect to different expression vectors, bacterial strains, types of culture media, time, Isopropyl β -D-1-thiogalactopyranoside concentrations, temperatures, rotations per minute, conditioning reagents and the efficacy of a newly described technique called double colony selection. We report a protocol that is simple, easy and can be carried out in any laboratory without the requirement of a fermentor. Though employed for CYP1B1 expression, this protocol can ideally be used to express any eukaryotic membrane protein.

PMCID: PMC4199734

PMID: 25329831 [PubMed - in process]

43: Faruq M, Srivastava AK, Suroliya V, Kumar D, Garg A, Shukla G, Behari M. Identification of FXTAS presenting with SCA 12 like phenotype in India. Parkinsonism Relat Disord. 2014 Oct;20(10):1089-93. doi: 10.1016/j.parkreldis.2014.07.001. Epub 2014 Jul 17. PubMed PMID: 25085749.

BACKGROUND: Fragile X-associated Tremor/Ataxia syndrome (FXTAS) is a clinically heterogeneous disorder characterized predominantly by tremor, followed by late onset gait ataxia, autonomic dysfunction and/or cognitive impairment. We aimed to screen FMR1-CGG repeats in our cohort of progressive late-onset cerebellar ataxia/tremor cohort to characterize the occurrence of FXTAS in India.

METHODS: We have screened FMR1-CGG repeats in 109 patients and 173 healthy control subjects. Our cohort comprised: a) group of patients with predominant cerebellar ataxia and/or tremor. b.) suspected cases of MSA and c.) patients who presented SCA12-like neurological manifestations (late onset predominant tremor and/or ataxia). All the cases were ruled out for known triplet-repeat-expansion (TRE) SCA mutations.

RESULTS: We have found three FMR1-premutation carriers among the cases. Two of them (with CGG-96 and CGG-102) were under evaluation for their SCA12-like manifestations and another (CGG-78) had progressive gait ataxia. Overall the frequency of FXTAS in our cohort was found to be 3.3% among cases of late onset cerebellar-ataxia/tremor; however, incidences were higher among cases with SCA12-like syndrome (9%, 2/23).

CONCLUSION: Finding FXTAS in patients with SCA12-like manifestation suggests that TRE in the 5'UTR of the gene is the common cue connecting two disorders with common phenotype of tremor/ataxia. This knowledge might shed light upon their sharing of molecular neuropathology.

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PMID: 25085749 [PubMed - in process]

44: Faruq M, Narang A, Kumari R, Pandey R, Garg A, Behari M, Dash D, Srivastava AK, Mukerji M. Novel mutations in typical and atypical genetic loci through exome sequencing in autosomal recessive cerebellar ataxia families. *Clin Genet.* 2014 Oct;86(4):335-41. doi: 10.1111/cge.12279. Epub 2013 Oct 13. PubMed PMID: 24102492.

Nearly a thousand mutations mapping to 60 different loci have been identified in cerebellar ataxias. However, almost 50% of the cases remain genetically uncharacterized and there is a difference in prevalence as well as in the phenotypic spectrum of ataxia among various geographical regions. This poses a challenge for setting up a genetic panel for screening ataxia. In our ataxic cohort of 1014 families, 61% are genetically uncharacterized (UC). We investigated the potential of whole exome sequencing in conjunction with homozygosity mapping (HM) to delineate the genetic defects in three uncharacterized families with recessive inheritance each manifesting some unusual phenotype: (i) infantile onset ataxia with hearing loss (IOAH), (ii) Juvenile onset cerebellar ataxia with seizures (JCS) and (iii) Friedreich ataxia-like (FA-like). We identified a novel missense mutation in *c10orf2* in the family with IOAH, compound heterozygous mutations in *CLN6* in the family with JCS and a homozygous frame-shift mutation in *SACS* in the FA-like patient. Phenotypes observed in our families were concordant with reported phenotypes of known mutations in the same genes thus obviating the need for functional validation. Our study revealed novel variations in three genes, *c10orf2*, *CLN6*, and *SACS*, that have so far not been reported in India. This study also demonstrates the utility of whole exome screening in clinics for early diagnosis.

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PMID: 24102492 [PubMed - in process]

45: Garg A, Chopra S, Ballal S, Soundararajan R, Bal CS. Differentiated thyroid

cancer in patients over 60years of age at presentation: A retrospective study of 438 patients. *J Geriatr Oncol*. 2015 Jan;6(1):29-37. doi: 10.1016/j.jgo.2014.09.182. Epub 2014 Oct 3. PubMed PMID: 25287965.

OBJECTIVES: The aim of this study is to identify the prognostic factors predicting remission and subsequent disease relapse in patients with differentiated thyroid cancer (DTC) greater than 60years of age.

MATERIALS AND METHODS: The institute thyroid cancer database had 4370 patients with DTC, of which 447 (10%) were aged>60. However, 9 patients were excluded due to follow-up less than 1year. The prognostic factors in the remaining 438 patients were studied.

RESULTS: Among the 438 patients, 311 (71%) had only loco-regional disease (M0) and 127 (29%) had distant metastases (M1) at the time of initial presentation. The host factors predictive of distant metastases at presentation were female gender, primary tumor size (>4cm), follicular histology, and extra-thyroidal extension. Among M0 patients, 195 (63%) achieved complete remission while only 12 (9%) M1 patients did so. Average number of radioactive iodine ((131)I) doses administered to achieve complete remission was 2.3 (range, 1-6) and the mean cumulative dose was 3404MBq (range, 925-46,250MBq). In multivariate logistic regression among M0 patients, follicular histology, nodal metastases, and surgical treatment lesser than total/near-total thyroidectomy and among M1 patients, site of distant metastases (skeletal and multiple sites) were independent factors predicting non-remission. Among the patients (both M0 and M1) who achieved remission, factors associated with disease recurrence were primary tumor size (>4cm), nodal metastases, pulmonary metastases, and non-remission after first dose of radioactive iodine and were associated with greater chances of disease relapse.

CONCLUSION: This study highlights that DTC in older patients behaves more aggressively than in adults age<60years, and identifies several prognostic factors for remission and subsequent relapse.

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PMID: 25287965 [PubMed - in process]

46: Garg K, Satyarthee GD, Singla R, Sharma BS. Extensive long-segment cervicothoracic traumatic spinal epidural hematoma with avulsion of C7, C8, and T1 nerve roots. *J Neurosci Rural Pract*. 2014 Oct;5(4):414-6. doi: 10.4103/0976-3147.140007. PubMed PMID: 25288853; PubMed Central PMCID: PMC4173248.

Traumatic spinal epidural hematoma (TSEH) is of rare clinical occurrence. We report a case of a young man with posttraumatic long-segment spinal epidural hematoma. Evacuation of the hematoma led to complete neurologic recovery in our patient. Our case highlights the importance of early diagnosis and prompt surgical intervention for the evacuation of hematoma in preservation or maximum recovery of neurologic function. Imaging findings, management options, and the relevant literature are reviewed.

PMCID: PMC4173248

PMID: 25288853 [PubMed]

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Hereditary hemorrhagic telangiectasia (HHT), also known by the eponym Osler-Weber-Rendu syndrome, is a group of related disorders inherited in an autosomal dominant fashion and characterized by the development of arteriovenous malformations (AVM) in the skin, mucous membranes, and/or internal organs such as brain, lungs, and liver. Its prevalence is currently estimated at one in 5,000 to 8,000. Most cases are due to mutations in the endoglin (HHT1) or ACVRLK1 (HHT2) genes. Telangiectasias in nasal and gastrointestinal mucosa generally present with recurrent/chronic bleeding and iron deficiency anemia. Larger AVMs occur in lungs (~40%-60% of affected individuals), liver (~40%-70%), brain (~10%), and spine (~1%). Due to the devastating and potentially fatal complications of some of these lesions (for example, strokes and brain abscesses with pulmonary AVMs), presymptomatic screening and treatment are of utmost importance. However, due to the rarity of this condition, many providers lack an appreciation for the whole gamut of its manifestations and complications, age-dependent penetrance, and marked intrafamilial variation. As a result, HHT remains frequently underdiagnosed and many families do not receive the appropriate screening and treatments. This article provides an overview of the clinical features of HHT, discusses the clinical and genetic diagnostic strategies, and presents an up-to-date review of literature and detailed considerations regarding screening for visceral AVMs, preventive modalities, and treatment options.

PMCID: PMC4206399

PMID: 25342923 [PubMed]

49: Garg PK. Inflammatory pseudotumor of urinary bladder: Beware lest we forget. *Urol Ann.* 2014 Oct;6(4):390-1. doi: 10.4103/0974-7796.141013. PubMed PMID: 25371628; PubMed Central PMCID: PMC4216557.

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51: Gnanavel S, Robert R. Psychoeducation: the dual advantage! *Clin Teach.* 2014 Oct;11(6):494. doi: 10.1111/tct.12265. PubMed PMID: 25212947.

52: Gnanavel S, Sharan P, Khandelwal S, Sharma U, Jagannathan NR. Neurochemicals measured by (1)H-MR spectroscopy: putative vulnerability biomarkers for obsessive compulsive disorder. *MAGMA.* 2014 Oct;27(5):407-17. doi: 10.1007/s10334-013-0427-y. Epub 2013 Dec 12. PubMed PMID: 24338164.

OBJECT: Obsessive compulsive disorder (OCD) is the fourth most common psychiatric disorder characterized by recurrent, intrusive thoughts and repetitive, ritualistic behaviors that are debilitating to the patient. Despite its high prevalence and the attendant morbidity, the pathophysiology of OCD remains unclear. Magnetic resonance spectroscopy (MRS) provides a noninvasive method to characterize the molecular biochemistry that may contribute to the pathophysiology of OCD. This study aimed to identify alterations in neurochemical measures that are specific to OCD using in vivo proton ((1)H) MRS of the caudate

nucleus, anterior cingulate cortex, and medial thalamus in these patients, and to identify their role as vulnerability markers by comparing them with the healthy first degree relatives of these patients and healthy controls.

MATERIALS AND METHODS: Appropriate psychometric instruments were applied in the study population followed by (1)H- MRS. The absolute neurochemical measures were quantified using a linear combination model.

RESULTS: Significant differences in neurochemical measures were demonstrated in two of the three candidate regions (except the medial thalamus) between the three study groups.

CONCLUSIONS: Our results lend support to the neurodegenerative hypothesis of OCD, and also raise the possibility of exploring these neurochemical measures (as measured by MRS) as putative vulnerability biomarkers in OCD that may aid in early identification and devising early prevention or management strategies for the population vulnerable to OCD.

PMID: 24338164 [PubMed - in process]

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54: Golechha M, Sarangal V, Bhatia J, Chaudhry U, Saluja D, Arya DS. Naringin ameliorates pentylenetetrazol-induced seizures and associated oxidative stress, inflammation, and cognitive impairment in rats: Possible mechanisms of neuroprotection. *Epilepsy Behav*. 2014 Dec;41:98-102. doi: 10.1016/j.yebeh.2014.09.058. Epub 2014 Oct 14. PubMed PMID: 25461197.

Oxidative stress and cognitive impairment are associated with PTZ-induced convulsions. Naringin is a bioflavonoid present in the grapefruit. It is a potent antioxidant, and we evaluated its effect on PTZ-induced convulsions. Rats were pretreated with normal saline, naringin (20, 40, and 80mg/kg, i.p.), or diazepam (5mg/kg, i.p.) 30min prior to the administration of PTZ. The administration of PTZ induced myoclonic jerks and generalized tonic-clonic seizures (GTSs). We observed that naringin significantly prolonged the induction of myoclonic jerks dose-dependently. Naringin (80mg/kg, i.p.) pretreatment protected all rats, and this protective effect was annulled by the GABAA receptor antagonist, flumazenil. In addition, naringin reduced brain MDA and TNF- α levels and conserved GSH. The pretreatment also enhanced the performance of rats in the passive avoidance task. Our observations highlight the antioxidant, antiinflammatory, and anticonvulsant potential of naringin. Also, naringin modulates the GABAA receptor to produce anticonvulsant effects and to ameliorate cognitive impairment.

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PMID: 25461197 [PubMed - in process]

55: Goudra BG, Singh PM. Propofol alternatives in gastrointestinal endoscopy anesthesia. *Saudi J Anaesth*. 2014 Oct;8(4):540-5. doi: 10.4103/1658-354X.140893. Review. PubMed PMID: 25422614; PubMed Central PMCID: PMC4236943.

Although propofol has been the backbone for sedation in gastrointestinal endoscopy, both anesthesiologists and endoscopists are faced with situations where an alternative is needed. Recent national shortages forced many physicians to explore these options. A midazolam and fentanyl combination is the mainstay in this area. However, there are other options. The aim of this review is to explore these options. The future would be, invariably, to move away from propofol. The

reason is not in any way related to the drawbacks of propofol as a sedative. The mandate that requires an anesthesia provider to administer propofol has been a setback in many countries. New sedative drugs like Remimazolam might fill this void in the future. In the meantime, it is important to keep an open eye to the existing alternatives.

PMCID: PMC4236943

PMID: 25422614 [PubMed]

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Epilepsy is defined as two or more unprovoked seizures. Epileptic patients have intellectual disability and behavioral co-morbidities to the tune of up to 25 and 75% respectively. Various factors like underlying etiology, socioeconomic environment at home, age at onset, seizure semiology, seizure descriptors like duration, severity and frequency, therapy related adverse effects secondary to antiepileptic drugs and epilepsy surgery have been implicated for the causation of cognitive and behavioral impairment in epilepsy. Cognitive epilepsy has emerged as a specific entity. This may manifest as a transient behavioral or cognitive change, insidious onset subacute to chronic encephalopathy or more catastrophic in the form of nonconvulsive status epilepticus. Cognitive impairment seen in epileptic children include difficulties in learning, memory, problem solving as well as concept formation. Anxiety, depression and attention deficit hyperkinetic disorders are the most common psychiatric co-morbidities seen. Investigating a child with epilepsy for cognitive and behavioral impairment is difficult as these tests would require cooperation from the patient's side to a significant extent. A rational approach towards treatment would be judicious selection of antiepileptic drugs, treatment of underlying cause, appropriate management of behavioral co-morbidities including psychopharmacotherapy and a trial of immunotherapy (particularly in cognitive epilepsies), wherever appropriate.

PMID: 25073691 [PubMed - in process]

58: Guleria R, Jyothidasan A, Madan K, Mohan A, Kumar R, Bhalla AS, Malhotra A. Utility of FDG-PET-CT scanning in assessing the extent of disease activity and response to treatment in sarcoidosis. *Lung India.* 2014 Oct;31(4):323-30. doi: 10.4103/0970-2113.142092. PubMed PMID: 25378838; PubMed Central PMCID: PMC4220312.

BACKGROUND: Radionuclide imaging modalities have increasingly been evaluated in the assessment of organ involvement in sarcoidosis. Fluoro-deoxyglucose positron emission tomography-computed tomography (FDG-PET-CT) scanning has received increasing attention in the recent years. The aim of our study was to evaluate the utility of FDG-PET-CT in determining the extent of organ involvement and disease activity in patients of sarcoidosis and to assess its utility in the evaluation of response to therapy. The secondary objective was to compare the agreement between clinical, radiological (HRCT) and metabolic indices (FDG-PET-CT) of disease activity.

MATERIALS AND METHODS: This was a prospective observational study conducted between March 2007 and December 2008 at a tertiary care referral center in north

India. Twenty-five symptomatic and histopathologically proven cases of sarcoidosis underwent FDG-PET-CT scanning at baseline and a follow-up scan in 21 patients at 6-9 months post-treatment with glucocorticoids.

RESULTS: FDG-PET-CT scan detected metabolic disease activity in 24 of the 25 patients with clinically active sarcoidosis. It also demonstrated many clinically inapparent sites of disease activity. Complete or partial metabolic response was seen in 17 of the 21 patients in whom a follow-up scan was available. Substantial degree of agreement was found between the metabolic response and the radiological response, whereas moderate agreement was found between clinical and metabolic responses.

CONCLUSIONS: FDG-PET-CT scanning is a useful imaging modality to assess disease activity, extent of disease involvement and response to treatment in clinically active sarcoidosis. There is substantial agreement between the HRCT and metabolic parameters of disease activity. Further, large sample size studies are proposed in order to identify the subset of patients who are likely to benefit the most from this sensitive modality of imaging, especially in developing countries where the cost of the procedure is an important concern.

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PMID: 25378838 [PubMed]

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BACKGROUND: Vitiligo has a significant psychological impact which needs to be evaluated separately from the extent of depigmentation. We have developed a vitiligo-specific quality-of-life (QoL) instrument, Vitiligo Impact Scale-22 (VIS-22) for this purpose.

OBJECTIVES: To study the measurement properties of VIS-22 and compare it with the Dermatology Life Quality Index (DLQI) and Skindex-16.

METHODS: Item-reduction analysis was used to reduce the number of items in the original VIS from 27 to 22. The 5-point Physician's Global Assessment (PGA) was used to evaluate the QoL followed by a Visual Analogue Scale (VAS) to assess patient-perceived severity. VIS-22, DLQI and Skindex-16 were self-administered. The validity of the VIS-22 was assessed in 161 patients, reliability in 69 patients and responsiveness in 72 patients and compared with DLQI and Skindex-16.

RESULTS: Criterion validity was shown by strong correlation of VIS-22 with VAS ($r = 0.7076$). Convergent validity was evidenced by strong correlations with DLQI ($r = 0.71$) and Skindex-16 ($r = 0.72$). Known-groups validity was demonstrated by significantly higher scores in females, those with less education, patients with progressive disease and patients with vitiligo compared with controls ($P < 0.001$). Reliability was shown by excellent correlation of the scores between baseline and 2 weeks ($r = 0.9053$). VIS-22 was found to be responsive with scores at 12 weeks moving parallel to scores on VAS. Similar trends were noted with DLQI and Skindex-16.

CONCLUSIONS: VIS-22 is a valid, reliable and responsive QoL instrument. It is comparable to DLQI and Skindex-16 in its measurement properties, while being specific to the needs of patients with vitiligo.

PMID: 24805089 [PubMed - in process]

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Clonorchis sinensis or the Chinese liver fluke is one of the most prevalent parasites affecting a major population in the oriental countries. The parasite lacks lipid generating mechanisms but is exposed to fatty acid rich bile in the liver. A secretory phospholipase A2, an enzyme that breaks down complex lipids, is important for the growth of the parasite. The enzyme is also implicated in the pathogenesis leading up to the hepatic fibrosis and its complications including cancer. The five isoforms of this particular enzyme from the parasite therefore qualify as potential drug targets. In this study, a detailed structural and ligand binding analysis of the isoforms has been done by modeling. The overall three dimensional structures of the isoforms are well conserved with three helices and a β -wing stabilized by four disulfide bonds. There are characteristic differences at the calcium binding loop, hydrophobic channel and the C-terminal domain that can potentially be exploited for drug binding. But the most significant feature pertains to the catalytic site where the isoforms exhibit three variations of either a histidine-aspartate-tyrosine or histidine-glutamate-tyrosine or histidine-aspartate-phenylalanine. Molecular docking studies show that isoform specific residues and their conformations in the substrate binding hydrophobic channel make unique interactions with certain inhibitor molecules resulting in a perfect tight fit. The proposed ligand molecules have a predicted affinity in micro-molar to nano-molar range. Interestingly, few of the ligand binding interaction patterns is in accordance to the phylogenetic studies to thereby establish the usefulness of evolutionary mechanisms in aiding ligand design. The molecular diversity of the parasitic PLA2 described in this study provides a platform for personalized medicine in the therapeutics of clonorchiasis.

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OBJECTIVE: Immunohistochemistry for p40 has emerged as a clinically applicable tool with high sensitivity and specificity to distinguish lung adenocarcinoma and squamous cell carcinoma (SCC). It appears to be an excellent marker for squamous

differentiation. Although application of p40 in cell blocks has been reported, its expression has not been described in cytology smears. The aim was to study the expression of p40 in fine needle aspirates of SCC of the lung and to analyse differences in immunoreactivity in variably differentiated SCC.

METHODS: The study used aspirates of lung masses diagnosed as SCC over a period of 2 years. p40 immunocytochemistry was performed on destained Papanicolaou smears. Nuclear staining was semi-quantitatively evaluated as 0, 1 + , 2 + and 3 + based on the percentage positivity of tumour cells and was correlated with differentiation of the tumour. Adequate unmatched histology (50 biopsies) and cytology (25 smears) controls were taken for comparison.

RESULTS: A total of 45 cases of primary and five cases of metastatic pulmonary SCC were identified. There were 17 well, 24 moderately and nine poorly differentiated SCC. p40 immunoreactivity was 2-3 + in all moderate and poorly differentiated tumours, however, negative to 1 + in all well-differentiated carcinomas ($P < 0.0001$).

CONCLUSION: p40 immunostain is a valuable stain in identifying lung SCCs and works well in aspiration smears. The pattern of positivity varies with the differentiation of the tumour and is seen prominently in higher grade SCC where in practice the need arises for distinguishing them from either poorly differentiated adenocarcinomas or non-small cell carcinoma, not otherwise specified.

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CONTEXT: Cirrhosis of liver is an important cause of morbidity and mortality and if associated with peripheral neuropathy (PN) it also poses a huge financial, psychological burden for the patients and their families.

AIM: The aim of the present study was to study the magnitude of PN among subjects with cirrhosis of liver presenting to tertiary care teaching hospital in central rural India.

