List of publications of AIIMS, New Delhi for the month of MAY, 2016

[Source: www.pubmed.com].

1: Adhikari N, Mondal D, Jana M, Kumari K, Das KJ, Julka PK. Primary Neuroendocrine Tumor of Seminal Vesicle: An Extremely Rare Clinical Entity Emphasizing Diagnostic Role of 68-Ga DOTANOC PET-CT Scan and Therapeutic Potential of Long-Acting Depot Octreotide Injection in Maintenance. Clin Genitourin Cancer. 2016 Oct;14(5):e539-e543. doi: 10.1016/j.clgc.2016.04.020. PubMed PMID: 27239005.

2: Agarwal S, Kumar T, Sharma MC, Damle NA, Gandhi AK. Parathyroid carcinoma with contralateral subcutaneous and breast recurrences: A rare presentation. Head Neck. 2016 May;38(5):E115-8. doi: 10.1002/hed.24317. PubMed PMID: 26685878.

BACKGROUND: Parathyroid carcinoma is extremely rare. Correct preoperative and even histopathological diagnosis may be difficult owing to the deceptively bland cytoarchitectural features, especially when presenting with localized disease. Recurrence/metastases developing years later then make the malignant nature obvious.
METHODS AND RESULTS: We present here an unusual case of a 32-year-old patient with carcinoma of the left upper parathyroid gland, initially diagnosed as parathyroid adenoma, treated with endoscopic left parathyroidectomy, and later developing subcutaneous metastatic nodules over the medial end of the right clavicle and right anterior chest wall, followed by a right breast deposit. The recurrences, especially subcutaneous ones, were probably secondary to tumor seeding along the track of insertion of the endoscope.
CONCLUSION: Involvement of subcutaneous tissue and the breast in parathyroid carcinoma is extremely rare. The case is being reported for its uniqueness along with a discussion of possible appropriate course of management, which may have averted the aggressive clinical course of the disease.

DOI: 10.1002/hed.24317
PMID: 26685878 [PubMed - in process]

3: Ahmad F, Dixit D, Sharma V, Kumar A, Joshi SD, Sarkar C, Sen E. Nrf2-driven TERT regulates pentose phosphate pathway in glioblastoma. Cell Death Dis. 2016 May 5;7:e2213. doi: 10.1038/cddis.2016.117. PubMed PMID: 27148686; PubMed Central PMCID: PMC4917655.

Given the involvement of telomerase activation and dysregulated metabolism in glioma progression, the connection between these two critical players was investigated. Pharmacological inhibition of human Telomerase reverse transcriptase (hTERT) by Costunolide induced glioma cell apoptosis in a reactive oxygen species (ROS)-dependent manner. Costunolide induced an ROS-dependent increase in p53 abrogated telomerase activity. Costunolide decreased Nrf2 level; and ectopic Nrf2 expression decreased Costunolide-induced ROS generation. While TERT knock-down abrogated Nrf2 levels, overexpression of Nrf2 increased TERT expression. Inhibition of hTERT either by Costunolide, or by siRNA or dominant-negative hTERT (DN-hTERT) abrogated (i) expression of Glucose-6-phosphate dehydrogenase (G6PD) and Transketolase (TKT) - two major nodes in the pentose phosphate (PPP) pathway; and (ii) phosphorylation of glycogen synthase (GS). hTERT knock-down decreased TKT activity and increased glycogen accumulation. Interestingly, siRNA-mediated knock-down of TKT elevated glycogen accumulation. Coherent with the in vitro findings, Costunolide reduced tumor burden in heterotypic xenograft glioma mouse model. Costunolide-treated tumors exhibited diminished TKT activity, heightened glycogen accumulation, and increased senescence. Importantly, glioblastoma multiforme (GBM) patient tumors bearing TERT promoter mutations (C228T and C250T) known to be associated with increased telomerase activity; exhibited elevated Nrf2 and TKT expression and decreased glycogen accumulation. Taken together, our findings highlight the previously unknown (i) role of telomerase in the regulation of PPP and glycogen accumulation and (ii) the involvement of Nrf2-TERT loop in maintaining oxidative

defense responses in glioma cells.