SETTINGS AND DESIGN: A cross-sectional study was performed in a tertiary care teaching hospital.

MATERIALS AND METHODS: In all patients of cirrhosis of liver irrespective of etiology, aged 15 and above, undergone clinical assessment for peripheral nervous systems damage and confirmed by nerve conduction studies.

STATISTICAL ANALYSIS USED: We used chi square test to study associations. P value ≤ 0.05 was considered as significant. Crude odds ratios were computed to assess the strength of association between independent variables and dependent variables along with their 95% confidence intervals.

RESULTS: We included 207 of cirrhosis of liver patients admitted in medicine department from November 2010 through November 2013. Nearly 83% patients were male and 63.2% patients were under the age of 45 years. Common features in these patients were ascites (71%) splenomegaly (63.3%) pedal edema (61.4%) icterus (46.4%) tingling (44.9%) gastrointestinal bleeding (39.1%), ataxia (26.6%), numbness (26.6%), distal motor weakness (21.7%) and paresthesia (20.8%). Among the manifestation of peripheral nerve involvement, loss of ankle reflex was the most

common feature in 51.7%, followed by loss of temperature sense 29.5%, loss of vibration sense 20.8%, loss of touch 16.4%, loss of position sense 14.5% and loss of pain in 6.3% of the patients. Peripheral neuropathy was found in 53.6% [95% CI: 46.58- 60.56] study subjects on electrophysiological study.

CONCLUSIONS: Analysis of electrophysiological study shows that the PN is very common in study subjects with cirrhosis of liver, especially in male subjects, during the middle age group.

PMCID: PMC4251014

PMID: 25506162 [PubMed]

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Transient Patellar dislocations are commonly associated with bony contusions or osteochondral fractures involving the medial facet of patella or lateral femoral condyle. Simultaneous osteochondral fractures are rare and have not been reported in the adult. The authors report a case of combined osteochondral fracture of patella and lateral femoral condyle following acute patellar dislocation in an adult, which was misdiagnosed as meniscal injury. Both the osteochondral fracture fragments were rigidly fixed with headless compression screws and repair of the medial retinaculum was done. At latest follow up after two years, patient had regained full range of motion with no further episodes of patellar dislocation. The rarity of this combination of injury along with difficulty in interpreting radiographs makes this case interesting.

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70: Kapil U, Kabra M, Prakash S, Sareen N, Khenduja P. Iodine nutritional status among neonates in the Solan district, Himachal Pradesh, India. *J Community Health.* 2014 Oct;39(5):987-9. doi: 10.1007/s10900-014-9845-7. PubMed PMID: 24563104.

Iodine nutrition status amongst neonates can be assessed by estimating thyroid

stimulating hormone (TSH). According to WHO, if more than 3 % of the neonates have TSH levels of 5 mIU/l and more in a population, it indicates presence of iodine deficiency (ID). Iodine deficiency is an endemic health problem in Solan district, Himachal Pradesh (HP) state. ID leads to mental retardation, deaf mutism, squint, dwarfism, spastic diplegia, neurological defects and congenital anomalies. The aim is to determine iodine nutrition status of neonates of Solan district. In Solan district, six hospitals/community health centers providing obstetric services and conducting more than 100 deliveries per annum were identified and enlisted. Two hospitals were selected keeping in view of operational feasibility. A total of 683 umbilical cord blood samples of neonates were collected on filter paper and analyzed for TSH. It was found that 63.2 % of the neonates had TSH levels of more than 5 mIU/l indicating iodine deficiency in the Solan district. Iodine deficiency was a public health problem in Solan district, HP.

PMID: 24563104 [PubMed - in process]

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BACKGROUND: Lethality of suicidal attempt provides useful information regarding the behavior. There is a perceived need for a clinically useful scale that can be easily adapted to various methods and circumstances of attempt.

AIMS: The study intended to develop and test utility of a scale for measuring lethality that can reflect overall clinical observation taking into account various indicators of lethality and which can be used across clinical scenarios involving different methods.

SETTINGS AND DESIGN: Cross-sectional study in a hospital.

MATERIALS AND METHODS: The scale for assessment of lethality of suicide attempt (SALSA) has two components: The first component has four items indicating seriousness of the attempt and its likely consequences and the second component is the global impression of lethality. All the items are scored from 1 to 5, higher scores suggestive of increased lethality. SALSA was used to evaluate lethality of 82 consecutive suicide attempters; and it was compared with lethality of suicide attempt rating scale (LSARS) and risk-rescue rating scale.

STATISTICAL ANALYSIS: Chi-square, t-test, analysis of variance, Cronbach's alpha, binary logistic regression.

RESULT: There was significant correlation of SALSA score with that of LSARS ($r: 0.89$) and risk score of risk-rescue rating ($r: 0.93$, $P < 0.001$); and negative correlation with rescue score ($r: -0.569$; $P < 0.001$). Internal consistency reliability of SALSA was high (Cronbach's alpha: 0.94). Lethality scores of SALSA differentiated known groups with different lethality, e.g. deceased and survived; attempters with different levels of medical intervention: In-patient only, intensive care, ventilator support. SALSA score significantly predicted the lethal outcome (odds ratio: 3.2, confidence interval: 1.12-8.98).

CONCLUSION: SALSA is a useful instrument for assessment of lethality of suicidal behaviors during clinical evaluations considering the ease of administration, its

ability to differentiate clinical groups with known variations of lethality and clinical outcomes.

PMCID: PMC4279290

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Melanoma of the uveal tract is the most common primary intraocular tumor in adults. With advances in genetic research and the open source access of genetic databases, new insights are emerging into the molecular changes of this cancer. As with most other tumors, the driving force behind such research is the hope of finding and developing new modalities for therapeutic purposes, prognosticating disease and understanding risk factors for metastasis. With advances in proteomics, cytogenetics and gene profiling, the stage is set to unearth the underlying genetic basis which can in the future be a target of therapeutic modalities. This article describes the cytogenetic, molecular pathogenesis, and prognostic factors along with the most important findings and their attribution to current and future management of uveal melanoma.

PMID: 25296731 [PubMed - in process]

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BACKGROUND & OBJECTIVES: Deficiency of vitamin D, an immunomodulator agent, is associated with increased susceptibility to tuberculosis in adults, but only limited studies are available in the paediatric age group, especially regarding association of vitamin D with type and outcome of tuberculosis. We conducted this study to determine the baseline 25-hydroxy vitamin D levels in children suffering from intrathoracic tuberculosis and its association with type and outcome of tuberculosis.

METHODS: Children with intrathoracic tuberculosis, diagnosed on the basis of clinico-radiological criteria, were enrolled as part of a randomized controlled trial on micronutrient supplementation in paediatric tuberculosis patients. Levels of 25-hydroxy vitamin D were measured in serum samples collected prior to starting antitubercular therapy by chemiluminescent immunoassay technology.

RESULTS: Two hundred sixty six children (mean age of 106.9 ± 43.7 months; 57.1% girls) were enrolled. Chest X-ray was suggestive of primary pulmonary complex, progressive disease and pleural effusion in 81 (30.5%), 149 (56%) and 36 (13.5%) subjects, respectively. Median serum 25-hydroxy vitamin D level was 8 ng/ml (IQR 5, 12). One hundred and eighty six (69.9%) children were vitamin D deficient (serum 25-hydroxy vitamin D <12 ng/ml), 55 (20.7%) were insufficient (12 to <20 ng/ml) and 25 (9.4%) were vitamin D sufficient (≥ 20 ng/ml). Levels of 25-hydroxy vitamin D were similar in all three types of intrathoracic tuberculosis, and in microbiologically confirmed and probable cases. Levels of 25-hydroxy vitamin D did not significantly affect outcome of the disease. Children who were deficient or insufficient were less likely to convert (become smear/culture negative) at two months as compared to those who were 25-hydroxy vitamin D sufficient ($p < 0.05$).

INTERPRETATION & CONCLUSIONS: Majority of Indian children with newly diagnosed intrathoracic tuberculosis were deficient in vitamin D. Type of disease or outcome was not affected by 25-hydroxy vitamin D levels in these children. However, children who did not demonstrate sputum conversion after intensive phase of antitubercular therapy had lower baseline 25-hydroxy vitamin D levels as compared to those who did.

PMCID: PMC4277140

PMID: 25488448 [PubMed - in process]

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BACKGROUND: Atypical hemolytic uremic syndrome associated with autoantibodies to complement factor H is an important cause of acute kidney injury; most patients require dialysis and are at risk of progressive renal failure.

CASE CHARACTERISTICS: 7 patients with gastrointestinal symptoms, acute kidney injury, thrombotic microangiopathy and elevated levels of anti-complement factor H antibodies.

INTERVENTION: Prompt initiation of plasma exchanges and immunosuppression.

OUTCOME: Remission of hematological and kidney functions.

MESSAGE: Prompt and specific management of antibody associated hemolytic uremic syndrome is associated with favorable outcome.

PMID: 25362019 [PubMed - in process]

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INTRODUCTION: We assessed the validity of "perfusion-metabolism coupling" hypothesis in recurrent glioma with ¹³N-ammonia (¹³N-NH₃) PET/CT and ¹⁸F-fluorodeoxyglucose (¹⁸F-FDG) PET/CT.

METHODS: Fifty-six consecutive patients (age, 38.8±12.1 years; 62.5% males) with histologically proven and previously treated glioma presenting with clinical suspicion of recurrence were prospectively enrolled and evaluated with ¹³N-NH₃ PET/CT and ¹⁸F-FDG PET/CT. PET/CT images were evaluated both qualitatively and semiquantitatively. Tumor to white matter uptake ratio (T/W) and tumor to gray matter uptake ratio (T/G) were calculated and analyzed for both the modalities. A combination of clinico-radiological follow-up, repeated imaging, and biopsy (when available) were considered as the reference standard.

RESULTS: Based on the reference standard, 27/56 patients had recurrence. ¹³N-NH₃ PET/CT and ¹⁸F-FDG PET/CT were concordant in 55/56 patients. Overall sensitivity, specificity, positive predictive value, negative predictive value, and accuracy of ¹³N-NH₃PET/CT were 77.8, 86.2, 84.0, 80.7, and 82.1%, respectively, and for ¹⁸F-FDG PET/CT were 77.8, 89.7, 87.5, 81.2, and 83.9%, respectively. There was excellent agreement between results of ¹³N-NH₃ PET/CT and ¹⁸F-FDG PET/CT ($\kappa=0.964$; $P<0.001$). The performances of ¹³N-NH₃ PET/CT and ¹⁸F-FDG PET/CT were not significantly different between high-grade and low-grade glioma ($P=1.000$). A strong positive correlation was noted between the uptake ratios derived on the two modalities ($\rho=0.866$, $P<0.001$ for T/W; $\rho=0.918$, $P<0.001$ for T/G).

CONCLUSION: A combination of $^{13}\text{N-NH}_3$ PET/CT and $^{18}\text{F-FDG}$ PET/CT demonstrates that perfusion and metabolism are coupled in recurrent gliomas. These tracers target two different but interrelated aspects of the same pathologic process and can be used as surrogates for each other.

PMID: 24989883 [PubMed - in process]

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PURPOSE: To compare intraocular lens implantation using a motorized injector vs standard manual injector through a 2.2-mm clear corneal incision.

METHODS: Patients underwent standard phacoemulsification using a 2.2-mm clear corneal incision. Hydrophobic acrylic aspheric intraocular lens (Acrysof SN60WF intraocular lens (IOL)) was inserted using D cartridge with manual monarch injector or autosert motorized injector. IOL safety, final incision size and wound integrity in terms of anterior and posterior wound gape, and descemet's membrane detachment were compared between the two groups at post-operative day 1 and at 1 month using Anterior Segment Optical Coherence Tomography.

RESULTS: The study recruited 32 patients in the group I (manual injector) and 30 patients in group II (motorized injector). In group I, the final incision after IOL insertion increased by 0.12mm (95% CI: 0.134-0.106) ($P < 0.0001$), which was seen in 100% of the patients. In group II, the incision enlarged by 0.01 (95% CI: 0.021-0.001) ($P = 0.07$) and was seen in only 6.67% of the cases. IOL nicks were seen in 9.37% of the cases in group I only. Although the incidence of descemet's membrane detachment and anterior wound gape was similar for both groups, posterior wound gape was seen more often with the manual injector in the immediate post-operative period. ($P = 0.018$) CONCLUSION: The motorized insertion system was gentle and safe for the IOLs with lesser incidence of IOL nicks. Regarding wound safety, it caused significantly less incision enlargement and better posterior wound integrity.

PMCID: PMC4194333 [Available on 2015/10/1]

PMID: 25033901 [PubMed - in process]

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Liposarcoma is the most common sarcoma in adults, but is an extremely rare tumor of the orbit. We report 4 cases of primary orbital liposarcoma treated at our center. All cases had tumor localized to the orbit and underwent exenteration followed by radiotherapy in one patient. None of the patients had a recurrence until a follow-up of 1-5 years (mean: 4 years).

PMID: 25308021 [PubMed - in process]

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The study was designed to compare the Full Outline of UnResponsiveness score with Glasgow Coma Scale as a predictor of mortality and poor functional outcome at hospital discharge in children with nontraumatic impairment of consciousness. Seventy children aged 5 to 18 years admitted with impaired consciousness were enrolled. The scores were applied by the Pediatric Neurology fellow within 2 hours of admission. The primary outcome studied was in-hospital mortality. Receiver operating characteristic curves were used to compare the 2 scores. The area under the curves for Glasgow Coma Scale and Full Outline of UnResponsiveness scores were 0.916 and 0.940, respectively. However, the difference between the areas under curve for the 2 scores was not statistically significant (0.023; 95% confidence interval: -0.0115 to 0.058). Our data indicate that both the scores are good predictors for in-hospital mortality and functional outcome. However, no significant difference was observed between the ability of the 2 scores to predict the outcomes.

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PMID: 24532807 [PubMed - in process]

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Amphotericin B (AmB), a polyene macrolide, is now a first-line treatment of visceral leishmaniasis cases refractory to antimonials in India. AmB relapse cases and the emergence of secondary resistance have now been reported. To understand the mechanism of AmB, differentially expressed genes in AmB resistance strains were identified by a DNA microarray and real-time reverse transcriptase PCR (RT-PCR) approach. Of the many genes functionally overexpressed in the presence of AmB, the ascorbate peroxidase gene from a resistant *Leishmania donovani* strain (LdAPx gene) was selected because the gene is present only in *Leishmania*, not in humans. Apoptosis-like cell death after exposure to AmB was investigated in a wild-type (WT) strain in which the LdAPx gene was overexpressed and in AmB-sensitive and -resistant strains. A higher percentage of apoptosis-like cell death after AmB treatment was noticed in the sensitive strain than in both the resistant isolate and the strain sensitive to LdAPx overexpression. This event is preceded by AmB-induced formation of reactive oxygen species and elevation of the cytosolic calcium level. Enhanced cytosolic calcium was found to be responsible for depolarization of the mitochondrial membrane potential and the release of cytochrome c (Cyt c) into the cytosol. The redox behavior of Cyt c showed that it has a role in the regulation of apoptosis-like cell death by activating metacaspase- and caspase-like proteins and causing concomitant nuclear alterations, as determined by terminal deoxynucleotidyltransferase-mediated dUTP-biotin nick end labeling (TUNEL) and DNA fragmentation in the resistant strain. The present study suggests that constitutive overexpression of LdAPx in the *L. donovani* AmB-resistant strain prevents cells from the deleterious effect of oxidative stress, i.e., mitochondrial dysfunction and cellular death induced by AmB.

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PMID: 25114128 [PubMed - in process]

83: Kumar A, Prasad M, Kathuria P. Sitting occupations are an independent risk factor for Ischemic stroke in North Indian population. *Int J Neurosci*. 2014 Oct;124(10):748-54. doi: 10.3109/00207454.2013.879130. Epub 2014 Feb 7. PubMed PMID: 24397501.

Stroke is a multi-factorial disease and is influenced by complex environmental interactions. The purpose of this case-control study was to determine the relationship of sitting occupations with ischemic stroke in the North Indian population. In a hospital-based case-control study, age- and sex-matched controls were recruited from the outpatient department and the neurology ward of All India Institute of Medical Sciences, New Delhi. Occupation along with other demographic and risk factor variables was measured in-person interview in standardized case record form. The multivariate logistic regression model was used to estimate the odds ratio associated with ischemic stroke. Two hundred and twenty-four people post-stroke and 224 control participants were recruited from the period of February 2009 to February 2012. Mean age of cases and controls was 53.47 ± 14 and 52.92 ± 13.4 , respectively. The occupations which involve sitting at work were independently associated with the risk of ischemic stroke after adjustment for demographic and risk factor variables (OR 2.2, 95% CI 1.12-3.8). The result of this study has shown an independent association between the sitting occupations and ischemic stroke in North Indian population. The present study supports the workplace health initiative to implement workplace physical activity policy and encourages employee to reduce the amount of time they spend sitting throughout the day.

PMID: 24397501 [PubMed - in process]

84: Kumar P, Kumar A, Lodha R, Kabra SK. Childhood Tuberculosis in General Practice. *Indian J Pediatr*. 2014 Oct 5. [Epub ahead of print] PubMed PMID: 25280927.

Tuberculosis (TB) in children is a common cause of morbidity. Diagnosis is difficult because of paucibacillary nature of illness and difficulty in obtaining appropriate samples. Children presenting with poor weight gain, fever with or without cough for more than two weeks or contact with an adult in family with pulmonary tuberculosis should be investigated for TB. In all suspected cases of tuberculosis initial investigations include radiograph of chest (CXR) and Mantoux test. If CXR is suggestive of TB, an ambulatory gastric aspirate and induced sputum for acid fast bacilli (AFB) smear may be carried out in two days. Children with AFB positive or abnormal CXR with positive Mantoux test should be started on Antitubercular therapy (ATT). Rest of the patients require more investigations and should be referred to a specialist. All children with newly diagnosed tuberculosis should be treated with 6 mo of ATT (two months with 4 drugs, followed by four months with 2 drugs). Children on ATT should be monitored for improvement in symptoms and weight gain along with side effects of medications. CXR should be done after completion of treatment.

PMID: 25280927 [PubMed - as supplied by publisher]

85: Kumar P, Dar L, Saldiwal S, Varma S, Datt Upadhyay A, Talwar D, Sharma VK, Verma KK, Dwivedi SN, Raj R, Gupta S. Intralesional injection of Mycobacterium w vaccine vs imiquimod, 5%, cream in patients with anogenital warts: a randomized clinical trial. *JAMA Dermatol*. 2014 Oct;150(10):1072-8. doi: 10.1001/jamadermatol.2014.794. PubMed PMID: 25103148.

IMPORTANCE: Intralesional antigen therapy has been used in the treatment of anogenital warts (AGWs), but it has not been compared with existing therapies. Evidence of its efficacy is not strong.

OBJECTIVE: To compare the efficacy and safety of intralesional Mycobacterium w (Mw) vaccine with that of imiquimod, 5%, cream in the treatment of AGWs, as well as changes in human papillomavirus (HPV)-6 and HPV-11 viral loads.

DESIGN, SETTING, AND PARTICIPANTS: A double-blind randomized clinical trial was conducted in New Delhi, India, between February 2009 and July 2012 and included a 3-month follow-up. Of 159 patients with AGWs who were screened, 89 were randomized.

INTERVENTIONS: Patients received either imiquimod, 5%, cream and an intralesional vehicle (imiquimod group: 44 patients) or vehicle cream and intralesional Mw vaccine (Mw group: 45 patients).

MAIN OUTCOMES AND MEASURES: The primary end point was complete clinical remission of visible AGWs. Secondary measures included the percentage of reduction in the surface area of AGWs and viral load for HPV-6 and HPV-11. Viral load was measured by real-time quantitative polymerase chain reaction.

RESULTS: In the intention-to-treat analysis, 59% (n = 26) of the patients in the imiquimod group and 67% (n = 30) of those in the Mw group had complete resolution (P = .52). Eighteen HPV genotypes, including high-risk genotypes, were detected, with no significant differences between the treatment groups (all P > .05). There was a significant decline in the mean viral loads of HPV-6 (from 0.011×10^8 to 0.00000154×10^8 copies/mg of tissue; P = .003) and HPV-11 (from 0.121×10^8 to 0.017×10^8 copies/mg of tissue; P = .03) after treatment in the Mw group but only in the viral load of HPV-6 (from 1.41×10^8 to 0.004×10^8 copies/mg of tissue; P = .01) in the imiquimod group. There was no recurrence of AGWs in patients with complete clearance at the 3-month follow-up and no serious adverse events.

CONCLUSIONS AND RELEVANCE: Imiquimod, 5%, and the Mw vaccine were equally effective in achieving clinical and virologic clearance for HPV-6. A significant decline in the HPV-11 viral load was achieved only with the Mw vaccine. Efficacy and safety of intralesional Mw vaccine is comparable to that of imiquimod, 5%, in treatment of AGWs.

TRIAL REGISTRATION: ctri.nic.in Identifier: CTRI/2009/091/000055.

PMID: 25103148 [PubMed - indexed for MEDLINE]

86: Kumar S, Choudhury A, Velayudam D, Kiran U. Peri-operative challenges in post myocardial infarction ventricular septal rupture: A case series and review of literature. Saudi J Anaesth. 2014 Oct;8(4):546-9. doi: 10.4103/1658-354X.140895. PubMed PMID: 25422615; PubMed Central PMCID: PMC4236944.

Ventricular septal rupture (VSR) is a life threatening complication of myocardial infarction (MI). The incidence of post-MIVSR varied from 1% to 3% in the pre-thrombolytic era. There is almost a 10-fold decrease in the reported incidences (0.2-0.3%) of MIVSR today. The mortality in such an event is as high as 50-90%. Prognosis of post-MIVSR depends on prompt echo diagnosis and proactive surgical therapy. The peri-operative challenges during management of such a case can be enormous.

PMCID: PMC4236944

PMID: 25422615 [PubMed]

87: Kumar S, Kumar P. Truncus bicaroticus with aberrant right subclavian artery and origin of right vertebral from right common carotid artery. Surg Radiol Anat. 2014 Oct;36(8):829-31. doi: 10.1007/s00276-013-1232-z. Epub 2013 Nov 9. PubMed

PMID: 24214020.

We describe a rare constellation of variant anatomy of the aortic arch branches, seen on a magnetic resonance angiographic examination during the course of investigation for recent onset memory loss in a 52-year-old patient. There was a common origin of both the common carotid arteries (CCA), the common trunk being the first major branch of the aortic arch, the right vertebral artery arising from the right CCA and the right subclavian artery arising as the last branch of the arch. In isolation, the three components of this constellation have been reported with different frequencies, but as per the authors' knowledge, this entire constellation has been rarely reported. We review the literature and propose an embryological mechanism for this variant anatomy.

PMID: 24214020 [PubMed - in process]

88: Kumar V, Nag TC, Sharma U, Mewar S, Jagannathan NR, Wadhwa S. High resolution ¹H NMR-based metabolomic study of the auditory cortex analogue of developing chick (*Gallus gallus domesticus*) following prenatal chronic loud music and noise exposure. *Neurochem Int.* 2014 Oct;76:99-108. doi: 10.1016/j.neuint.2014.07.002. Epub 2014 Jul 15. PubMed PMID: 25049174.

Proper functional development of the auditory cortex (ACx) critically depends on early relevant sensory experiences. Exposure to high intensity noise (industrial/traffic) and music, a current public health concern, may disrupt the proper development of the ACx and associated behavior. The biochemical mechanisms associated with such activity dependent changes during development are poorly understood. Here we report the effects of prenatal chronic (last 10 days of incubation), 110dB sound pressure level (SPL) music and noise exposure on metabolic profile of the auditory cortex analogue/field L (AuL) in domestic chicks. Perchloric acid extracts of AuL of post hatch day 1 chicks from control, music and noise groups were subjected to high resolution (700MHz) (¹H) NMR spectroscopy. Multivariate regression analysis of the concentration data of 18 metabolites revealed a significant class separation between control and loud sound exposed groups, indicating a metabolic perturbation. Comparison of absolute concentration of metabolites showed that overstimulation with loud sound, independent of spectral characteristics (music or noise) led to extensive usage of major energy metabolites, e.g., glucose, β -hydroxybutyrate and ATP. On the other hand, high glutamine levels and sustained levels of neuromodulators and alternate energy sources, e.g., creatine, ascorbate and lactate indicated a systems restorative measure in a condition of neuronal hyperactivity. At the same time, decreased aspartate and taurine levels in the noise group suggested a differential impact of prenatal chronic loud noise over music exposure. Thus prenatal exposure to loud sound especially noise alters the metabolic activity in the AuL which in turn can affect the functional development and later auditory associated behaviour.

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PMID: 25049174 [PubMed - in process]

89: Lohani N, Narayan Singh H, Agarwal S, Mehrotra R, Rajeswari MR. Interaction of adriamycin with a regulatory element of hmgb1: spectroscopic and calorimetric approach. *J Biomol Struct Dyn.* 2014 Oct 14:1-12. [Epub ahead of print] PubMed PMID: 25311659.

HMGB1 is a non-histone nuclear protein which plays important role in transcription, variable, diverse and joining (VDJ) recombination, chromatin remodeling, and DNA repair, etc. and its over expression is directly correlated

with various human malignancies and inflammatory diseases. Because of the clear association between HMGB1 and cancer, we studied the binding of adriamycin (ADM), a well-known anticancer drug with the promoter region (-165 to -183) of hmgbl by using a variety of spectroscopic, calorimetric techniques, and in-silico molecular modeling. Changes in UV and CD spectral characteristics (intensity and wavelength) of ADM and DNA associated with an induced peak (300 nm) in CD spectrum of DNA and a high binding constant of 2.0×10^5 M⁻¹ suggest a strong and stable complex formation between DNA and ADM. Scatchard analysis of spectroscopic data indicate that ADM binds to DNA in a non-cooperative nature. Further the quenching of fluorescence emission of ADM and isothermal titration calorimetry of ADM in presence of DNA points out to the intercalative mode of ADM binding to DNA which is enthalpically driven with additional small entropic contribution. Results from molecular modeling, Isothermal titration calorimetry, and Fourier transform infrared spectroscopy reveal that ADM has no marked preference between AT vs. GC base pair in binding to DNA. Therefore, hmgbl can be considered as a novel potential chemotherapeutic target in treating cancers associated with HMGB1 upregulation.

PMID: 25311659 [PubMed - as supplied by publisher]

90: Madan K, Das CJ, Guleria R. Posterior tracheal diverticulosis. *J Bronchology Interv Pulmonol.* 2014 Oct;21(4):338-41. doi: 10.1097/LBR.000000000000091. PubMed PMID: 25321454.

Multiple tracheal diverticulosis is a rare clinical entity. Tracheal diverticula are usually recognized radiologically as solitary right paratracheal air collections on thoracic computed tomography examination. They are usually asymptomatic but can occasionally present with persistent symptoms. We herein report the case of a 50-year-old male patient who underwent extensive evaluation for persistent cough. Multiple posterior right paratracheal air collections were recognized on thoracic multidetector computed tomography examination, which was confirmed as multiple-acquired posterior upper tracheal diverticula on flexible bronchoscopy. The patient improved with conservative medical management.

PMID: 25321454 [PubMed - in process]

91: Mahajan D, Sharma R, Garg SP, Venkatesh P, Sihota R, Dada T. Clinical profile of uveitis-related ocular hypertension. *Int Ophthalmol.* 2014 Dec;34(6):1221-6. doi: 10.1007/s10792-014-0008-8. Epub 2014 Oct 10. PubMed PMID: 25301079.

The purpose of this article is to study the clinical and demographic profile of uveitis-related ocular hypertension (OHT) and evaluate risk factors predisposing to development of OHT in uveitis. Two hundred patients (200 eyes) with uveitis were evaluated for type of uveitis and the presence of OHT [IOP > 21 mmHg]. All patients underwent a complete ophthalmic examination and appropriate systemic evaluation. Patients with OHT were started on appropriate antiglaucoma medication and were followed up for minimum of 6 months. Forty-two eyes (21 %) were found to have OHT. Anterior uveitis alone was seen in 22 (52.4 %), granulomatous uveitis was seen in 8 (19.1 %) eyes, while 13 eyes (30.9 %) had active uveitis. On multiple logistic regression, age greater than 60 years ($p = 0.025$), peripheral anterior synechiae (PAS) > 180° ($p = 0.029$), and steroid use ($p < 0.001$) were found to have significant association with OHT. Mean IOP at baseline was 24.6 ± 10.1 mmHg which decreased to 17.3 ± 4.5 mmHg at 6 months ($p < 0.001$). At 6 months, 30 eyes were medically controlled (71.4 %), 5 eyes underwent trabeculectomy with MMC (11.9 %), and in 7 eyes, antiglaucoma medication could be discontinued. One-fifth of eyes with uveitis had OHT. Risk factors for IOP elevation included increased age, PAS > 180°, and corticosteroid use.

PMID: 25301079 [PubMed - in process]

92: Maitra S, Krishnan G, Baidya DK, Chumber S. Is computed tomography scan the ultimate modality for airway evaluation? *J Anaesthesiol Clin Pharmacol*. 2014 Oct;30(4):586-7. doi: 10.4103/0970-9185.142894. PubMed PMID: 25425803; PubMed Central PMCID: PMC4234814.

93: Maitra S, Baidya DK, Bhattacharjee S, Khanna P. Evaluation of i-gel™ airway in children: a meta-analysis. *Paediatr Anaesth*. 2014 Oct;24(10):1072-9. doi: 10.1111/pan.12483. Epub 2014 Jul 16. PubMed PMID: 25041224.

BACKGROUND: I-gel™ is a relatively newer addition in the pediatric anesthesia practice. Its comparison with the other laryngeal mask airway reported a wide range of results. Randomized controlled trials where i-gel™ has been compared with other laryngeal masks (laryngeal mask airway ProSeal™ and laryngeal mask airway Classic™) in children for airway management device during general anesthesia has been included in this meta-analysis.

METHODS: PubMed and Central Register of Clinical Trials of the Cochrane Collaboration for eligible controlled trials using following search words: 'i-gel', 'i-gel laryngeal mask airway', 'i-gel children', 'i-gel paediatric' until February 15, 2014. A total nine prospective randomized controlled trials have been included in this meta-analysis.

RESULTS: Pooled analyses have found that i-gel™ provided significantly higher oropharyngeal leak pressure than laryngeal mask airway ProSeal™ [496 participants, mean difference 2.07 cm H₂O, 95% CI 0.52-3.62; P = 0.009] and a similar leak in comparison with laryngeal mask airway Classic™ [355 participants, mean difference 1.73 cm H₂O, 95% CI -0.04, 3.51 cm H₂O; P = 0.06]. No difference was found in first insertion success rate and ease of insertion between i-gel™, laryngeal mask airway ProSeal™, and laryngeal mask airway Classic™. Ease of gastric tube insertion is similar between i-gel™ and laryngeal mask airway ProSeal™. Reported complications are infrequent and similar in all three devices.

CONCLUSION: We conclude that i-gel™ is an effective alternative of the commonly used laryngeal mask airway ProSeal™ and laryngeal mask airway Classic™ in children for airway management during general anesthesia.

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PMID: 25041224 [PubMed - in process]

94: Maitra S, Baidya DK, Pawar DK, Arora MK, Khanna P. Epidural anesthesia and analgesia in the neonate: a review of current evidences. *J Anesth*. 2014 Oct;28(5):768-79. doi: 10.1007/s00540-014-1796-8. Epub 2014 Feb 13. PubMed PMID: 24522812.

The role of single shot spinal anesthesia has been established in ex-premature infants at risk of apnea. However, use of epidural anesthesia in neonates is on the rise. In this systematic analysis, we have reviewed the current evidence on the safety and efficacy of the use of single shot and continuous epidural anesthesia/analgesia in neonates. Current clinical practice is guided by evidence based mostly on non-randomized studies, prospective/retrospective case series and surveys. Single shot caudal blockade as a sole technique has been used in neonates mainly for inguinal hernia repair and circumcision. Use of continuous epidural anesthesia through the caudal route or caudo-thoracic advancement of the catheter for major thoracic and abdominal surgery offers good perioperative analgesia. Other observed benefits are early extubation, attenuation of stress response, early return of bowel function and reduction of general

anesthesia-related postoperative complications. However, risk of procedure-related and drug-related complications to the developing neural structure remains a serious concern.

PMID: 24522812 [PubMed - in process]

95: Malhotra AK, Lis JA, Ramam M. Cydnidae (Burrowing Bug) Pigmentation: A Novel Arthropod Dermatitis. *JAMA Dermatol*. 2014 Oct 29. doi: 10.1001/jamadermatol.2014.2715. [Epub ahead of print] PubMed PMID: 25353259.

96: Malik MA, Shukla S, Azad SV, Kaur J. Vascular endothelial growth factor (VEGF-634G/C) polymorphism and retinopathy of prematurity: a meta-analysis. *Saudi J Ophthalmol*. 2014 Oct;28(4):299-303. doi: 10.1016/j.sjopt.2014.07.001. Epub 2014 Jul 24. PubMed PMID: 25473347; PubMed Central PMCID: PMC4250490.

PURPOSE: Vascular endothelial growth factor polymorphism (VEGF-634G/C, rs 2010963) has been considered a risk factor for the development of retinopathy of prematurity (ROP). However, the results remain controversial. Therefore, the aim of the present meta-analysis was to determine the association between VEGF-634G/C polymorphism and ROP risk.

METHODS: Published literature from PubMed and other databases were retrieved. All studies evaluating the association between VEGF-634G/C polymorphism and ROP risk were included. Pooled odds ratio (OR) and 95% confidence interval (CI) were calculated using random or fixed effects model. A total of six case-control studies including 355 cases and 471 controls were included.

RESULTS: By pooling all the studies, we found that VEGF-634G/C polymorphism was not associated with ROP risk at co-dominant and allele levels and no association was also found in dominant and recessive models. While stratifying on ethnicity level no association was observed in Caucasian and Asian population.

DISCUSSION: This meta-analysis suggests that VEGF-634G/C polymorphism may not be associated with ROP risk, the association between single VEGF-634G/C polymorphism and ROP risk awaits further investigation.

PMCID: PMC4250490

PMID: 25473347 [PubMed]

97: Mathew DG, Ramachandran R, Rewari V, Trikha A, Chandralekha. Endotracheal intubation with intubating laryngeal mask airway (ILMA), C-Trach, and Cobra PLA in simulated cervical spine injury patients: a comparative study. *J Anesth*. 2014 Oct;28(5):655-61. doi: 10.1007/s00540-014-1794-x. Epub 2014 Feb 20. PubMed PMID: 24554246.

PURPOSE: The aim of our study was to evaluate the success rate of fiberoptic-guided endotracheal intubation through an Intubating Laryngeal Mask Airway (ILMA), a Cobra Perilaryngeal Airway (Cobra PLA), and a C-Trach Laryngeal Mask Airway (C-Trach) in patients whose necks are stabilized in a hard cervical collar.

METHODS: One hundred and eighty ASA I-II patients were randomized to undergo endotracheal intubation after general anesthesia via an ILMA (group ILMA), a C-Trach (group C-Trach) or a Cobra PLA (group CPLA) with the application of an appropriately-sized hard cervical collar. A fiberoptic bronchoscope was used for intubation via the ILMA and Cobra PLA. Rate of successful insertion of an endotracheal tube through the three devices was the primary aim. Other parameters compared were time taken for device insertion, endotracheal intubation, hemodynamic changes, incidence of hypoxia, and mucosal injury during the procedure. The incidence of postoperative sore throat was also compared between the three groups.

RESULTS: The success rates of intubation in the ILMA, C-Trach, and CPLA groups were 100, 100, and 98% respectively. The first-attempt success rate was significantly better with the C-Trach compared to Cobra PLA (100 vs. 85%, $p < 0.05$). The time taken for device insertion was significantly more with the Cobra PLA as compared to that taken with an ILMA or a C-Trach (35.7 vs. 30.3 and 27.5 s, respectively). Intubation through a C-Trach took the least amount of time (84.4 s) as compared to an ILMA (117.9 s) or a Cobra PLA (139.2 s). The incidence of hypoxia and airway morbidity was similar between the groups.

CONCLUSION: The success rates of fiberoptic-guided endotracheal intubation through an ILMA and a Cobra PLA are similar to the success rate of intubation using a C-Trach in patients whose cervical spines are immobilized with a hard cervical collar.

PMID: 24554246 [PubMed - in process]

98: Meel R, Bakhshi S, Pushker N, Vishnubhatla S. Randomized, controlled trial in groups C and d retinoblastoma. *Ophthalmology*. 2015 Feb;122(2):433-5. doi: 10.1016/j.optha.2014.09.013. Epub 2014 Oct 22. PubMed PMID: 25439612.

99: Mehta M, Pilania VM. Bullying in Indian school going adolescents. *Indian J Pediatr*. 2014 Nov;81(11):1143-4. doi: 10.1007/s12098-014-1611-4. Epub 2014 Oct 18. PubMed PMID: 25326157.

100: Mishra B. The threat of Ebola: an update. *Indian J Med Microbiol*. 2014 Oct-Dec;32(4):364-70. doi: 10.4103/0255-0857.142230. PubMed PMID: 25297018.

101: Mishra P, Panda SS, Tripathy M, Panda M, Das RR. Infantile cortical hyperostosis: two cases with varied presentations. *J Clin Diagn Res*. 2014 Oct;8(10):PJ01-2. doi: 10.7860/JCDR/2014/9077.4945. Epub 2014 Oct 20. PubMed PMID: 25478424; PubMed Central PMCID: PMC4253242.

102: Mittal S, Singla A, Nag HL, Meena S, Lohiya R, Agarwal A. Dual ACL Ganglion Cysts: Significance of Detailed Arthroscopy. *Case Rep Orthop*. 2014;2014:236902. doi: 10.1155/2014/236902. Epub 2014 Oct 8. PubMed PMID: 25400962; PubMed Central PMCID: PMC4220573.

Intra-articular ganglion cysts of the knee joint are rare and most frequently are an incidental finding on MRI and arthroscopy. Most of the previous studies have reported a single ganglion cyst in the knee. There have been previous reports of more than one cyst in the same knee but not in the same structure within the knee. We are reporting a case of dual ACL (anterior cruciate ligament) ganglion cysts one of which was missed on radiological examination but later detected during arthroscopy. To the best of our knowledge, no such case has been reported in the indexed English literature till date.

PMCID: PMC4220573

PMID: 25400962 [PubMed]

103: Mondal D, Julka PK, Jana M, Walia R, Chaudhuri T. Langerhans cell histiocytosis of atlantoaxial joint in a middle-aged man presenting with deafness as first symptom and soft-tissue mass at neck showing excellent response to radiotherapy alone: Report of an extremely rare and unusual clinical condition and review of literature. *Ann Indian Acad Neurol*. 2014 Oct;17(4):429-32. doi: 10.4103/0972-2327.144022. PubMed PMID: 25506166; PubMed Central PMCID:

PMC4251018.

Langerhans cell histiocytosis (LCH) is a disorder of clonal proliferation of dendritic cell mainly occurring in children. Spine involvement is rare. This usually presents with pain and torticollis when neck is involved. Histopathology with immunohistochemistry is confirmatory. Local curative therapy with excision or curettage is used for localized disease. Radiotherapy is usually reserved for selected cases. Systemic chemotherapy is the treatment of choice for widespread systemic disease. In this article, we present an unusual presentation of atlantoaxial LCH with mastoid involvement resulting in hearing loss as the first symptom and quadraparesis in a middle aged male patient, which was also associated with soft-tissue mass at the nape of the neck and deafness. The patient was treated with radical radiotherapy, which provided excellent response to the disease. Involvement of atlantoaxial joint and temporal bone associated with soft-tissue mass neck and deafness in a middle-aged man is an extremely rare clinical situation.

PMCID: PMC4251018

PMID: 25506166 [PubMed]

104: Mukherjee A, Karunanithi S, Singla S, Bal C, Das CJ, Kumar R. (18)F-FDG PET/CT in detection of sarcomatous degeneration of renal angiomyolipoma in setting of tuberous sclerosis. *Indian J Nucl Med*. 2014 Oct;29(4):280-1. doi: 10.4103/0972-3919.142650. PubMed PMID: 25400377; PubMed Central PMCID: PMC4228601.

Angiomyolipomas (AMLs) of kidneys are one of the common extracranial manifestations of tuberous sclerosis (TSC). AMLs when large may cause life-threatening hemorrhage, but seldom undergo malignant degeneration. We describe the appearance of renal AML degenerated to angiosarcoma on (18)F-fluorodeoxyglucose positron emission tomography/computed tomography ((18)F-FDG PET/CT) and contrast-enhanced CT (CECT).

PMCID: PMC4228601

PMID: 25400377 [PubMed]

105: Mukherjee A, Karunanithi S, Bal C, Kumar R. 68Ga DOTANOC PET/CT aiding in the diagnosis of von Hippel-Lindau syndrome by detecting cerebellar hemangioblastoma and adrenal pheochromocytoma. *Clin Nucl Med*. 2014 Oct;39(10):920-1. doi: 10.1097/RLU.0000000000000486. PubMed PMID: 24999687.

A 35-year-old man with clinical suspicion of adrenal pheochromocytoma was evaluated using Ga DOTANOC PET/CT. PET/CT demonstrated Ga DOTANOC-avid right adrenal mass and cerebellar lesion, raising the suspicion of adrenal pheochromocytoma with cerebellar hemangioblastoma suggesting von Hippel-Lindau (VHL) syndrome. Cerebellar lesion on further evaluation with MRI was suggestive of cerebellar hemangioblastoma. Surgical resection of the adrenal mass revealed pheochromocytoma, and genetic analysis revealed mutation involving the chromosome 3p, confirming the diagnosis of VHL syndrome. Ga DOTANOC PET/CT in our patient helped in the diagnosis of VHL syndrome and changed the disease management.

PMID: 24999687 [PubMed - in process]

106: Nag HL, Gupta H. Anterior cruciate ligament reconstruction with preservation of femoral anterior cruciate ligament stump. *Arthrosc Tech*. 2014 Sep 15;3(5):e575-7. doi: 10.1016/j.eats.2014.06.012. eCollection 2014 Oct. PubMed PMID: 25473609; PubMed Central PMCID: PMC4246405.

Anterior cruciate ligament (ACL) reconstruction with preservation of either the remnant or the tibial stump is performed with the hope of improving the vascularization and proprioceptive function of the graft. Remnant preservation is technically difficult because it hinders the visualization of the intra-articular tunnel site. Taking a cue from the concept of tibial stump preservation, we have modified our ACL reconstruction technique to preserve a sleeve of the soft tissue and ACL stump attached to the femoral condyle, in addition to tibial stump preservation, while still allowing adequate visualization of the femoral ACL insertion site. We describe our modification in this article and hypothesize that this should further improve graft vascularization and ligamentization.