DOI: 10.1038/cddis.2016.117
PMCID: PMC4917655
PMID: 27148686 [PubMed - in process]

4: Alam MS, Zeeshan M, Mittra P, Choudhary V, Sharma YD. Receptor specific binding regions of Plasmodium vivax tryptophan rich antigens and parasite growth inhibition activity of PvTRAg35.2. Microbes Infect. 2016 Sep;18(9):550-8. doi: 10.1016/j.micinf.2016.04.006. PubMed PMID: 27235199.

Plasmodium tryptophan rich proteins play important role in host-parasite interaction. Earlier, we have described that one of the merozoite expressed Plasmodium vivax tryptophan-rich antigen PvTRAg35.2 binds to the host erythrocytes, have conserved sequences in parasite population, and generates humoral as well as cellular immune responses in humans during this parasitic infection. Here, we show that PvTRAg35.2 interferes with the parasite growth in a heterologous Plasmodium falciparum culture system. This probably suggests the recognition of the common erythrocyte receptor(s) by certain merozoite ligands of these two parasite species. We have mapped the erythrocyte binding activity of PvTRAg35.2 to its two different regions positioned at amino acid residues 155-190 and 263-283. Binding of these peptide domains to the erythrocytes was inhibited by anti-PvTRAg35.2 antibodies either raised in rabbit or produced by the P. vivax patients. The cross-competition between peptides of PvTRAg35.2 and PvTRAg33.5 or PvTRAg38 during erythrocyte binding assay suggested sharing of host cell receptors by these PvTRAgs. Further studies on these receptor-ligand interactions may lead to the development of therapeutic agents for P. vivax malaria.

DOI: 10.1016/j.micinf.2016.04.006
PMID: 27235199 [PubMed - in process]

5: Ambalayam S, Jain S, Mathur R. Abnormal feeding behaviour in spinalised rats is mediated by hypothalamus: Restorative effect of exposure to extremely low frequency magnetic field. Spinal Cord. 2016 Dec;54(12):1076-1087. doi: 10.1038/sc.2016.32. PubMed PMID: 27163452.

STUDY DESIGN: Experimental study.
OBJECTIVES: To investigate the role of hypothalamus in abnormal feeding behaviour after spinal cord injury (SCI) and the effect of exposure to extremely low frequency magnetic field (ELF-MF) on it.
SETTING: India.
METHODS: Male Wistar rats (n=44) were divided into Sham (laminectomy), SCI (complete transection of T13 spinal cord), SCI+MF (ELF-MF exposure to SCI rats), VMHL (lesion of ventromedial hypothalamus; VMH), SCI+VMHL (VMHL after SCI) and SCI+VMHL+MF (ELF-MF exposure to SCI+VMHL rats) groups. Food intake (FI), water intake (WI), calorie intake (CI), body weight (BWT), taste preference and sucrose-induced biphasic (SIB) response to noxious stimulus were studied pre and post surgery. Neuronal activity at VMH was assessed by c-Fos immunohistochemistry. The extent of neuronal degeneration and regeneration in spinal cord was assessed microscopically.
RESULTS: Data revealed post-SCI decrease in FI, WI, CI and BWT, preference for sodium chloride and citric acid, prolonged analgesic phase of SIB and increased c-Fos immunoreactivity in VMH of SCI rats vs Sham rats. VMH lesion increased FI, WI, CI, BW, preference for sweet tastants and abolished SIB, whereas in SCI+VMHL rats it abolished the effects of SCI on these parameters indicating probable involvement of VMH in SCI-induced alteration in feeding behaviour. Exposure to MF improved the study parameters in SCI rats and reduced the c-Fos immunoreactivity in VMH besides reduction in lesion volume, greater myelination and neuronal regeneration at SCI site.
CONCLUSION: SCI influences VMH, leading to alteration in feeding behaviour, which

is improved by exposure to ELF-MF.

DOI: 10.1038/sc.2016.32
PMID: 27163452 [PubMed - in process]

6: Anand M, Hazarika B, Kumar L, Kumar R, Chopra A. High abundance of circulating megakaryocytic cells in chronic myeloid leukemia in Indian patients. Revisiting George Minot to re-interpret megakaryocytic maturation. Blood Cells Mol Dis. 2016 Sep;60:28-32. doi: 10.1016/j.bcmd.2016.05.003. PubMed PMID: 27519941.