PMCID: PMC4246405

PMID: 25473609 [PubMed]

107: Nagori SA, Bhutia O, Roychoudhury A, Pandey RM. Immediate autotransplantation of third molars: an experience of 57 cases. *Oral Surg Oral Med Oral Pathol Oral Radiol.* 2014 Oct;118(4):400-7. doi: 10.1016/j.oooo.2014.05.011. Epub 2014 Jun 2. PubMed PMID: 25183229.

OBJECTIVE: We present our experience of success with immediate third molar transplants in young individuals while secondarily assessing factors predicting failure.

STUDY DESIGN: A total of 57 cases of third molar transplant with both open and closed apices were studied in individuals aged 15 to 25 years. Factors influencing prognosis were analyzed by univariate and multivariate analysis.

RESULTS: The replaced teeth included 17 maxillary molars (29.8%) and 40 mandibular molars (70.2%). After a follow-up of 19.9 ± 2.8 months, 49 cases (86%) were successful; 7 (12.3%) cases failed owing to root resorption, and 1 (1.7%) failed owing to infection. Pulp revascularization was seen in all successful cases with open apices. Proximal grinding of donor tooth was significantly associated with failure (odds ratio, 12.5; $P = .025$).

CONCLUSIONS: Autogenous third molar transplant is an excellent and viable treatment modality. By using proper case selection and minimizing damage to the donor tooth root, high success rates can be achieved.

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PMID: 25183229 [PubMed - in process]

108: Nair VV, Malankar D, Airan B. Pulmonary atresia with left main coronary artery fistula to the pulmonary artery. *Asian Cardiovasc Thorac Ann.* 2014 Oct;22(8):995. doi: 10.1177/0218492313499925. Epub 2013 Oct 16. PubMed PMID: 24887867.

109: Nambirajan A, Sharma MC, Gupta RK, Suri V, Singh M, Sarkar C. Study of stem cell marker nestin and its correlation with vascular endothelial growth factor and microvascular density in ependymomas. *Neuropathol Appl Neurobiol.* 2014 Oct;40(6):714-25. doi: 10.1111/nan.12097. PubMed PMID: 24224478.

BACKGROUND: Ependymomas are relatively rare glial tumours, whose pathogenesis is not well elucidated. They are enigmatic tumours that show site-specific differences in their biological behaviour. Recent studies have hypothesized that ependymoma cancer stem cells (CSCs) are derived from radial glia and express stem cell markers such as nestin, which is associated with a poor prognosis. CSCs

reside in 'vascular niches', where endothelial cells and molecular signals like vascular endothelial growth factor (VEGF) play an important role in their survival. Studies analysing VEGF expression in ependymomas showed that ependymal vascular proliferation is less sensitive to induction by VEGF, questioning the possible beneficial effect of anti-VEGF therapy in ependymomas. We aimed to study nestin and VEGF immunoeexpression in ependymomas, correlate them with clinicopathological parameters and reveal a role for VEGF in ependymomas that extends beyond the context of tumour angiogenesis.

METHODS: We analysed 126 cases of ependymomas of different grades and locations for nestin and VEGF immunoeexpression. Endothelial cells were labelled with CD34. Vascular patterns and microvascular density was determined.

RESULTS: Nestin and VEGF expression in tumour cells were more frequent in supratentorial tumours [89% (33/37) and 65% (24/37) respectively], and were associated with a significantly poor progression-free survival (PFS). VEGF expression did not reveal any correlation with necrosis or bizarre vascular patterns.

CONCLUSIONS: Supratentorial location is an independent predictor of a poor PFS. Significant coexpression of nestin and VEGF suggests that latter possibly augments stem cell survival. Thus, anti-VEGF therapy may be a good option in future for nestin immunopositive ependymomas.

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PMID: 24224478 [PubMed - in process]

110: Narayan J, Ghildiyal A, Goyal M, Verma D, Singh S, Tiwari S. Cold pressor response in high landers versus low landers. *J Clin Diagn Res.* 2014 Oct;8(10):BC08-11. doi: 10.7860/JCDR/2014/10768.5009. Epub 2014 Oct 20. PubMed PMID: 25478333; PubMed Central PMCID: PMC4253151.

BACKGROUND: Native high landers face two main environmental challenges i.e. hypobaric hypoxia and low ambient temperatures. Both factors contribute to increased sympathetic stimulation and increased blood pressure. Despite these challenges, subjects living at high altitude have lower systolic and diastolic pressures as compared to subjects living in plains. Present study investigated cold pressor test (CPT) which is a potential predictor of future hypertension in high landers and low landers **Materials and Methods:** Vascular reactivity in terms of changes in systolic and diastolic blood pressure and heart rate in response to cold pressor test has been compared in high lander (n=45) and low lander (n=46) population.

RESULTS: Systolic and diastolic blood pressure changes and heart rate changes with cold pressor test are lower in high landers as compared to low landers. Females in both the groups in general exhibited greater cold pressor response than males.

CONCLUSION: Hypo-reactive cold pressor test is due to higher parasympathetic tone and lower sympathetic tone. Decreased cold pressor response in high landers reflects another adaptive modulation of sympatho-vagal activity that enables them to stay in hypobaric atmosphere and lower temperatures without undue autonomic stress.

PMCID: PMC4253151

PMID: 25478333 [PubMed]

111: Nehra A, Chopra S. Beating the Odds: Intact Neuropsychological Functioning despite TLE. *Ann Neurosci*. 2014 Oct;21(4):155-9. doi: 10.5214/ans.0972.7531.210410. PubMed PMID: 25452679; PubMed Central PMCID: PMC4248473.

Patients with Temporal lobe epilepsy (TLE) frequently display cognitive comorbidity and can have widespread network abnormalities, which might affect a variety of cognitive and intellectual functions. As a result, refractory TLE seems to be associated with slow but ongoing cognitive deterioration. The case is of a 32 year old, right handed male, engineering graduate, diagnosed with TLE-right mesial, 12 years ago. A number of head injuries were caused due to the seizure present, which includes a fall from height of 12 feet in childhood. The neuropsychological tests administered were Gesell's Drawing Test, Mini Mental State Examination, PGI Memory Scale, Battery of Performance Tests of Intelligence, Verbal Adult Intelligence Scale, Hamilton Rating Scale for Depression, Bender Visual Motor Gestalt Test and Dysfunction Analysis Questionnaire. No impairment found on orientation; average cognitive functioning; above average attention and concentration, verbal working memory, visual and verbal memory; average practical ability, abstract ability, average verbal intellectual ability; superior ability on comprehension and average performance ability. Mild to moderate impairment on perceptuo-motor functioning and an evidence of depression were present. Patient showed high dysfunction in personal, social, vocational and cognitive areas. The study highlights that even despite chronic epilepsy, with a series of head injuries due to the seizures; an individual can still have average neuropsychological abilities. Holistic neuropsychological rehabilitation along with Vocational Retraining would go a long way in the functional independence of the patient. Neuropsychologists have a significant role in the assessment, treatment, and rehabilitation of people with epilepsy.

PMCID: PMC4248473

PMID: 25452679 [PubMed]

112: Nehra A, Singla S, Bajpai S, Malviya S, Padma V, Tripathi M. Inverse relationship between stigma and quality of life in India: is epilepsy a disabling neurological condition? *Epilepsy Behav*. 2014 Oct;39:116-25. doi: 10.1016/j.yebeh.2014.07.004. Epub 2014 Sep 18. PubMed PMID: 25240123.

OBJECTIVE: Stigma associated with epilepsy has negative effects on psychosocial outcomes, affecting quality of life (QOL) and increasing disease burden in persons with epilepsy (PWEs). The aim of our study was to measure the impact of stigma on the QOL of PWEs and the prevalence of neurological disability due to stigmatized epilepsy.

METHOD: A prospective observational study with a sample of 208 PWEs was conducted. Neuropsychological Tests used were the Indian Disability Evaluation Assessment Scale (IDEAS) to measure disability, the Dysfunctional Analysis Questionnaire (DAQ) to measure QOL, and the Stigma Scale for Epilepsy (SSE) to assess stigma.

RESULTS: Spearman correlation was calculated, and stigma (SSE) was highly significant with QOL (DAQ) (0.019) and disability due to stigmatized epilepsy (IDEAS) (0.011).

CONCLUSION: The present study supports the global perception of stigma associated with epilepsy and its negative impact on their overall QOL and its contribution to the escalation of the disease burden.

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PMID: 25240123 [PubMed - in process]

113: Pai G, Jain V. Massive levothyroxine ingestion. Indian Pediatr. 2014 Oct;51(10):840-1. PubMed PMID: 25362025.

114: Panda A, Gamanagatti S, Jana M, Gupta AK. Skeletal dysplasias: A radiographic approach and review of common non-lethal skeletal dysplasias. World J Radiol. 2014 Oct 28;6(10):808-25. doi: 10.4329/wjr.v6.i10.808. Review. PubMed PMID: 25349664; PubMed Central PMCID: PMC4209426.

Skeletal dysplasias are not uncommon entities and a radiologist is likely to encounter a suspected case of dysplasia in his practice. The correct and early diagnosis of dysplasia is important for management of complications and for future genetic counselling. While there is an exhaustive classification system on dysplasias, it is important to be familiar with the radiological features of common dysplasias. In this article, we enumerate a radiographic approach to skeletal dysplasias, describe the essential as well as differentiating features of common non-lethal skeletal dysplasias and conclude by presenting working algorithms to either definitively diagnose a particular dysplasia or suggest the most likely differential diagnoses to the referring clinician and thus direct further workup of the patient.

PMCID: PMC4209426

PMID: 25349664 [PubMed]

115: Panda S, Kumar MV, Bagchi S, Singh G, Agarwal SK, Dinda A. Migratory skin lesions in a renal transplant recipient. Nephrology (Carlton). 2014 Oct;19(10):661-2. doi: 10.1111/nep.12314. PubMed PMID: 25262975.

116: Panda SS, Panda M, Das RR, Mohanty PK. Radiological versus clinical evidence of malrotation: Role of laparoscopy/laparotomy in Indian scenario. J Minim Access Surg. 2014 Oct;10(4):225. doi: 10.4103/0972-9941.141536. PubMed PMID: 25336829; PubMed Central PMCID: PMC4204272.

117: Pandey AK, Sharma SK, Sharma P, Singh H, Patel C, Sarkar K, Kumar R, Bal CS. Enhancement of positron emission tomography-computed tomography image quality using the principle of stochastic resonance. Indian J Nucl Med. 2014 Oct;29(4):235-40. doi: 10.4103/0972-3919.142626. PubMed PMID: 25400362; PubMed Central PMCID: PMC4228586.

PURPOSE: Acquisition of higher counts improves visual perception of positron emission tomography-computed tomography (PET-CT) image. Larger radiopharmaceutical doses (implies more radiation dose) are administered to acquire this count in a short time period. However, diagnostic information does not increase after a certain threshold of counts. This study was conducted to develop a post processing method based on principle of "stochastic resonance" to improve visual perception of the PET-CT image having a required threshold counts.

MATERIALS AND METHODS: PET-CT images (JPEG file format) with low, medium, and high counts in the image were included in this study. The image was corrupted with the addition of Poisson noise. The amplitude of the Poisson noise was adjusted by dividing each pixel by a constant 1, 2, 4, 8, 16, and 32. The best amplitude of the noise that gave best images quality was selected based on high

value of entropy of the output image, high value of structural similarity index and feature similarity index. Visual perception of the image was evaluated by two nuclear medicine physicians.

RESULTS: The variation in structural and feature similarity of the image was not appreciable visually, but statistically images deteriorated as the noise amplitude increases although maintaining structural (above 70%) and feature (above 80%) similarity of input images in all cases. We obtained the best image quality at noise amplitude "4" in which 88% structural and 95% feature similarity of the input images was retained.

CONCLUSION: This method of stochastic resonance can be used to improve the visual perception of the PET-CT image. This can indirectly lead to reduction of radiation dose.

PMCID: PMC4228586

PMID: 25400362 [PubMed]

118: Parashar R, Bhalla P, Rai NK, Pakhare A, Babbar R. Migraine: is it related to hormonal disturbances or stress? *Int J Womens Health*. 2014 Oct 24;6:921-5. doi: 10.2147/IJWH.S62922. eCollection 2014. PubMed PMID: 25368535; PubMed Central PMCID: PMC4216045.

BACKGROUND: Common neurological syndrome (migraine without aura) is more common among women than men. Migraine is among the top 20 causes of disability. Menstruation is known to be a powerful trigger for migraine, and so is stress, but the presentation of headache is similar in both. Also, women are more vulnerable to stress as well as migraine, and this makes a complex relationship of menstruation, stress, and migraine.

OBJECTIVE: This study was done to understand the association of hormonal fluctuation in menstruation and stress with common migraine.

MATERIALS AND METHODS: A cross-sectional comparative study was conducted in 40 young adult females, of whom 20 participants were cases of migraine without aura (18-35 years old), and the remaining 20 participants were age-matched controls. The study was done in Maulana Azad Medical College, New Delhi. Study participants were selected on the basis of International Headache Society (ICHD-IIA1.1) (2004) classification. Study participants with neurological disorders, chronic diseases, and disease suggestive of any hormonal disturbances were excluded. Clinically diagnosed migraine cases were asked to maintain a headache diary and to fill in the Depression Anxiety Stress Scales questionnaire. Biochemical assessment of hormonal status for thyroid-stimulating hormone, triiodothyronine, thyroxine, estrogen, follicle-stimulating hormone, luteinizing hormone, and prolactin was also done on the second day of their menstrual cycle. We used the Mann-Whitney U test to compare hormonal levels and the χ^2 (2) test to compare anxiety- or depression-related stress among the migraine and nonmigraine groups.

RESULTS: Significantly higher values of prolactin were observed in cases (mean \pm standard deviation, 152.7 mIU/L \pm 30.5) compared to controls (76.1 mIU/L \pm 8.7), with a P-value <0.001 . There was no statistically significant difference observed in levels of thyroid-stimulating hormone (P=0.081), estrogen (P=0.086), luteinizing hormone (P=0.091), or follicle-stimulating hormone (P=0.478). Also, anxiety with stress or depression with stress was significantly higher among the migraine group than the controls (P=0.002). Odds of any stress in migraine were higher in the migraine group than in the nonmigraine group (odds ratio 12, 95% confidence interval 2.7-53.33).

CONCLUSION: Migraine, particularly without aura, in women is mainly associated

with stress-related anxiety or depression, and are more susceptible to stress in the premenstrual period.

PMCID: PMC4216045

PMID: 25368535 [PubMed]

119: Patel CD, Agarwal S, Seth S, Mohanty S, Aggarwal H, Gupta N. Detection of homing-in of stem cells labeled with technetium-99m hexamethylpropyleneamine oxime in infarcted myocardium after intracoronary injection. *Indian J Nucl Med.* 2014 Oct;29(4):276-7. doi: 10.4103/0972-3919.142647. PubMed PMID: 25400375; PubMed Central PMCID: PMC4228599.

Bone marrow stem cells having myogenic potential are promising candidates for various cell-based therapies for myocardial disease. We present here images showing homing of technetium-99m (Tc-99m) hexamethylpropyleneamine oxime (HMPAO) labeled stem cells in the infarcted myocardium from a pilot study conducted to radio-label part of the stem cells in patients enrolled in a stem cell clinical trial for recent myocardial infarction.

PMCID: PMC4228599

PMID: 25400375 [PubMed]

120: Patel H, Chakrabarty B, Gulati S, Sharma MC, Saini L. A case of congenital myopathy masquerading as paroxysmal dyskinesia. *Ann Indian Acad Neurol.* 2014 Oct;17(4):441-3. doi: 10.4103/0972-2327.144034. PubMed PMID: 25506169; PubMed Central PMCID: PMC4251021.

Gastroesophageal reflux (GER) disease is a significant comorbidity of neuromuscular disorders. It may present as paroxysmal dyskinesia, an entity known as Sandifer syndrome. A 6-week-old neonate presented with very frequent paroxysms of generalized stiffening and opisthotonic posture since day 22 of life. These were initially diagnosed as seizures and he was started on multiple antiepileptics which did not show any response. After a normal video electroencephalogram (VEEG) was documented, possibility of dyskinesia was kept. However, when he did not respond to symptomatic therapy, Sandifer syndrome was thought of and GER scan was done, which revealed severe GER. After his symptoms got reduced to some extent, a detailed clinical examination revealed abnormal facies with flaccid quadriparesis. Muscle biopsy confirmed the diagnosis of a specific congenital myopathy. On antireflux measures, those episodic paroxysms reduced to some extent. Partial response to therapy in GER should prompt search for an underlying secondary etiology.

PMCID: PMC4251021

PMID: 25506169 [PubMed]

121: Paul VK, Sankar MJ, Saini S. Trek to MDG 4: state of Indian States. *Indian J Pediatr.* 2014 Oct;81(10):993-9. doi: 10.1007/s12098-013-1324-0. Epub 2014 Mar 22. PubMed PMID: 24652266.

OBJECTIVES: To provide projections of progress towards the national and state specific MDG 4 using infant mortality rates (IMR) as the indicator.

METHODS: Infant mortality rates (IMR) of major Indian states for year 1990 were used as the base for evaluating their progress in child health. In the absence of any specific guidelines, the state specific target IMR was derived from the IMR:U5MR (under 5 mortality rate) of the countries whose current U5MR is between 11 and 47 per 1,000 live-births (range of target U5MR for Indian states). The projected IMR for year 2015 was then estimated by the average annual rate of reduction (AARR) from 2005 to 2012.

RESULTS: Only a few major states-Karnataka, Maharashtra, Odisha, Punjab, and Tamil Nadu are likely to achieve their respective target IMR within the stipulated time (2015). The other major states, and India as a whole, are likely to miss the MDG 4. The two worst performers, Assam and West Bengal, are likely to achieve their respective targets by 2032 and 2022 respectively. Almost all the states have witnessed a significant progress since the advent of National Rural Health Mission (NRHM) in mid-2005-the AARR has almost doubled in the post-NRHM epoch for most states and India as a whole.

CONCLUSIONS: The overall progress of most Indian states towards achieving MDG 4 is presently unsatisfactory. However, given the momentum gained since the commencement of NRHM, acceleration in child survival is quite possible in these states.

PMID: 24652266 [PubMed - in process]

122: Prabhakar P, Reeta KH, Maulik SK, Dinda AK, Gupta YK. Protective effect of thymoquinone against high-fructose diet-induced metabolic syndrome in rats. *Eur J Nutr.* 2014 Oct 28. [Epub ahead of print] PubMed PMID: 25347965.

PURPOSE: Thymoquinone (TQ), a bioactive constituent of *Nigella sativa* (Linn.) seed, which is commonly used as a spice in Asian food, has been reported to possess a wide range of biological effects. The present study evaluated the effect of TQ on high-fructose diet (HFD)-induced metabolic syndrome (MetS) in male Wistar rats.

METHODS: MetS was induced by 60 % HFD over 42 days. TQ (25, 50 and 100 mg/kg, p.o. once daily) was administered along with HFD for 42 days. Pioglitazone (10 mg/kg, p.o. once daily) was used as a standard drug. Plasma glucose, triglycerides, total cholesterol and HDL-cholesterol were estimated on days 0 and 42. Change in blood pressure, oral glucose tolerance and insulin resistance were measured. Hepatic thiobarbituric acid reactive substances (TBARS), reduced glutathione (GSH), superoxide dismutase (SOD) and catalase levels were estimated as measures of hepatic oxidative stress. Hepatic mRNA of PPAR- α and PPAR- γ was also studied.

RESULTS: TQ prevented the characteristic features of HFD-induced MetS, such as hyperglycaemia, hypertriglyceridemia, hypercholesterolaemia and elevated systolic blood pressure. TQ also prevented impaired glucose tolerance and insulin resistance. It also ameliorated HFD-induced increase in hepatic TBARS and depletion of SOD, catalase and GSH. TQ prevented reduction in hepatic mRNA of PPAR- α and PPAR- γ in HFD rats, and the effects were comparable to those of pioglitazone.

CONCLUSIONS: This study demonstrates protective effect of TQ against HFD-induced MetS on rats which might have been mediated via PPAR mechanism.

PMID: 25347965 [PubMed - as supplied by publisher]

123: Pradhan B, Jindal A. Acute encephalitis syndrome following scrub typhus infection. *Indian J Crit Care Med.* 2014 Oct;18(10):700-1. doi: 10.4103/0972-5229.142184. PubMed PMID: 25316985; PubMed Central PMCID: PMC4195205.

124: Purohit A, Aggarwal M, Pati HP, Saxena R. Atypical immunophenotype of T-cell Acute Lymphoblastic Leukemia. *Indian J Pathol Microbiol.* 2014

Oct-Dec;57(4):661-2. doi: 10.4103/0377-4929.142729. PubMed PMID: 25308042.

125: Rai SK, Kant S, Misra P, Srivastava R, Pandav CS. Cause of death during 2009-2012, using a probabilistic model (InterVA-4): an experience from Ballabgarh Health and Demographic Surveillance System in India. *Glob Health Action*. 2014 Oct 29;7:25573. doi: 10.3402/gha.v7.25573. eCollection 2014. PubMed PMID: 25377339; PubMed Central PMCID: PMC4220166.

OBJECTIVES: The present study aimed to estimate the age and cause-specific mortality in Ballabgarh Health and Demographic Surveillance System (HDSS) site for the years 2009 to 2012, using a probabilistic model (InterVA-4).

METHODS: All Deaths in Ballabgarh HDSS from January 1, 2009, to December 31, 2012, were included in the study. InterVA-4 model (version 4.02) was used for assigning cause of death (COD). Data from the verbal autopsy (VA) tool were extracted and processed with the InterVA-4 model. Cause-specific mortality rate (CSMR) per 1,000 person-years was calculated.

RESULTS: A total of 2,459 deaths occurred in the HDSS during the year 2009 to 2012. Among them, 2,174 (88.4%) valid VA interviews were conducted. Crude death rate ranged from 7.1 (2009) to 6.4 (2012) per 1,000 population. The CSMR per 1,000 person-years over the years (2009-2012) for non-communicable diseases, communicable diseases, trauma, neoplasm, and maternal and neonatal diseases were 1.78, 1.68, 0.68, 0.49, and 0.48, respectively. The most common causes of death among children, adults, and the elderly were infectious diseases, trauma, and non-communicable diseases, respectively.

CONCLUSIONS: Overall, non-communicable diseases constituted the largest proportion of mortality, whereas trauma was the most common COD among adults at Ballabgarh HDSS. Policy-makers ought to focus on prevention of premature CODs, especially prevention of infectious diseases in children, and intentional self-harm and road traffic accidents in the adult population.

PMCID: PMC4220166

PMID: 25377339 [PubMed - in process]

126: Rai VK, Shukla G, Afsar M, Poornima S, Pandey RM, Rai N, Goyal V, Srivastava A, Vibha D, Behari M. Memory, executive function and language function are similarly impaired in both temporal and extra temporal refractory epilepsy-A prospective study. *Epilepsy Res*. 2015 Jan;109:72-80. doi: 10.1016/j.epilepsyres.2014.09.031. Epub 2014 Oct 13. PubMed PMID: 25524845.

INTRODUCTION: Cognitive impairment has long been recognized as a co-morbidity or sequel to refractory epilepsy. This study was conducted to evaluate the degree and selectivity of involvement of memory, language and executive functions performance among patients with temporal (TLE) versus extratemporal epilepsy (ETLE).

METHODS: We prospectively enrolled adolescent and adult patients with medically refractory focal epilepsy, who had undergone pre-surgical evaluation. Language, memory and executive function assessment was done using Western Aphasia Battery, PGI memory scale and battery of four executive function tests (trail making test A & B, digit symbol test, Stroop Task and verbal fluency test), respectively.

RESULTS: Among 102 patients enrolled (TLE-59, ETLE-43), mean age of patients 23.04±8.3 years, 83 (82%) had impairment of more than one cognitive domain and 21 (21%) had all three domains involved. Severely impaired memory scores were found in 8.6% patients with MTLE-HS, 8% of the rest of the patients with TLE and 7% patients with ETLE. The differences in the mean scores were also not found

statistically significant ($p=0.669$). Naming impairment was the most common language abnormality, although all aphasia subscores were similar for the ETLE and TLE groups. Executive function impairment was the most common cognitive domain affected. Overall performance on executive function tests was found impaired in almost all patients of both groups without any significant inter-group difference, except on Trail-A test, which revealed better results in patients with mTLE-HS as compared to all other sub-groups.

CONCLUSION: Our study shows that impairment of memory, language and executive function is common among patients with drug refractory epilepsy. The most prevalent impairment is in executive function. There is no significant difference in the degree, prevalence or selectivity of impairment in either of the three domains, between the TLE versus ETLE groups.

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PMID: 25524845 [PubMed - in process]

127: Raj K, Bhatia R, Prasad K, Padma Srivastava MV, Vishnubhatla S, Singh MB. Seasonal differences and circadian variation in stroke occurrence and stroke subtypes. *J Stroke Cerebrovasc Dis.* 2015 Jan;24(1):10-6. doi: 10.1016/j.jstrokecerebrovasdis.2014.07.051. Epub 2014 Oct 3. PubMed PMID: 25284717.

BACKGROUND: India is a subtropical country with clear seasonal variations in weather conditions. Seasonal and circadian variation in occurrence of subtypes of cerebrovascular disease has been of interest in several studies from different countries and climate zones, but discrepant results have made the conclusions unclear. The aim of the present study was to observe the seasonal and circadian variation in the occurrence of stroke and its subtypes among our population.

METHODS: This was a cross-sectional observational study based on new cases and past cases of stroke on follow-up, conducted between January 2011 and December 2012 in the Department of Neurology, at the All India Institute of Medical Sciences, New Delhi, India. The date and time of onset of the stroke was recorded. The categorization of months into season was in accordance with the Indian Meteorological Department guidelines. The time of onset was distributed into 6 hourly intervals. Statistical calculations were performed using Stata version 12.1 and SPSS version 20.

RESULTS: A total of 583 patients were included for the study. The rate of occurrence of stroke was highest in the late morning 0600-1159 hours (P value $<.001$) compared with other times of the day, regardless of gender or age for both ischemic and hemorrhagic strokes. It was lowest in late evening (1800-2359 hours) quadrant compared with other quadrants. Although there was no significant difference found by dichotomizing the groups into two 6-month periods, there was an increasing trend in number of patients with stroke during the months November-February. There was no difference in stroke occurrence between the types of stroke or within each type among different seasons with different temperatures. Trial of Org 10172 in Acute Stroke Treatment (TOAST) classification of ischemic strokes also did not show any association with season or circadian rhythm.

CONCLUSIONS: There is a significant increase in occurrence of strokes between 0600 and 1159 hours and lowest between 1800-2359 hours. No significant variation in stroke occurrence or subtype for any of the seasons was observed.

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PMID: 25284717 [PubMed - in process]

128: Rajkumari N, Mathur P, Xess I, Misra MC. Distribution of different yeasts isolates among trauma patients and comparison of accuracy in identification of yeasts by automated method versus conventional methods for better use in low resource countries. *Indian J Med Microbiol.* 2014 Oct-Dec;32(4):391-7. doi: 10.4103/0255-0857.142243. PubMed PMID: 25297023.

INTRODUCTION: As most trauma patients require long-term hospital stay and long-term antibiotic therapy, the risk of fungal infections in such patients is steadily increasing. Early diagnosis and rapid treatment is life saving in such critically ill trauma patients.

AIMS: To see the distribution of various species of *Candida* among trauma patients and compare the accuracy, rapid identification and cost effectiveness between VITEK 2, CHROMagar and conventional methods.

SETTINGS AND DESIGN: Retrospective laboratory-based surveillance study performed over a period of 52 months (January 2009 to April 2013) at a level I trauma centre in New Delhi, India.

MATERIALS AND METHODS: All microbiological samples positive for *Candida* were processed for microbial identification using standard methods. Identification of *Candida* was done using chromogenic medium and by automated VITEK 2 Compact system and later confirmed using the conventional method. Time to identification in both was noted and accuracy compared with conventional method.

STATISTICAL ANALYSIS: Performed using the SPSS software for Windows (SPSS Inc. Chicago, IL, version 15.0). P values calculated using χ^2 test for categorical variables. A $P < 0.05$ was considered significant.

RESULTS: Out of 445 yeasts isolates, *Candida tropicalis* (217, 49%) was the species that was maximally isolated. VITEK 2 was able to correctly identify 354 (79.5%) isolates but could not identify 48 (10.7%) isolates and wrongly identified or showed low discrimination in 43 (9.6%) isolates but CHROM agar correctly identified 381 (85.6%) isolates with 64 (14.4%) misidentification. Highest rate of misidentification was seen in *C. tropicalis* and *C. glabrata* (13, 27.1% each) by VITEK 2 and among *C. albicans* (9, 14%) by CHROMagar.

CONCLUSIONS: Though CHROMagar gives identification at a lower cost compared with VITEK 2 and are more accurate, which is useful in low resource countries, its main drawback is the long duration taken for complete identification.

PMID: 25297023 [PubMed - in process]

129: Rajkumari N, Mathur P, Misra MC. Soft Tissue and Wound Infections Due to *Enterococcus* spp. Among Hospitalized Trauma Patients in a Developing Country. *J Glob Infect Dis.* 2014 Oct;6(4):189-93. doi: 10.4103/0974-777X.145253. PubMed PMID: 25538459; PubMed Central PMCID: PMC4265836.

Soft tissue and wound infections due to *Enterococcus* spp. are increasing worldwide with current need to understand the epidemiology of the Enterococcal infections of wounds. Hence, we have looked into the distribution of *Enterococcus* spp. responsible for causing wound and soft tissue infections among trauma patients, its antibiotic resistance pattern and how it affects the length of hospital stay and mortality. A laboratory cum clinical-based study was performed over a period of 3 years at a level I trauma center in New Delhi, India. Patients with Enterococcal wound and soft tissue infections were identified using the hospital data base, their incidence of soft tissue/wound infections calculated, drug resistance pattern and their possible risk factors as well as outcomes analyzed. A total of 86 non-repetitive *Enterococcus* spp. was isolated of which *E. faecium* were maximally isolated 48 (56%). High level of resistance was seen to gentamicin HLAR in all the species of *Enterococcus* causing infections whereas a low level resistance to vancomycin and teicoplanin was observed among the isolates. Longer hospital stay, repeated surgical procedure, prior antibiotic therapy and ICU stay were observed to associate with increased morbidity ($P <$

0.05) and hence, more chances of infections with VRE among the trauma patients. The overall rate of wound and soft tissue infections with *Enterococcus* sp. was 8.6 per 1,000 admissions during the study period. Enterococcal wound infection is much prevalent in trauma care facilities especially in the ICUs. Here, a microbiologist can act as a sentinel, help in empirical therapeutic decisions and also in preventing such infections.

PMCID: PMC4265836

PMID: 25538459 [PubMed]

130: Rajkumari N, John NV, Mathur P, Misra MC. Antimicrobial Resistance in *Pseudomonas* sp. Causing Infections in Trauma Patients: A 6 Year Experience from a South Asian Country. *J Glob Infect Dis.* 2014 Oct;6(4):182-5. doi: 10.4103/0974-777X.145250. PubMed PMID: 25538457; PubMed Central PMCID: PMC4265834.

Drug resistance to *Pseudomonas* sp. has spread to such a level irrespective of the type of patients, that its pattern of distribution and antibiotic resistance needs to be studied in detail, especially in trauma patients and hence the study. A 6 year study was carried out among trauma patients to see the trend and type of resistance prevalent in the apex hospital for trauma care in India among nonduplicate isolates where multidrug-resistance (MDR), cross-resistance and pan-drug resistance in *Pseudomonas* sp. were analyzed. Of the total 2,269 isolates obtained, the species, which was maximally isolated was *Pseudomonas aeruginosa* (2,224, 98%). The highest level of resistance was seen in tetracycline (2,166, 95.5%, $P < 0.001$) and chloramphenicol (2,160, 95.2%, $P < 0.001$) and least in meropenem (1,739, 76.7%, $P < 0.003$). Of the total, 1,692 (74.6%) isolates were MDR in which *P. aeruginosa* (75%) were maximum. MDR *Pseudomonas* is slowly increasing since the beginning of the study period. Of 1,797 imipenem-resistant *P. aeruginosa* isolated during the study period, 1,763 (98%) showed resistance to ciprofloxacin or levofloxacin, suggesting that cross-resistance may have developed for imipenem due to prior use of fluoroquinolones. Antibiotic resistance in *Pseudomonas* sp. is fast becoming a problem in trauma patients, especially in those who requires prolonged hospital stay, which calls for proper antimicrobial stewardship.

PMCID: PMC4265834

PMID: 25538457 [PubMed]

131: Raman VS, Sharma A, Agarwala S, Bakshi S, Bhatnagar V. Intussusception following treatment for glioblastoma multiforme: A rare association. *J Indian Assoc Pediatr Surg.* 2014 Oct;19(4):246. doi: 10.4103/0971-9261.142025. PubMed PMID: 25336813; PubMed Central PMCID: PMC4204256.

132: Ranjan R, Pattanayak RD, Dhawan A. Long-term agonist and antagonist therapy for adolescent opioid dependence: a description of two cases. *Indian J Psychol Med.* 2014 Oct;36(4):439-43. doi: 10.4103/0253-7176.140754. PubMed PMID: 25336782; PubMed Central PMCID: PMC4201802.

Adolescents constitute only a small percentage of treatment seekers in drug dependence treatment settings. Little research evidence is available for pharmacological treatment of adolescent opioid dependence and no prior case report is available from India. We discuss two adolescent patients with opioid (heroin) dependence visiting a tertiary care center who have been stabilized on agonist (sublingual buprenorphine-naloxone) and antagonist (oral naltrexone) respectively for a substantial period of time. A comprehensive management approach, including intensive psychosocial interventions and family involvement, was followed in addition to pharmacotherapies. More research is needed on the

efficacy of pharmacological treatment in adolescent opioid users.

PMCID: PMC4201802

PMID: 25336782 [PubMed]

133: Rao A, Ramam M. The case for case reports. *Indian Dermatol Online J.* 2014 Oct;5(4):413-5. doi: 10.4103/2229-5178.142480. PubMed PMID: 25396121; PubMed Central PMCID: PMC4228633.

134: Rastogi D, Meena S, Sharma V, Singh GK. Causality of injury and outcome in patients admitted in a major trauma center in North India. *Int J Crit Illn Inj Sci.* 2014 Oct-Dec;4(4):298-302. doi: 10.4103/2229-5151.147523. PubMed PMID: 25625061.

CONTEXT: Trauma in South Asia is an increasingly significant problem, particularly in light of increasing motorization. Societal changes are resulting in alterations in the epidemiology of trauma.

AIMS: To assess various epidemiological parameters that influence causation of injury in the patients admitted in a major trauma center in Northern India.

SETTINGS AND DESIGN: Prospective, cross-sectional, Hospital based study from August 2008 to July 2009.

MATERIALS AND METHODS: A prospective study of 748 patients chosen by random assortment was carried out over a period of 1 year (August 2008 to July 2009) and following parameters were noted: Age group, sex, mode of trauma, type of injury, place where the trauma occurred and factors leading to injury. The length of stay of patients, Kampala trauma score (KTS) and mortality depending on the arrival time in emergency department was also noted.

STATISTICAL ANALYSIS: Data analysis was performed using SPSS Version 16.

RESULTS: Overall trauma was most common in the age group 15-30 years (Mean age: 29.43 ± 16.87 years), with male constituting 85.29% of the total patients. It was observed that road side injuries were the most frequent (66.71%) site of injuries, whereas household injuries (23.66%), farm site (6.28%), work place (1.60) were the next most common modes of trauma. Mean time of presentation of injured patient was 2.53 ± 4.92 days. About 48.13% patients were admitted after more than 24 h after the injury. Two wheelers (32.09) were found to be the most common mode of injury. Maximum injuries (65.31%) occurred in the rural setting. The overall length of hospital stay ranged from 2 days to 178 days (median 15.6 days). Mortality is more in patients who arrive in night (between 9 pm and 5 pm).

CONCLUSIONS: We conclude that the majority of injuries are preventable and the epidemiological trends differ from that of developed countries. Therefore, preventive strategies should be made on the basis of these epidemiological trends.

PMID: 25625061 [PubMed]

135: Rath GK, Gandhi AK. National cancer control and registration program in India. *Indian J Med Paediatr Oncol.* 2014 Oct;35(4):288-90. doi: 10.4103/0971-5851.144991. PubMed PMID: 25538407; PubMed Central PMCID: PMC4264276.

136: Rath RS, Singh M, Rizwan SA, Lohiya A, Gopal G, Silan V. Evaluation of state-run STI/RTI clinics in the state of Haryana, India through a supportive supervision approach. *Indian Dermatol Online J.* 2014 Oct;5(4):446-8. doi: 10.4103/2229-5178.142489. PubMed PMID: 25396126; PubMed Central PMCID: PMC4228638.

INTRODUCTION: Sexually transmitted infections (STIs) are an important public health problem because of their adverse effects on reproductive health of men and

women. About 5% of adult population in India suffers from STIs. To tackle this issue the government has set up reproductive tract infection (RTI) clinics across the country.

AIMS: To assess the effect of supportive supervision on the quality of services provided in STI/RTI clinics in the state of Haryana, India.

SETTINGS AND DESIGN: Selected state-run STI/RTI clinics, facility-based pre- and post evaluation study.

MATERIAL AND METHODS: Sixteen STI/RTI clinics were selected for the study, including six from government facilities and 10 from targeted intervention sites across five districts of Haryana. From each of the selected sites one physician in-charge was interviewed twice with an interval of 2-3 months using pretested formats. Scores were given in selected domains of STI/RTI management for each visit and the improvement was assessed.

STATISTICAL ANALYSIS: Wilcoxon signed rank test.

RESULTS: A total of 16 physicians one from each site were interviewed. Improvement in mean score of the physicians for knowledge about STI/RTI was 3.6 points. Similarly for skills score, which measured the physicians' skill in various domains of running STI/RTI clinics, the mean improvement was 3.1 points. Both the improvements were statistically significant ($P < 0.001$).

CONCLUSIONS: Supportive supervision proved to be a useful tool for monitoring and improving the quality of services provided by the STI/RTI clinics.

PMCID: PMC4228638

PMID: 25396126 [PubMed]

137: Rongpharpi SR, Gur R, Duggal S, Kumar A, Nayar R, Xess I, Wadhwa V, Khanijo CM. *Candida krusei* fungemia in 7 neonates: clonality tracked to an infusate. *Am J Infect Control*. 2014 Nov;42(11):1247-8. doi: 10.1016/j.ajic.2014.07.033. Epub 2014 Oct 30. PubMed PMID: 25444273.

138: Roy S, Sharma HP, Nag TC, Velpandian T, Upadhyay AD, Mathur R, Jain S. BDNF mediated activity dependent maturation of visual Wulst following prenatal repetitive auditory stimulation at a critical developmental period in domestic chicks (*Gallus domesticus*). *Brain Res Bull*. 2014 Oct;109:99-108. doi: 10.1016/j.brainresbull.2014.10.003. Epub 2014 Oct 18. PubMed PMID: 25305344.

The developing visual circuitry attains its mature adult pattern through the process of activity-dependent refinement in which photic stimulation plays the major role. However, auditory stimulation can also facilitate the developing visual Wulst synaptic plasticity and postnatal perceptual behavior, though the underlying mechanism is unclear. We exposed the fertilized eggs of white Leghorn chickens during incubation to either species-specific calls or no sound for varying time periods depending on the functional development of the auditory and/or visual systems. The visual evoked potential (VEP) from the Wulst was recorded at embryonic days (E) 19, 20 and posthatch days (PH) 1-3, to assess functional maturation. A significant attenuation in latencies and higher amplitudes at PH1-3 in the stimulated groups that received exposure during visual system maturation, suggest beneficial effect of auditory inputs only during critical periods. Concomitant with this, there was a significant increase in the expression of BDNF and levels of neurotransmitters GABA, glutamate, norepinephrine and serotonin from E18 only in both hemispheres of the visual Wulst. A significant inter-hemispheric difference in expression was also found in all groups. These results suggest the role of BDNF in activity driven structural and functional maturation of the visual system following prenatal repetitive auditory stimulation.

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PMID: 25305344 [PubMed - in process]

139: Sadashiv, Tiwari S, Gupta V, Paul BN, Kumar S, Chandra A, Dhananjai S, Negi MP, Ghatak A. IL-6 gene expression in adipose tissue of postmenopausal women and its association with metabolic risk factors. *Mol Cell Endocrinol*. 2015 Jan 5;399:87-94. doi: 10.1016/j.mce.2014.08.008. Epub 2014 Oct 6. PubMed PMID: 25301326.

Adipose tissue secretes various kinds of adipokines that controls the glucose and lipid metabolism in humans. The abdominal visceral adipose tissue (VAT) and subcutaneous adipose tissue (SAT) both are associated with metabolic syndrome and insulin resistance. IL-6 is one of the adipokines, which promotes insulin resistance and dyslipidemia in humans. The association of adipokines with metabolic syndrome at protein levels are well documented. However, their association at gene expression level are lacking. The present study was design to investigate IL-6 mRNA expression in adipose tissues (VAT and SAT) and its correlation with metabolic risk factors and insulin resistance (HOMA) in post menopausal women. A total of 108 Asian North Indian post menopausal women, 54 without metabolic syndrome (controls) and 54 with metabolic syndrome (cases) were recruited and evaluated. Overnight fasting blood samples were collected at admission and abdominal visceral and subcutaneous adipose tissues were collected during open abdomen surgery. The results showed significantly ($p < 0.05$ or $p < 0.01$ or $p < 0.001$) higher mean SBP, glucose, insulin, HOMA, TG, VLDL and serum IL-6 while significantly ($p < 0.001$) lower HDL and estrogen in cases as compared to controls. In cases, the relative mean SAT IL-6 expression was also significantly ($p < 0.05$) higher as compared to VAT. Further, in cases, the VAT IL-6 expression showed significant ($p < 0.05$ or $p < 0.001$) and negative correlation with WC, WHR, glucose, HOMA, TC, LDL and estrogen while SAT IL-6 expression also showed significant ($p < 0.05$ or $p < 0.01$ or $p < 0.001$) and negative correlation with WC, WHR and estrogen. The Cox regression analysis found VAT IL-6 mRNA expression the significant ($p < 0.05$ or $p < 0.01$) an independent predictor of WC, HOMA, TC, LDL and estrogen while SAT IL-6 mRNA expression the significant ($p < 0.01$) an independent predictor of TG and VLDL. The study concluded that IL-6 expressions of both visceral and subcutaneous tissues may be associated with metabolic risk factors in postmenopausal Asian North Indian women.

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PMID: 25301326 [PubMed - in process]

140: Sahani G, Sharma SD, Sharma PK, Deshpande DD, Negi PS, Sathianarayanan VK, Rath GK. Acceptance criteria for flattening filter-free photon beam from standard medical electron linear accelerator: AERB task group recommendations. *J Med Phys*. 2014 Oct;39(4):206-11. doi: 10.4103/0971-6203.144482. PubMed PMID: 25525307; PubMed Central PMCID: PMC4258727.

Medical electron linear accelerators with the capability of generating unflat photon (flattening filter-free, FFF) beams are also available commercially for clinical applications in radiotherapy. However, the beam characteristics evaluation criteria and parameters are not yet available for such photon beams. Atomic Energy Regulatory Board (AERB) of India constituted a Task Group comprising experts from regulatory agency, advisory body/research and technical institutions, and clinical radiotherapy centers in the country to evolve and recommend the acceptance criteria for the flattening filter-free (FFF) photon

beams. The Task Group thoroughly reviewed the literature and inputs of the manufactures/suppliers of the FFF linac and recommended a set of dosimetry parameters for evaluating the characteristics of the unflat photon beam. The recommendations included the evaluation of quality index, degree of unflatness, difference in percentage surface dose between flat and unflat photon beams, percentage depth dose at 10 cm depth, off-axis-ratios and radiation beam penumbra. The recommended parameters were evaluated for FFF photon beams generated by three different models of the linac, and it was observed that recommended evaluation methods are simple and easy to be implemented with the existing dosimetry and quality assurance infrastructure of the linac facilities of the radiotherapy departments. Recommendations were also made for periodic quality control check of the unflat photon beams and constancy evaluation in the beam characteristics.

PMCID: PMC4258727

PMID: 25525307 [PubMed]

141: Sankar J, Lodha R, Kabra SK. Parental stress in pediatric intensive care unit: how do we cope with it? *Indian J Pediatr.* 2014 Nov;81(11):1141-2. doi: 10.1007/s12098-014-1599-9. Epub 2014 Oct 15. PubMed PMID: 25316530.

142: Santra A, Kumar R. Brain perfusion single photon emission computed tomography in major psychiatric disorders: From basics to clinical practice. *Indian J Nucl Med.* 2014 Oct;29(4):210-21. doi: 10.4103/0972-3919.142622. Review. PubMed PMID: 25400359; PubMed Central PMCID: PMC4228583.

Brain single photon emission computed tomography (SPECT) is a well-established and reliable method to assess brain function through measurement of regional cerebral blood flow (rCBF). It can be used to define a patient's pathophysiological status when neurological or psychiatric symptoms cannot be explained by anatomical neuroimaging findings. Though there is ample evidence validating brain SPECT as a technique to track human behavior and correlating psychiatric disorders with dysfunction of specific brain regions, only few psychiatrists have adopted brain SPECT in routine clinical practice. It can be utilized to evaluate the involvement of brain regions in a particular patient, to individualize treatment on basis of SPECT findings, to monitor the treatment response and modify treatment, if necessary. In this article, we have reviewed the available studies in this regard from existing literature and tried to present the evidence for establishing the clinical role of brain SPECT in major psychiatric illnesses.

PMCID: PMC4228583

PMID: 25400359 [PubMed]

143: Satyarthee GD, Kumar S. Is staged surgery for giant vestibular schwannomas always better in improving outcome: Needs socioeconomic consideration? *J Neurosci Rural Pract.* 2014 Oct;5(4):437-9. doi: 10.4103/0976-3147.140018. PubMed PMID: 25288863; PubMed Central PMCID: PMC4173258.

144: Saxena P, Saxena R. Clinical trials: changing regulations in India. *Indian J Community Med.* 2014 Oct;39(4):197-202. doi: 10.4103/0970-0218.143018. PubMed PMID: 25364141; PubMed Central PMCID: PMC4215498.

145: Saxena R, Singh D, Menon V. Controversies in neuro-ophthalmology: steroid therapy for traumatic optic neuropathy. *Indian J Ophthalmol.* 2014 Oct;62(10):1028-30. doi: 10.4103/0301-4738.146021. PubMed PMID: 25449942; PubMed Central PMCID: PMC4278117.

BACKGROUND: There is an increase in the incidence of traumatic optic neuropathy (TON) due to increasing urbanization and rapid spurt in the number of motor vehicles on the road. Despite early presentation and ease of diagnosis the visual outcomes in TON are still limited. There is also significant confusion about the timing, dose and efficacy of steroid treatment in its management.

PURPOSE: To provide a clinical update of the pros and cons of steroid therapy for TON.

DESIGN: The paper is a retrospective review of the currently available literature in the English language indexed in PubMed.

METHODS: A PubMed search was conducted by the authors using the following terms: Traumatic optic neuropathy, megadose, steroids, methylprednisolone. Relevant original articles, review articles, and case reports related to the topic of discussion were evaluated and discussed in the paper.

RESULTS: There is no prospective randomized control trial evaluating the effect of steroids in TON. There are varying reports on the effect of steroid therapy from significant improvement to no difference compared to observation.

CONCLUSION: The decision to give steroids to patients with TON has to be on an individual case to case basis and must involve informed consent from the patient. There are documented advantages and disadvantages of steroid therapy and a prospective, randomized, controlled trial is necessary comparing steroids, surgery and observation before definitive management can be evolved.

PMCID: PMC4278117

PMID: 25449942 [PubMed - in process]

146: Seedeivi P, Moovendhan M, Sudharsan S, Vasanthkumar S, Srinivasan A, Vairamani S, Shanmugam A. Structural characterization and bioactivities of sulfated polysaccharide from *Monostroma oxyspermum*. *Int J Biol Macromol*. 2015 Jan;72:1459-65. doi: 10.1016/j.ijbiomac.2014.09.062. Epub 2014 Oct 30. PubMed PMID: 25451755.

Sulfated polysaccharide was isolated from *Monostroma oxyspermum* through hot water extraction, anion-exchange and gel permeation column chromatography. The sulfated polysaccharide contained 92% of carbohydrate, 0% of protein, 7.8% of uronic acid, 22% of ash and 33% of moisture respectively. The elemental composition was analyzed using CHNS/O analyzer. The molecular weight of sulfated polysaccharide determined through PAGE was found to be as 55 kDa. Monosaccharides analysis revealed that sulfated polysaccharide was composed of rhamnose, fructose, galactose, xylose, and glucose. The structural features of sulfated polysaccharide were analyzed by NMR spectroscopy. Further the sulfated polysaccharide showed total antioxidant and DPPH free radical scavenging activity were as 66.29% at 250 µg/ml and 66.83% at 160 µg/ml respectively. The sulfated polysaccharide also showed ABTS scavenging ability and reducing power were as 83.88% at 125 µg/ml and 15.81% at 400 µg/ml respectively. The anticoagulant activity was determined for human plasma with respect to Activated Partial Thromboplastin Time (APTT) and Prothrombin Time (PT) was 20.09 IU and 1.79 IU at 25 µg/ml respectively. These results indicated that the sulfated polysaccharide from *M. oxyspermum* had potent antioxidant and anticoagulant activities.

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PMID: 25451755 [PubMed - in process]

147: Sen A, Nalwa A, Mathur SR, Jain D, Iyer VK. Cytomorphology of columnar cell variant of papillary carcinoma thyroid: A case report and review of the literature. *Cytojournal*. 2014 Oct 21;11:27. doi: 10.4103/1742-6413.143303. eCollection 2014. PubMed PMID: 25379049; PubMed Central PMCID: PMC4220425.

A 58 years old lady reported with history of progressively increasing lump in the neck. Patient had earlier undergone sub-total thyroidectomy (details not available) in a private institute one year back. Fine needle aspiration cytology (FNAC) of the present lump revealed features of papillary carcinoma thyroid. Patient subsequently underwent total thyroidectomy along with excision of a tumor nodule in the larynx. Gross examination of the specimen revealed a tumor nodule in the right lobe of the thyroid. Microscopic examination of the tumor nodule in the thyroid and larynx revealed a columnar cell variant of papillary carcinoma thyroid. Very few reports describing the cytomorphologic features of this variant of papillary carcinoma are available in the published literature. These reports highlight the absence or paucity of nuclear grooves and intranuclear inclusions in this variant. We describe a case of columnar cell variant of papillary carcinoma where nuclear grooves were prominently seen. In addition, we report the occurrence of rosette-like structures which were brought out better on FNA smears. These rosette-like structures have not been emphasized earlier in the published literature. The cytomorphologic features of this rare variant are also reviewed in this report.

PMCID: PMC4220425

PMID: 25379049 [PubMed]

148: Shah N, Bansal N, Logani A. Recent advances in imaging technologies in dentistry. *World J Radiol.* 2014 Oct 28;6(10):794-807. doi: 10.4329/wjr.v6.i10.794. Review. PubMed PMID: 25349663; PubMed Central PMCID: PMC4209425.

Dentistry has witnessed tremendous advances in all its branches over the past three decades. With these advances, the need for more precise diagnostic tools, specially imaging methods, have become mandatory. From the simple intra-oral periapical X-rays, advanced imaging techniques like computed tomography, cone beam computed tomography, magnetic resonance imaging and ultrasound have also found place in modern dentistry. Changing from analogue to digital radiography has not only made the process simpler and faster but also made image storage, manipulation (brightness/contrast, image cropping, etc.) and retrieval easier. The three-dimensional imaging has made the complex cranio-facial structures more accessible for examination and early and accurate diagnosis of deep seated lesions. This paper is to review current advances in imaging technology and their uses in different disciplines of dentistry.

PMCID: PMC4209425

PMID: 25349663 [PubMed]

149: Sharma G, Gn KK, Yadav S, Lakhotia D, Singh R, Gamanagatti S, Sharma V. Pertrochanteric fractures (AO/OTA 31-A1 and A2) not amenable to closed reduction: Causes of irreducibility. *Injury.* 2014 Oct 27;45(12):1950-1957. doi: 10.1016/j.injury.2014.10.007. [Epub ahead of print] PubMed PMID: 25458060.

PURPOSE: To define the unique radiographic features, operative treatment, and complications of pertrochanteric fractures (AO/OTA 31-A1 and A2) which are not amenable to the usual closed reduction manoeuvres.

METHODS: During a 2-year period (from August 2011 until December 2013), 212 patients with pertrochanteric fractures were treated at our level I trauma centre. A retrospective review was undertaken to determine which of these fractures were not reducible via the routine closed reduction manoeuvres and required some form of open reduction. These fractures were assessed for

radiographic markers of irreducibility, surgical findings, reduction techniques, and perioperative complications.

RESULTS: Twenty-four patients had fractures, which were not amenable to closed reduction and underwent open reduction. These fractures could be grouped into four patterns. A preoperative CT scan was available for at least two cases of each pattern, which provided further insights into the cause of irreducibility by closed means. These included a variant where the proximal fragment is locked underneath the shaft fragment (3 cases), bisected lesser trochanter with a locked proximal fragment (3 cases), irreducibility due to entrapped posteromedial fragment at the fracture site (6 cases) and a variant where the proximal fragment is flexed passively by the underlying lesser trochanter (12 cases).

CONCLUSIONS: Pertrochanteric fractures, which are not amenable to closed reduction, are uncommon, but are heralded by unique radiographic features. These patients warrant special consideration in terms of recognition and management. The specific radiographic markers should alert the surgeon to this injury pattern and its related difficulty encountered during closed reduction. Once reduction is achieved, however, these fractures follow an uneventful course.

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PMID: 25458060 [PubMed - as supplied by publisher]

150: Sharma J, Sharma T, Bhatt GC, Bhargava R. Isolated cold abscess of the thigh in an immunocompetent infant. Trop Doct. 2014 Oct;44(4):221-2. doi: 10.1177/0049475514524200. Epub 2014 Feb 19. PubMed PMID: 24554090.

Isolated cold abscess of the thigh without active tuberculosis elsewhere in the body is a rare entity, and only a few cases have been reported in the literature. We report a case of isolated cold abscess of the thigh following DPT vaccination in an immunocompetent child. The association with DPT vaccination is intriguing and requires further research.

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PMID: 24554090 [PubMed - in process]

151: Sharma SK, Kohli M, Chaubey J, Yadav RN, Sharma R, Singh BK, Sreenivas V, Sharma A, Bhatia R, Jain D, Seenu V, Dhar A, Soneja M. Evaluation of Xpert MTB/RIF assay performance in diagnosing extrapulmonary tuberculosis among adults in a tertiary care centre in India. Eur Respir J. 2014 Oct;44(4):1090-3. doi: 10.1183/09031936.00059014. Epub 2014 Jul 25. PubMed PMID: 25063241.

152: Shrikhande SV, Sirohi B, Barreto SG, Chacko RT, Parikh PM, Pautu J, Arya S, Patil P, Chilukuri SC, Ganesh B, Kaur T, Shukla D, Rath GS. Indian Council of Medical Research consensus document for the management of gastrointestinal stromal tumors. Indian J Med Paediatr Oncol. 2014 Oct;35(4):244-8. doi: 10.4103/0971-5851.144983. PubMed PMID: 25538399; PubMed Central PMCID: PMC4264268.

This consensus statement was produced along with the gastric cancer discussions as stomach is the most common site for gastrointestinal stromal tumor (GIST). The recommendations apply to treatment of GIST. Evaluation of a patient with newly diagnosed GIST should include essential tests: A standard white light endoscopy with 6-8 biopsies (c-KIT testing on immunohistochemistry) from the tumor for confirmation of the diagnosis, a computed tomography (CT) scan (multi-detector or helical) of the abdomen and pelvis for staging with a CT chest or chest X-ray,

and complete blood counts, renal function tests and liver function tests. Endoscopic ultrasonography (EUS)/magnetic resonance imaging (MRI)/positron emission tomography (PET)-CT are not recommended for all patients. For localized and resectable disease, surgery is recommended. The need for adjuvant treatment with imatinib would be guided by the risk stratification on the histopathological analysis of the resected specimen. For localized but borderline resectable tumors, upfront surgery may be considered only if complications due to the tumor are present such as major bleeding or gastric outlet obstruction. In all other patients, neoadjuvant imatinib should be considered to downstage the disease followed by surgery (with a curative intent, if feasible) in those with stable or partial response. This may be followed by adjuvant imatinib. In those patients with a poor response, further imatinib with dose escalation or sunitinib may be considered. Patients with metastatic disease must be assessed for treatment with imatinib as first-line therapy followed by sunitinib as second-line therapy versus best supportive care on an individual basis.

PMCID: PMC4264268

PMID: 25538399 [PubMed]

153: Shrikhande SV, Sirohi B, Barreto SG, Chacko RT, Parikh PM, Pautu J, Arya S, Patil P, Chilukuri SC, Ganesh B, Kaur T, Shukla D, Rath GS. Indian Council of Medical Research consensus document for the management of gastric cancer. *Indian J Med Paediatr Oncol.* 2014 Oct;35(4):239-43. doi: 10.4103/0971-5851.144970. PubMed PMID: 25538398; PubMed Central PMCID: PMC4264267.

The document is based on consensus among the experts and best available evidence pertaining to Indian population and is meant for practice in India. Evaluation of a patient with newly diagnosed gastric cancer should include essential tests: A standard white light endoscopy with multiple biopsies from the tumor for confirmation of the diagnosis, a computed tomography (CT) scan (multi-detector or helical) of the abdomen and pelvis for staging with a CT chest or chest X-ray, and complete blood counts, renal and liver function tests. Endoscopic ultrasonography/ magnetic resonance imaging/positron emission tomography-CT is not recommended for all patients. For early stage disease (IA/B, N0), surgery alone is recommended. The need for adjuvant treatment would be guided by the histopathological analysis of the resected specimen. For locally advanced stage (IB, N(+) to IIIC), neoadjuvant chemotherapy may be considered to downstage the disease followed by surgery. This may be followed by adjuvant chemotherapy (as part of the peri-operative chemotherapy regimen). Patients with stage IV/metastatic disease must be assessed for chemotherapy versus best supportive care on an individual basis. Clinical examination including history and physical examination are recommended at each follow-up visit, with a yearly CT scan of the chest, abdomen, and pelvis. HER2 testing should be considered in patients with metastatic disease. 5-FU may be replaced with capecitabine if patients do not have gastric outlet obstruction. Cisplatin may be replaced with oxaliplatin in the regimens.

PMCID: PMC4264267

PMID: 25538398 [PubMed]

154: Shukla KK, Chambial S, Dwivedi S, Misra S, Sharma P. Recent scenario of obesity and male fertility. *Andrology.* 2014 Nov;2(6):809-18. doi: 10.1111/andr.270. Epub 2014 Oct 1. PubMed PMID: 25269421.

The aim of this review was to provide current scenario linking obesity and male fertility. Obesity has been linked to male fertility because of lifestyle changes, internal hormonal environment alterations, and sperm genetic factors. A few studies assessing the impact of obesity on sperm genetic factor have been published, but they did not lead to a strong consensus. Our objective was to

explore further the relationship between sperm genetic factor and obesity. There are emerging facts that obesity negatively affects male reproductive potential not only by reducing sperm quality, but in particular it alters the physical and molecular structure of germ cells in the testes and ultimately affects the maturity and function of sperm cells. Inhibition of microRNA in the male pronucleus of fertilized zygotes produces offspring of phenotypes of variable severity depending on miRNAs ratios. Hence, these RNAs have a role in the oocyte development during fertilization and in embryo development, fetal survival, and offspring phenotype. It has been reported that the miRNA profile is altered in spermatozoa of obese males, however, the impact of these changes in fertilization and embryo health remains as yet not known.

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PMID: 25269421 [PubMed - in process]

155: Siddiqui S, Chattopadhyay S, Akhtar MS, Najm MZ, Deo SV, Shukla NK, Husain SA. A study on genetic variants of Fibroblast growth factor receptor 2 (FGFR2) and the risk of breast cancer from North India. PLoS One. 2014 Oct 21;9(10):e110426. doi: 10.1371/journal.pone.0110426. eCollection 2014. PubMed PMID: 25333473; PubMed Central PMCID: PMC4204868.

Genome-Wide Association Studies (GWAS) have identified Fibroblast growth factor receptor 2 (FGFR2) as a candidate gene for breast cancer with single nucleotide polymorphisms (SNPs) located in intron 2 region as the susceptibility loci strongly associated with the risk. However, replicate studies have often failed to extrapolate the association to diverse ethnic regions. This hints towards the existing heterogeneity among different populations, arising due to differential linkage disequilibrium (LD) structures and frequencies of SNPs within the associated regions of the genome. It is therefore important to revisit the previously linked candidates in varied population groups to unravel the extent of heterogeneity. In an attempt to investigate the role of FGFR2 polymorphisms in susceptibility to the risk of breast cancer among North Indian women, we genotyped rs2981582, rs1219648, rs2981578 and rs7895676 polymorphisms in 368 breast cancer patients and 484 healthy controls by Polymerase chain reaction-Restriction fragment length polymorphism (PCR-RFLP) assay. We observed a statistically significant association with breast cancer risk for all the four genetic variants ($P < 0.05$). In per-allele model for rs2981582, rs1219648, rs7895676 and in dominant model for rs2981578, association remained significant after bonferroni correction ($P < 0.0125$). On performing stratified analysis, significant correlations with various clinicopathological as well as environmental and lifestyle characteristics were observed. It was evident that rs1219648 and rs2981578 interacted with exogenous hormone use and advanced clinical stage III (after Bonferroni correction, $P < 0.000694$), respectively. Furthermore, combined analysis on these four loci revealed that compared to women with 0-1 risk loci, those with 2-4 risk loci had increased risk ($OR = 1.645$, $95\%CI = 1.152-2.347$, $P = 0.006$). In haplotype analysis, for rs2981578, rs2981582 and rs1219648, risk haplotype (GTG) was associated with a significantly increased risk compared to the common (ACA) haplotype ($OR = 1.365$, $95\% CI = 1.086-1.717$, $P = 0.008$). Our results suggest that intron 2 SNPs of FGFR2 may contribute to genetic susceptibility of breast cancer in North India population.

PMCID: PMC4204868

PMID: 25333473 [PubMed - in process]

156: Singh A, Dubey A, Sonker A, Chaudhary R. Evaluation of various methods of point-of-care testing of haemoglobin concentration in blood donors. Blood

Transfus. 2014 Oct 29;1-7. doi: 10.2450/2014.0085-14. [Epub ahead of print]
PubMed PMID: 25369609.

BACKGROUND: Point-of-care testing (POCT) devices for determining pre-donation haemoglobin (Hb) concentrations mark the advent of advanced technology for blood banks. POCT devices have undergone several improvements including changes in testing methodology and size of device, befitting the needs of blood donors and blood banks in terms of safety and quality of blood components. This study was planned to evaluate the suitability of non-invasive and invasive POCT devices for blood donor Hb screening.

MATERIAL AND METHODS: Pre-donation Hb in apparently healthy blood donors was measured by a non-invasive spectrophotometric based method (NBM-200, OrSense) and an invasive method utilizing reagent free cuvettes (DiaSpect) along with a device using sodium azide-coated cuvettes (HemoControl, EKF diagnostic GmbH). The performance of the devices was evaluated by comparison with the reference method i.e. an automated cell counter (KX-21).

RESULTS: Hb was measured in 485 prospective blood donors. DiaSpect hemoglobin T system was found to be the most sensitive method of POCT for Hb (sensitivity 98.1%) followed by HemoControl (sensitivity 86.8%). NBM-200 was the least sensitive method (sensitivity 71.7%). The intraclass correlation coefficient was highest for DiaSpect (0.78), followed by HemoControl (0.77) and NBM-200 (0.43). The variation of results on repeat testing was high for NBM-200 with a coefficient of variation of 4.28%, compared to 2.19% for DiaSpect. On comparing the mean testing time, DiaSpect (1.9 seconds) was found to be significantly quicker than the other two POCT devices ($p < 0.001$).

DISCUSSION: NBM-200 has the apparent advantage of eliminating pain but also a substantial possibility of causing ineligible donors to be accepted. DiaSpect was fast and accurate, with its results showing perfect agreement with those of the standard method. It is, therefore, aptly suited for screening donors in blood banks.

PMID: 25369609 [PubMed - as supplied by publisher]

157: Singh A, Bajpai M. Plasma rennin activity: Early indicator of renal injury in bilateral pelviureteric junction obstruction in children. Urol Ann. 2014 Oct;6(4):295-7. doi: 10.4103/0974-7796.140981. PubMed PMID: 25371604; PubMed Central PMCID: PMC4216533.

OBJECTIVE: The objective of the present study is to analyze the early indicators of renal injury in children with bilateral pelviuretric junction obstruction.

MATERIALS AND METHODS: We investigated 23 children, 46 kidney units who were diagnosed with bilateral pelvi-ureteric junction obstruction (PUJO) and underwent unilateral or bilateral pyeloplasty between January 2001 and December 2011. Ipsilateral kidney biopsy was performed during pyeloplasty. Kidney biopsy results were divided into three categories. Pre-operative investigation included ultrasonography with the Society of Fetal Urology (SFU) grading, plasma rennin activity (PRA) and differential renal function (DRF).

RESULTS: Out of 23 children there were 17 (73.9%) boys while 6 (26.1%) girls. Median age at operation was 35.4 months (range: 9-60 months). Unilateral pyeloplasty was performed in 14 (60.8%), simultaneous bilateral pyeloplasty in 2 (8.6%) and sequential bilateral pyeloplasty in 7 (30.4%).

CONCLUSION: In bilateral PUJO where DRF and SFU grading of hydronephrosis did not correctly reflect renal injury, PRA showed a significant relationship with renal histopathologic grade and could be an early indicator of renal injury in bilateral PUJO.

PMCID: PMC4216533
PMID: 25371604 [PubMed]

158: Singh A, Gautam L, Sinha M, Bhushan A, Kaur P, Sharma S, Singh TP. Crystal structure of peptidyl-tRNA hydrolase from a Gram-positive bacterium, *Streptococcus pyogenes* at 2.19 Å resolution shows the closed structure of the substrate-binding cleft. *FEBS Open Bio*. 2014 Oct 22;4:915-22. doi: 10.1016/j.fob.2014.10.010. eCollection 2014. PubMed PMID: 25389518; PubMed Central PMCID: PMC4226762.

Peptidyl-tRNA hydrolase (Pth) catalyses the release of tRNA and peptide components from peptidyl-tRNA molecules. Pth from a Gram-positive bacterium *Streptococcus pyogenes* (SpPth) was cloned, expressed, purified and crystallised. Three-dimensional structure of SpPth was determined by X-ray crystallography at 2.19 Å resolution. Structure determination showed that the asymmetric unit of the unit cell contained two crystallographically independent molecules, designated A and B. The superimposition of C(α) traces of molecules A and B showed an r.m.s. shift of 0.4 Å, indicating that the structures of two crystallographically independent molecules were identical. The polypeptide chain of SpPth adopted an overall α/β conformation. The substrate-binding cleft in SpPth is formed with three loops: the gate loop, Ile91-Leu102; the base loop, Gly108-Gly115; and the lid loop, Gly136-Gly150. Unlike in the structures of Pth from Gram-negative bacteria, the entry to the cleft in the structure of SpPth appeared to be virtually closed. However, the conformations of the active site residues were found to be similar.

PMCID: PMC4226762
PMID: 25389518 [PubMed]

159: Singh AK, Salve H, Selvaraj K, Rai SK, Kant S. Quality of diagnostic and treatment practices of pulmonary tuberculosis management amongst health practitioners in Haryana, north India. *Rural Remote Health*. 2014 Oct-Dec;14(4):2784. Epub 2014 Nov 23. PubMed PMID: 25416920.

INTRODUCTION: Early diagnosis and supervised treatment remains the mainstay for tuberculosis (TB) control in India.

METHODS: A facility-based cross-sectional study was conducted to assess diagnostic and treatment practices of tuberculosis management as per the Revised National Tuberculosis Control Programme at a secondary level health facility in north India. This hospital mostly caters to rural and peri-urban populations in the Ballabgarh block of Faridabad district, Haryana. A sample size of 244 was calculated. Consecutive chest symptomatic patients were recruited in the study. Information about socio-demographic characteristics and treatment was obtained from a routine history-taking process in the outpatient clinic. Results were expressed as mean, standard deviation (SD) and odds ratio (OR) with 95% confidence interval (CI).

RESULTS: A total of 250 pulmonary TB suspects were recruited, out of which 55.4% were males and mean age of study participants was 35.4 years (SD 14.6). Almost half (47.1%) of the participants had sought treatment from government hospitals, followed by 46.7% from private hospitals. Those who had visited a private facility were significantly more likely not to receive sputum acid-fast bacillus (AFB) diagnostic testing (OR=7.26, 95% CI 4.04-13.08), likely to be taking a second-line anti-TB drug as an antibiotic trial (OR=3.65, 95% CI 1.17-11.30), be empirically taking anti-TB drugs (OR=5.28, 95% CI 1.50-118.64) and getting a serological test done (OR=9.58, 95% CI 1.20-76.0) than those who went to a

government health facility. Those who made at least three visits to a private facility were significantly more likely to have taken a second-line anti-TB drug as an antibiotic trial (OR=3.56, 95% CI 1.36- 9.28) and be empirically taking anti-TB drugs (OR=5.75, 95% CI 2.18-15.20) than those that made fewer than three visits.

CONCLUSIONS: This study documented inappropriate diagnostic and treatment practices in TB management and highlights the need to generate awareness about it among health practitioners in north India.

PMID: 25416920 [PubMed - in process]

160: Singh K, Kumar S, Shekhar S, Dhawan B, Dey S. Synthesis and biological evaluation of novel peptide BF2 as an antibacterial agent against clinical isolates of vancomycin-resistant enterococci. *J Med Chem.* 2014 Nov 13;57(21):8880-5. doi: 10.1021/jm500960s. Epub 2014 Oct 29. PubMed PMID: 25291061.

Enterococci are the leading cause of nosocomial infections worldwide and acquired resistance to a variety of antibiotics. Antimicrobial peptides represent a promising molecule against the antibiotic resistance in bacteria and an indispensable component of the innate immune system. The aim of the study was to develop an antimicrobial peptide against vancomycin-resistant enterococci (VRE). We have designed a series of peptides based on Sapecin B as template. An in vitro antibacterial study of synthetic peptide BF2 against the clinical isolates of vancomycin-resistant and control strains of enterococci showed rapid killing effect on enterococci by killing 99.9% of bacterial cells in 60 min and susceptibility at minimum inhibitory concentration (MIC) range of 6.25-12.5 µg/mL. Synergy of BF2 was observed in combination with vancomycin and teicoplanin. The peptide was bactericidal and nontoxic to mammalian cells. An in vivo study also revealed the antibacterial activity against enterococci-infected Wistar albino rats. BF2 may be used synergistically with antibiotics.

PMID: 25291061 [PubMed - in process]

161: Singh L, Pushker N, Sen S, Singh MK, Bakhshi S, Chawla B, Kashyap S. Expression of CDC25A and CDC25B phosphatase proteins in human retinoblastoma and its correlation with clinicopathological parameters. *Br J Ophthalmol.* 2014 Oct 17. pii: bjophthalmol-2014-305830. doi: 10.1136/bjophthalmol-2014-305830. [Epub ahead of print] PubMed PMID: 25326518.

BACKGROUND: CDC25 proteins play a pivotal role in controlling cell proliferation during development and tumorigenesis. The aim of the study is to elucidate the role of CDC25A and CDC25B proteins in retinoblastoma and their association with the clinical and histopathological parameters.

METHODS: One hundred and nine prospective cases of primary enucleated retinoblastomas were included in the present study. Expression of CDC25A and CDC25B proteins was investigated by immunohistochemistry, western blotting and mRNA expression by reverse-transcriptase PCR.

RESULTS: Immunohistochemistry showed CDC25A expression in (57/109) 52.29%, whereas CDC25B expressed in (69/109) 63.30% cases. Western blotting confirmed the immunoreactivity results on representative cases. mRNA expression of CDC25A and CDC25B was found in 29/60 (48.33%) and 35/60 (58.33%) cases, respectively. Expression of CDC25A and CDC25B showed significant correlation with poor tumour differentiation and tumour invasion ($p < 0.05$). There was a statistically significant difference in the overall survival of patients with CDC25B expression

($p=0.0270$).

CONCLUSIONS: Our results suggest that expression of CDC25B may be used as a potential prognostic marker in the pathogenesis of retinoblastoma. These findings demonstrate an important role of CDC25 phosphatase proteins and inhibition of these proteins may have therapeutic potential in retinoblastoma.

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PMID: 25326518 [PubMed - as supplied by publisher]

162: Singh L, Ranjan R, Arava S, Singh MK. Role of p40 and cytokeratin 5/6 in the differential diagnosis of sinonasal undifferentiated carcinoma. *Ann Diagn Pathol*. 2014 Oct;18(5):261-5. doi: 10.1016/j.anndiagpath.2014.01.003. Epub 2014 Jan 13. PubMed PMID: 25017972.

Sinonasal undifferentiated carcinoma (SNUC) is an epithelial neoplasm of sinonasal region which does not exhibit a squamous or glandular differentiation. The challenge in diagnosis of this entity is the rarity of the disease, the varying morphology of the tumor which leads to gamut of differential diagnosis and the paucity of consistent immunohistochemical markers except pancytokeratin. Forty-one cases of sinonasal epithelial neoplasm consisting of 11 cases of SNUC and 10 cases each of high-grade (grade 3 and 4) esthesioneuroblastoma, undifferentiated nasopharyngeal carcinoma, and poorly differentiated squamous cell carcinoma of the sinonasal region were analyzed for morphology and immunoexpression of CK5/6 and p40. It was found that SNUC did not exhibit immunohistochemical expression of p40 and CK 5/6, suggesting that these could be useful negative immune markers for diagnosis of SNUC.

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PMID: 25017972 [PubMed - in process]

163: Singh S, Doshi S, Salahuddin S, Tarik M, Barwad P, Ramakrishnan L, Ramakrishnan S, Karthikeyan G, Bhargava B, Bahl VK. Antistreptokinase antibodies and outcome of fibrinolytic therapy with streptokinase for left-sided prosthetic valve thrombosis. *Am Heart J*. 2015 Jan;169(1):170-4. doi: 10.1016/j.ahj.2014.10.012. Epub 2014 Oct 23. PubMed PMID: 25497263.

BACKGROUND: Left-sided prosthetic valve thrombosis (PVT) is a serious complication of valve replacement. In developing countries, fibrinolysis with streptokinase (SK) is often used as the first line of treatment. Anti-streptokinase (anti-SK) antibodies are widely prevalent in the general population, but their effect on the efficacy and outcome of fibrinolysis with SK in patients with PVT is not known.

METHODS: Patients with rheumatic heart disease and prosthetic valve replacement presenting with a first episode of left-sided PVT were enrolled. All patients underwent fibrinolysis with SK. An indirect enzyme-linked immunosorbent assay was used to detect anti-SK antibodies before fibrinolysis. Relationship of these antibodies to the outcome of fibrinolysis was evaluated.

RESULTS: Forty-four patients treated for left-sided PVT were included. Thrombosis affected 33 mitral and 11 aortic prosthetic valves. On fibrinolysis with SK, 32 (73%) patients achieved complete success, whereas it was unsuccessful in the remaining 12 patients. There were 3 bleeding events, 1 stroke, and 3 deaths. Mean anti-SK antibody levels were not significantly different between patients who had complete success and those who did not (8.81 ± 2.43 vs 7.67 ± 1.26 Au/mL; $P =$

.13) and did not correlate with the outcome after adjustment with other variables. Patients in New York Heart Association class III or IV had a greater chance of failed fibrinolytic therapy, even after adjustment for other prognostic variables (odds ratio 9.0; 95% CI 1.29-63.02; P = .027).

CONCLUSION: Anti-SK antibody titers are not associated with success of fibrinolytic therapy using SK in patients with left-sided PVT.

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PMID: 25497263 [PubMed - in process]

164: Singh S. Early detection of multi-drug resistant tuberculosis in India using GenoType MTBDRplus assay & profile of resistance mutations in Mycobacterium tuberculosis. Indian J Med Res. 2014 Oct;140(4):477-9. PubMed PMID: 25488439; PubMed Central PMCID: PMC4277131.

Following the HIV epidemic, several countries have reported co-infections of Leishmania with HIV. Co-infection with these two pathogens results in rapid disease progression, more severe disease, and a poor response to treatment. A systematic review of the literature from India is presented herein. Since the first case of visceral leishmaniasis (VL) and HIV was published from India in 1999, a number of cases of HIV-Leishmania co-infection have been reported, but the proportion has been low (0.029-0.4%), as also reported in other countries where these two diseases are co-endemic. More than 89 cases of VL-HIV and 10 cases of cutaneous leishmaniasis (CL)-HIV have been published since 1999. Of these latter 10 cases, five had simple CL and five cases manifested with diffuse cutaneous leishmaniasis (DCL). In addition, one case of post-kala-azar mucocutaneous leishmaniasis in a patient with full-blown AIDS has also been reported. In two cases, it could not be ascertained whether they were cases of DCL or post-kala-azar dermal leishmaniasis from the description. Although the first case of VL-HIV co-infection was reported from the sub-Himalayan state of Uttarakhand, most cases have been reported from the VL endemic state of Bihar. HIV-Leishmania is not alarmingly high in India. Most cases were found to have occurred during 1997-2007. After that, the number of new cases decreased. This is most probably due to the low prevalence of HIV in VL and CL endemic regions and to the free supply of highly active antiretroviral therapy for HIV-infected patients.

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PMID: 25449244 [PubMed - as supplied by publisher]

165: Singh S. Changing trends in the epidemiology, clinical presentation, and diagnosis of Leishmania-HIV co-infection in India. Int J Infect Dis. 2014 Dec;29C:103-112. doi: 10.1016/j.ijid.2014.07.011. Epub 2014 Oct 22. Review. PubMed PMID: 25449244.

166: Singh SP, Hasija S, Chauhan S. An uncommon presentation of partially ligated left atrial appendage on transesophageal echocardiography. Ann Card Anaesth. 2014 Oct-Dec;17(4):320-1. doi: 10.4103/0971-9784.142079. PubMed PMID: 25281636.

167: Sinha SK, Joshiraj B, Chaudhary L, Hayaran N, Kaur M, Jain A. A comparison of dexmedetomidine plus ketamine combination with dexmedetomidine alone for awake fiberoptic nasotracheal intubation: A randomized controlled study. J Anaesthesiol Clin Pharmacol. 2014 Oct;30(4):514-9. doi: 10.4103/0970-9185.142846. PubMed PMID: 25425777; PubMed Central PMCID: PMC4234788.

BACKGROUND AND AIMS: We designed a study to compare the effectiveness of dexmedetomidine plus ketamine combination with dexmedetomidine alone in search of an ideal sedation regime, which would achieve better intubating conditions, hemodynamic stability, and sedation for awake fiberoptic nasotracheal intubation.

MATERIALS AND METHODS: A total of 60 adult patients of age group 18-60 years with American Society of Anesthesiologists I and II posted for elective surgery under general anesthesia were randomly divided into two groups of 30 each in this prospective randomized controlled double-blinded study. Groups I and II patients received a bolus dose of dexmedetomidine at 1 mcg/kg over 10 min followed by a continuous infusion of dexmedetomidine at 0.5 mcg/kg/h. Upon completion of the dexmedetomidine bolus, Group I patients received 15 mg of ketamine and an infusion of ketamine at 20 mg/h followed by awake fiberoptic nasotracheal intubation, while Group II patients upon completion of dexmedetomidine bolus received plain normal saline instead of ketamine. Hemodynamic variables like heart rate (HR) and mean arterial pressure (MAP), oxygen saturation, electrocardiogram changes, sedation score (modified Observer assessment of alertness/sedation score), intubation score (vocal cord movement and coughing), grimace score, time taken for intubation, amount of lignocaine used were noted during the course of study. Patient satisfaction score and level of recall were assessed during the postoperative visit the next day.

RESULTS: Group I patients maintained a stable HR and MAP (<10% fall when compared with the baseline value). Sedation score (3.47 vs. 3.93) and patient satisfaction score were better in Group I patients. There was no significant difference in intubation scores, grimace scores, oxygen saturation and level of recall when compared between the two groups ($P > 0.05$).

CONCLUSION: The use of dexmedetomidine plus ketamine combination in awake fiberoptic nasotracheal intubation provided better hemodynamic stability and sedation than dexmedetomidine alone.

PMCID: PMC4234788

PMID: 25425777 [PubMed]

168: Somasundaram V, Purohit A, Aggarwal M, Manivannan P, Mishra P, Seth T, Tyagi S, Mahapatra M, Pati HP, Saxena R. Hairy cell leukemia: A decade long experience of North Indian Hematology Center. *Indian J Med Paediatr Oncol.* 2014 Oct;35(4):271-5. doi: 10.4103/0971-5851.144988. PubMed PMID: 25538404; PubMed Central PMCID: PMC4264273.

INTRODUCTION: Hairy cell leukemia is a rare chronic B-cell disorder that follows an indolent but progressive course. This disorder is characterized by pancytopenia, splenomegaly, bone marrow fibrosis and the presence of atypical lymphoid cells with hairy projections in peripheral blood, bone marrow and spleen. Treatment is mainly with nucleoside analog cladribine, which induces complete remission in up to 85% cases.

MATERIALS AND METHODS: This is a retrospective analysis of Hairy cell Leukemia cases diagnosed and treated in the Department of Hematology, All India Institute of Medical Sciences, New Delhi between 2002 and 2013. Various parameters such as clinical features, laboratory parameters including complete blood cell count, bone marrow findings, cytochemistry, immunophenotyping by flowcytometry or immunohistochemistry, treatment protocol and complications secondary to treatment and relapse were reviewed.

RESULTS: A total of 35 cases were diagnosed during this period of 12 years of which 27 received cladribine and went in to remission. Median follow-up duration was 26 months. 5 (18%) cases had a relapse and all relapsed cases achieved second remission with cladribine; however, there was no case of second malignancy in our cohort.

CONCLUSION: Cladribine has emerged as the treatment of choice for hairy cell leukemia given that the overwhelming majority of patients achieve long-lasting complete remissions. Upon relapse, these patients could be successfully salvaged with cladribine retreatment.

PMCID: PMC4264273

PMID: 25538404 [PubMed]

169: Srivastava MV, Bhasin A, Chaudhry R, Sharma S, Subbaiah V, Bhatia R, Tripathi M. Novel inflammatory biomarkers and their correlation to Chlamydia pneumoniae titres in acute ischemic stroke. *J Stroke Cerebrovasc Dis.* 2014 Oct;23(9):2391-6. doi: 10.1016/j.jstrokecerebrovasdis.2014.05.016. PubMed PMID: 25263435.

BACKGROUND: Young stroke patients constitute 15%-30% of all stroke patients in India as against 3.0%-8.5% reported from the West. The mechanisms for stroke in the young may include unconventional risk factors such as infections. We aimed to investigate the role (if any) of Chlamydia pneumoniae antibodies in young patients with acute ischemic stroke (AIS). Several proinflammatory cytokines and biomarkers are released early after the onset of brain ischemia. We assessed the role of heat shock protein (hsp) 65, neopterin, and myeloperoxidase upregulation after AIS in predicting stroke severity. We also assessed relationship of upregulated inflammatory biomarkers with C pneumoniae antibody titres (IgG, IgA, and IgM).

METHODS: Eighty acute stroke patients and healthy age- and sex-matched controls were recruited. Blood samples were drawn within 1 week from the onset of stroke. Detection of IgA, IgG, and IgM antibodies to C pneumoniae was done with a validated microimmunofluorescence technique from 5 mL of serum in all subjects. Inflammatory biomarkers such as neopterin, myeloperoxidase and hsp 65 were estimated with sandwich enzyme linked immunosorbent assay (ELISA) method.

RESULTS: hsp 65 and neopterin were significantly elevated in all stroke patients with respect to healthy controls (odds ratio [OR], 4.9; 95% confidence interval [CI], 23.5-67.8; P = .001 and OR, 4.4; 95% CI, 2.08-9.4; P = .04, respectively). Eighty-one percent of cases were seropositive for IgA versus 32% of controls (P = .003), and IgG was positive in 52.7% versus 17.3% of controls (P = .05). Myeloperoxidase levels were similar in patients and controls. Correlation and multiple regression indicated a high level of predictability and sensitivity of hsp 65 to IgA. C. pneumoniae antibody titres when all other variables were constant (F [4,90] = -6.8, P = .001). Patients with high NIHSS scores (>15) had elevated levels of hsp 65 (mean, 13.2 ng/mL) suggesting correlation with stroke severity.

CONCLUSIONS: The study demonstrated high levels of hsp 65 and neopterin levels in AIS correlated to significantly elevated IgA titres of C pneumoniae. Elevated levels of hsp 65 were associated with stroke severity.

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PMID: 25263435 [PubMed - in process]

170: Srivastava P, Mehta M. Computerized cognitive behavior therapies in psychiatry: a viable option in India? *Asian J Psychiatr*. 2014 Oct;11:72-3. doi: 10.1016/j.ajp.2014.04.003. Epub 2014 May 9. PubMed PMID: 25453701.

171: Srivastava PV, Sudhan P, Khurana D, Bhatia R, Kaul S, Sylaja PN, Moonis M, Pandian JD. Telestroke a viable option to improve stroke care in India. *Int J Stroke*. 2014 Oct;9 Suppl A100:133-4. doi: 10.1111/ijs.12326. Epub 2014 Jul 18. PubMed PMID: 25042038.

In India, stroke care services are not well developed. There is a need to explore alternative options to tackle the rising burden of stroke. Telemedicine has been used by the Indian Space Research Organization (ISRO) to meet the needs of remote hospitals in India. The telemedicine network implemented by ISRO in 2001 presently stretches to around 100 hospitals all over the country, with 78 remote/rural/district health centers connected to 22 specialty hospitals in major cities, thus providing treatment to more than 25000 patients, which includes stroke patients. Telemedicine is currently used in India for diagnosing stroke patients, subtyping stroke as ischemic or hemorrhagic, and treating accordingly. However, a dedicated telestroke system for providing acute stroke care is needed. Keeping in mind India's flourishing technology sector and leading communication networks, the hub-and-spoke model could work out really well in the upcoming years. Until then, simpler alternatives like smartphones, online data transfer, and new mobile applications like WhatsApp could be used. Telestroke facilities could increase the pool of patients eligible for thrombolysis. But this primary aim of telestroke can be achieved in India only if thrombolysis and imaging techniques are made available at all levels of health care.

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PMID: 25042038 [PubMed - in process]

172: Suresh S, Sharma KK, Saksena M, Thukral A, Agarwal R, Vatsa M. Predictors of breastfeeding problems in the first postnatal week and its effect on exclusive breastfeeding rate at six months: experience in a tertiary care centre in Northern India. *Indian J Public Health*. 2014 Oct-Dec;58(4):270-3. doi: 10.4103/0019-557X.146292. PubMed PMID: 25491520.

In spite of the countless benefits of breastfeeding, prevalence of exclusive breastfeeding (EBF) has been far from optimal in the developing world. Breastfeeding problems at or after 4 weeks has been reported as one among the constraints to EBF. The study aimed to determine the breastfeeding problems in the 1st postnatal week, their predictors and impact on EBF rate at 6 months. Under a prospective cohort design, 400 mother-newborn dyads were assessed for breastfeeding problems before discharge and at 60 ± 12 h of discharge. Nearly 89% of the mother-newborn dyads had one or more BF problems before discharge. Major concern was difficulty in positioning and attaching the infant to the breast (88.5%), followed by breast and nipple problems (30.3%). BF problems continued to persist even after discharge in a significant proportion of the mothers (72.5%). The only independent predictor of BF problems in the 1st week was the caesarean section (odds ratio: 1.9, 95% confidence interval: 1.3-3.2, P < 0.05). There was a marked improvement in the EBF status (69.5%) at 6 months, and BF problems did not predict EBF failure at 6 months.

PMID: 25491520 [PubMed - in process]

173: Takkar B, Jain A, Azad S, Mahajan D, Gangwe BA, Azad R. Lens status as the

single most important factor in endothelium protection after vitreous surgery: a prospective study. *Cornea*. 2014 Oct;33(10):1061-5. doi: 10.1097/ICO.0000000000000218. PubMed PMID: 25119959.

PURPOSE: The aim of this study was to evaluate the effect of vitreous surgery on the corneal endothelium.

METHODS: A total of 113 eyes undergoing pars plana vitrectomy for variable indications at a tertiary care center were included prospectively. The mean age was 41 years (range, 9-84 years), and 60% were male. The endothelial cell count was measured preoperatively and on postoperative day 1, 30, 90, and 180. The rate of endothelial cell loss was measured and analysis performed based on gauge of surgery, lens status, and vitreous substitute used.

RESULTS: About 7.6% of endothelial cells were lost at postoperative day 1. This rate had decreased to 2.5% in the first 30 days, 1.5% between days 30 and 90, and 1.4% between days 90 and 180. Significant difference in endothelial cell loss was noted on day 1 between phakic (7.2%), pseudophakic (6.4%), and aphakic (11.4%) eyes with similar results at 6 months. There was no significant difference between the gauges of surgery (20 G vs. 23 G) or the vitreous substitutes used (air vs. gas vs. silicone oil) on day 1 or at 6 months.

CONCLUSIONS: Endothelial decompensation is an important complication of vitreoretinal surgery. Precautions should be taken in aphakics and patients requiring anterior segment manipulation. Although there is immediate cell loss, the rate of cell loss approaches normative values with time.

PMID: 25119959 [PubMed - in process]

174: Talwar S, Anderson RH, Keshri VK, Choudhary SK, Gulati GS, Airan B. Coronary-pulmonary artery fistula in tetralogy of Fallot with pulmonary atresia. *Asian Cardiovasc Thorac Ann*. 2014 Oct;22(8):1003-9. doi: 10.1177/0218492313505101. Epub 2013 Nov 12. PubMed PMID: 24887892.

Surgical correction of patients with tetralogy of Fallot with pulmonary atresia is now one of the routine procedures performed by pediatric cardiac surgeons. In one variant, the pulmonary arterial supply is derived from a fistulous communication from the coronary arteries. This rare and interesting situation poses a diagnostic and therapeutic dilemma, as well as providing specific management challenges to the surgical team. Here, we discuss important aspects of this rare variant, specifically its morphology, presentation, evaluation and management.

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PMID: 24887892 [PubMed - in process]

175: Tandon V, Garg K, Mahapatra AK, Borkar SA. Extra giant occipital encephalocele--can it grow bigger than this? *Indian J Pediatr*. 2014 Oct;81(10):1131-2. doi: 10.1007/s12098-014-1345-3. Epub 2014 Feb 14. PubMed PMID: 24522946.

176: Thukral A, Joshi M, Joshi P, Prakash V, Adkoli BV, Deorari AK. Apps for management of sick newborn: evaluation of impact on health care professionals. *J Trop Pediatr*. 2014 Oct;60(5):370-6. doi: 10.1093/tropej/fmu032. Epub 2014 Jun 12. PubMed PMID: 24924579.

The objective of the study was to evaluate the efficacy of interactive mobile device application 'Apps on sick newborn care' as a training tool, in improving the knowledge and skill scores of postgraduate nursing students (N = 27). A training workshop was conducted in small workstations by the facilitators using the modules on android device and preloaded videos in which the procedure was systematically demonstrated. A mixed-methods approach consisting of pre-post tests, Likert's scale and focus group discussion were used to assess the knowledge, skills and perception of the participants. The scores in multiple choice questions (pre and post, 12.4 ± 2.2 and 19.7 ± 3.6 ; $P < 0.001$) and composite Objective Structured Clinical Examination scores (32.8 ± 7.3 vs. 63.7 ± 7.1 ; $P < 0.001$) significantly improved after training. The students derived overall satisfaction from the training using the device. Such applications have potential to train health-care professionals.

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PMID: 24924579 [PubMed - in process]

177: Tiwari P, Madan K, Jain D, Kumar R, Mohan A, Guleria R. Pleuro-peritoneal lymphomatosis with concurrent tonsillar involvement in T-cell nonHodgkin's lymphoma: Clinical presentation mimicking disseminated tuberculosis. *Lung India*. 2014 Oct;31(4):380-2. doi: 10.4103/0970-2113.142125. PubMed PMID: 25378847; PubMed Central PMCID: PMC4220321.

A young male patient had been evaluated for pleural effusion at another center wherein on the basis of exudative, lymphocyte predominant pleural effusion with high pleural fluid adenosine deaminase (ADA) levels and tuberculin skin test (TST) reactivity, antituberculous medications had been administered. Reevaluation in view of worsening symptoms led to confirmation of the diagnosis of T-cell lymphoblastic lymphoma with pleuro-peritoneal lymphomatosis and tonsillar involvement. This case highlights the fact that elevated ADA levels should not be taken as surrogate for a diagnosis of TB in the absence of histopathological/microbiological confirmation even in countries with high tuberculosis (TB) prevalence. Tonsil in an uncommon site of involvement in patients with T-cell lymphoma. As the diagnosis in our patient was confirmed from biopsy of a tonsillar mass, a thorough physical examination should be performed in all patients with a suspected diagnosis of lymphoma.

PMCID: PMC4220321

PMID: 25378847 [PubMed]

178: Tiwari V, Khatri K, Khan SA, Nath D. Disseminated *Aspergillus flavus* following septic arthritis in an immunocompetent patient: a case report. *BMC Res Notes*. 2014 Oct 9;7:709. doi: 10.1186/1756-0500-7-709. PubMed PMID: 25301635; PubMed Central PMCID: PMC4200168.

BACKGROUND: Aspergillosis is a rare cause of osteomyelitis and septic arthritis. *Aspergillus* osteomyelitis is a debilitating infection affecting both immunocompromised and immunocompetent patients. It is associated with a high incidence of morbidity and mortality. Infection with *Aspergillus flavus* species in the knee has been very rarely seen in the past.

CASE PRESENTATION: We present a case of septic arthritis of the knee in an Indian patient secondary to infection with *Aspergillus flavus*, which was earlier managed as a case of tuberculosis based on the endemicity of the condition, later leading to disseminated aspergillosis. There was no clinical feature or investigation

suggesting immunocompromised state. Following knee arthrotomy, *Aspergillus flavus* was isolated and patient was subsequently managed with antifungals leading to recovery after three months.

CONCLUSIONS: Disseminated aspergillosis can mimic tuberculosis both clinically and radiologically. Though fungal infections affect joints rarely but they must always be ruled out to avoid later complications.

PMCID: PMC4200168

PMID: 25301635 [PubMed - in process]

179: Varma P, Darlong V, Pandey R, Garg R, Chandralekha, Punj J. Comparison of subarachnoid block with bupivacaine and bupivacaine with fentanyl on entropy and sedation: A prospective randomized double-blind study. *J Anaesthesiol Clin Pharmacol*. 2014 Oct;30(4):543-9. doi: 10.4103/0970-9185.142854. PubMed PMID: 25425782; PubMed Central PMCID: PMC4234793.

BACKGROUND AND AIMS: We studied the state entropy to monitor the sedative effect of subarachnoid block (SAB) using bupivacaine alone or combination of bupivacaine and fentanyl. The effect of use of fentanyl via the subarachnoid route on the sedation level was also studied using the entropy scores and the decrease in the requirement of propofol used as an adjuvant sedative drug.

MATERIALS AND METHODS: In this prospective randomized double-blind study, 30 patients of age 18-70 years requiring SAB were enrolled for the study. Patients with any known allergy to study drugs, contraindication for SAB, obesity, neurological or psychiatric disease on concurrent medication and refusal were excluded from the study. Patients were randomly allocated into two groups: Group C: SAB was administered with 2.5 mL (12.5 mg) of 0.5% hyperbaric bupivacaine; Group D: SAB was administered with 2.5 mL of 2 mL (10 mg) of 0.5% hyperbaric bupivacaine and 0.5 mL (25 µg) fentanyl. Propofol infusion was started if the state entropy (SE) value was ≥ 75 , at the rate of 100 µg/kg/min till the SE value reaches in the range of 60-75 (recorded as onset time). Thereafter the infusion rate was titrated to maintain SE value between 60 and 75. The level of sedation was measured with SE and Ramsay sedation (RS) scale.

RESULTS: The demographic profile and baseline parameters, were comparable in two groups ($P > 0.05$). After SAB, decrease in SE and response entropy was noted in both the groups and fall was significant in Group D ($P < 0.0001$). The total propofol required in the two groups were comparable being 3.97 ± 2.14 mg/kg in Group C and 3.41 ± 2.34 mg/kg in Group D ($P = 0.342$). The change in the mean RS values was from 1.17 ± 0.38 to 1.69 ± 0.47 in Group D ($P = 0.06$), whereas in Group C it was from 1.03 ± 0.18 to 1.43 ± 0.50 ($P = 0.041$) within 20 min of SAB.

CONCLUSION: Subarachnoid block causes sedation per se, but the level of sedation is not clinically significant and the sedation caused is not enough to avoid sedative agents for allaying anxiety in patients intraoperatively. The sedative effect of SAB was enhanced by adding intrathecal fentanyl probably because of better quality of SAB. SE showed good correlation with RS scaling system. Therefore, SE may be used as reliable tool to titrate sedation in patients undergoing surgery under SAB.

PMCID: PMC4234793

PMID: 25425782 [PubMed]

180: Yadav NK, Arjuman A, Chandra NC. Role of leptin on the expression of low density lipoprotein receptor. *Indian J Med Res*. 2014 Oct;140(4):524-30. PubMed

PMID: 25488447; PubMed Central PMCID: PMC4277139.

BACKGROUND & OBJECTIVES: Leptin resistance oriented hyperleptinaemia is a common problem in obese subjects in association with hypercholesterolaemia. The most common target for hypercholesterolaemia is impaired low density lipoprotein receptor (LDLR). This study was carried out to investigate whether any alteration in LDLR expression could explain the occurrence of hypercholesterolaemia in the event of hyperleptinaemia.

METHODS: Expression of LDLR and SREBP2 (sterol regulatory element binding protein 2) were examined in HepG2 cells by RT-PCR and Western blotting. JAK2 inhibitor II was used to verify the effect of JAK-STAT (Janus Kinase-Signal Transducer and Activator of Transcription) pathway (common mediator for cytokine signaling). Co-localization of LDLR and insulin receptor (IR) was examined by confocal microscopy.

RESULTS: Leptin was found to reduce the expression of LDLR and its transcription factor SREBP2. On the other hand, a weak signal for stimulation of LDLR by leptin was noted to be mediated by JAK2 pathway. But the joint effect of the two signaling pathways kept LDLR only in depressed mode in presence of leptin. Confocal microscopy showed that LDLR made an intensively co-localized complex with insulin receptor in presence of leptin.

INTERPRETATION & CONCLUSIONS: Our results show that though leptin stimulates LDLR expression very weakly through JAK-STAT signaling pathway, it mainly imposes inhibition on LDLR expression by inhibiting transcription factor SREBP2. The inter-association between LDLR and IR may be a reason to render LDLR functionally inactive in presence of leptin.

PMCID: PMC4277139

PMID: 25488447 [PubMed - in process]

181: Yadav P, Tak V, Mirdha BR, Makharia GK. Refractory giardiasis: a molecular appraisal from a tertiary care centre in India. *Indian J Med Microbiol.* 2014 Oct-Dec;32(4):378-82. doi: 10.4103/0255-0857.142236. PubMed PMID: 25297020.

PURPOSE: The intestinal flagellate *Giardia lamblia* includes many genetically distinct assemblages, of which assemblage A and B, predominantly infect humans. Nitroimidazoles derivatives (metronidazole and tinidazole) and nitazoxanide are some of the therapeutic agents for treatment of giardiasis. Nevertheless, some individuals with giardiasis are non-responsive to standard therapy. The present study highlights cases of refractory giardiasis and attempts to elucidate if genetic heterogeneity in the parasite is associated with treatment failure.

MATERIALS AND METHODS: Three stool samples were obtained on three consecutive days from 4000 patients with diarrhoea and were microscopically examined for the detection of trophozoites, and/or cysts, using both normal saline and Lugol's iodine. A hemi-nested polymerase chain reaction (PCR) assay using triose phosphate isomerase (*tpi*) as the target gene was performed to determine the assemblages. Sequencing of the PCR products of the patients showing failure to treatment of giardiasis was also performed.

RESULTS: Two per cent (82/4000) of the total patients were microscopically positive for *Giardia lamblia* in the stool samples. All these patients were treated with metronidazole/tinidazole as per the standard regimens. However, eight patients showed treatment failure to giardiasis as stool examinations were repeatedly positive even after treatment with multiple courses of anti-giardial therapy. Genetic characterisation of all eight *Giardia* isolates showed that they

belonged to Assemblage B and had homogeneous sequences. These patients were either treated with extended regimens or with combination therapy of anti-giardials.

CONCLUSION: In our experience, combination of two or more drugs for a longer duration is the treatment modality to treat refractory giardiasis.

PMID: 25297020 [PubMed - in process]

182: Yoganathan S, Chakrabarty B, Gulati S, Kumar A, Kumar A, Singh M, Xess I. *Candida tropicalis* brain abscess in a neonate: An emerging nosocomial menace. *Ann Indian Acad Neurol*. 2014 Oct;17(4):448-50. doi: 10.4103/0972-2327.144036. PubMed PMID: 25506171; PubMed Central PMCID: PMC4251023.

Fungi are a relatively uncommon cause of brain abscess in neonates and early infancy. They are usually associated with predisposing factors like prematurity, low birth weight, use of broad-spectrum antibiotics, and prolonged stay in the intensive care unit. *Candida tropicalis* (*C. tropicalis*) is rapidly emerging as a nosocomial threat in the neonatal intensive care settings. This case report describes a neonate with *C. tropicalis* brain abscess who was diagnosed early and managed aggressively with a favorable outcome. Inadvertent use of intravenous antibiotics can have serious complications such as invasive fungal infection. Correct microbiological diagnosis is the key to successful treatment of deep-seated pyogenic infection. Fungal etiology should always be studied in relevant clinical settings.

PMCID: PMC4251023

PMID: 25506171 [PubMed]

183: Zaman S, Chaurasia R, Chatterjee K, Thapliyal RM. Prevalence and Specificity of RBC Alloantibodies in Indian Patients Attending a Tertiary Care Hospital. *Adv Hematol*. 2014;2014:749218. doi: 10.1155/2014/749218. Epub 2014 Oct 16. PubMed PMID: 25386192; PubMed Central PMCID: PMC4216689.

Background. Red blood cell (RBC) alloimmunization results from genetic disparity of RBC antigens between donor and recipients. Data about alloimmunization rate in general patient population is scarce especially from resource limited countries. We undertook this study to determine prevalence and specificity of RBC alloantibodies in patients admitted in various clinical specialties at a tertiary care hospital in North India. Methods. Antibody screening was carried out in 11,235 patients on automated QWALYS 3 platform (Diagast, Loos, France). Antibody identification was carried out with an 11-cell identification panel (ID-Diapanel, Diamed GmbH, Switzerland). Results. The overall incidence of RBC alloimmunization in transfused patients was 1.4% (157/11235), with anti-E being the most common specificity (36.3%), followed by anti-D (16%), anti-c (6.4%), anti-c + E (6.4%), anti-C + D (5.1%), and anti-K (4.5%). The highest incidence of alloimmunization was observed in hematology/oncology patients (1.9%), whereas in other specialties the range was 0.7-1%. Conclusion. As alloimmunization complicates the transfusion outcomes, authors recommend pretransfusion antibody screening and issue of Rh and Kell matched blood to patients who warrant high transfusion requirements in future.

PMCID: PMC4216689

PMID: 25386192 [PubMed]

184: Zeeshan M, Tyagi RK, Tyagi K, Alam MS, Sharma YD. Host-Parasite Interaction: Selective Pv-fam-a Family Proteins of *Plasmodium vivax* Bind to a Restricted Number of Human Erythrocyte Receptors. *J Infect Dis*. 2014 Oct 13. pii: jiu558.

[Epub ahead of print] PubMed PMID: 25312039.

BACKGROUND: Plasmodium vivax synthesizes the largest number of 36 tryptophan-rich proteins belonging to the Pv-fam-a family. These parasite proteins need to be characterized for their biological function because tryptophan-rich proteins from other Plasmodium species have been proposed as vaccine candidates.

METHODS: Recombinant P. vivax tryptophan-rich antigens (PvTRAGs) were used to determine their erythrocyte-binding activity by a cell-based enzyme-linked immunosorbent assay, flow cytometry, and a rosetting assay.

RESULTS: Only 4 (PvTRAG26.3, PvTRAG34, PvTRAG36, and PvTRAG36.6) of 21 PvTRAGs bind to host erythrocytes. The cross-competition data indicated that PvTRAG36 and PvTRAG34 share their erythrocyte receptors with previously described proteins PvTRAG38 and PvTRAG33.5, respectively. On the other hand, PvTRAG26.3 and PvTRAG36.6 cross-compete with each other and not with any other PvTRAG, indicating that these 2 proteins bind to the same but yet another set of erythrocyte receptor(s). Together, 10 of 36 PvTRAGs possess erythrocyte-binding activity in which each protein recognizes >1 erythrocyte receptor. Further, each erythrocyte receptor is shared by >1 PvTRAG.

CONCLUSIONS: This redundancy may be useful for the parasite to invade red blood cells and cause disease pathogenesis, and it can be exploited to develop therapeutics against P. vivax malaria.

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