Circulating megakaryocytic cells abound in chronic myeloid leukemia (CML) seen in India and uniquely provide a setting for observing megakaryocytic maturation in the peripheral blood, a milieu not native to megakaryocytes. Peripheral blood megakaryocytic cells were studied in 324 cases of CML (235 chronic, 65 accelerated and 24 blastic phases). Two maturation themes were evident. Megakaryocytic blasts, especially in some cases of blast crisis, precociously make a foray into platelet formation and end up producing huge agranular or poorly granular cytoplasmic lobulated masses, that break off and come to lie in the circulation. This evidence of unsuccessful effort may exist, in a considerably attenuated form in chronic phase, alongside of the second major theme of megakaryocytic maturation centered around the familiar micromegakaryocyte, characteristic of the chronic phase. This cell is regarded as dysplastic, but produces morphologically normal platelets. The possibility that this occurs via a hitherto unstudied alternative path of platelet maturation that plays out in the peripheral blood, and the contrasting disorderly premature attempt of blasts to form platelets, represent exciting maturation processes that need further study. Our observations fortuitously constitute a revisit of the insightful exposition on the subject by George Minot nearly a century ago.

DOI: 10.1016/j.bcmd.2016.05.003
PMID: 27519941 [PubMed - in process]

7: Arora S, Chhabra A, Subramaniam R, Arora MK, Misra MC, Bansal VK. Transversus abdominis plane block for laparoscopic inguinal hernia repair: a randomized trial. J Clin Anesth. 2016 Sep;33:357-64. doi: 10.1016/j.jclinane.2016.04.047. PubMed PMID: 27555193.

BACKGROUND: Pain after laparoscopic inguinal hernia surgery can be moderate to severe, interfering with return to normal activity. The study aimed to assess the efficacy of bilateral ultrasound-guided (USG) transversus abdominis plane (TAP) block for relieving acute pain after laparoscopic hernia repair as T10-L1 nerve endings are anesthetized with this block.
METHODS: Seventy-one American Society of Anesthesiologists I to II patients, aged 18 to 65 years, undergoing unilateral/bilateral laparoscopic hernia repair were randomized to port site infiltration (control, 36) and TAP block groups (35). All patients received general anesthesia (fentanyl 2 μg/kg intravenously at induction, 0.5 μg/kg on 20% increase in heart rate or mean blood pressure) and paracetamol 6 hourly. Postintubation, TAP group received bilateral USG TAP block (15-20 mL 0.5% ropivacaine, maximum 3 mg/kg) with 18-G Tuohy needle. Control group had 20 to 30 mL 0.5% ropivacaine infiltrated preincision, at port sites from skin to peritoneum. Postoperative patient-controlled analgesia fentanyl was provided for 6 hours; pain was assessed using 0- to 100-mm visual analog scale (VAS) at 0, 1, 2, 4, 6, and 24 hours and telephonically at 1 week and 3 months.
RESULTS: Demographic profile of the 2 groups was comparable. Significantly more number of patients required intraoperative fentanyl in the control group (24/36) than in the TAP group (13/35); VAS at rest was lower in TAP than control patients in postanesthesia care unit at 0, 2, 6, and 24 hours (median VAS TAP group: 0, 0, 0, and 0; control: 10, 20, 10, and 10; P= .002, P= .001, P= .001, and P= .006, respectively); P< .01 was considered statistically significant. TAP group had significantly lower VAS on deep breathing at 6 hours and on knee bending and walking at 24 hours and lesser patient-controlled analgesia fentanyl requirement.

No significant difference in pain scores was observed at 1 week and 3 months. CONCLUSION: TAP block reduced postoperative pain up to 24 hours after laparoscopic hernia repair.

DOI: 10.1016/j.jclinane.2016.04.047
PMID: 27555193 [PubMed - in process]

8: Bahr NC, Marais S, Caws M, van Crevel R, Wilkinson RJ, Tyagi JS, Thwaites GE, Boulware DR; Tuberculous Meningitis International Research Consortium.. GeneXpert MTB/Rif to Diagnose Tuberculous Meningitis: Perhaps the First Test but not the Last. Clin Infect Dis. 2016 May 1;62(9):1133-5. doi: 10.1093/cid/ciw083. PubMed PMID: 26966284; PubMed Central PMCID: PMC4826457.

Tuberculous meningitis (TBM) is the most severe form of tuberculous with substantial mortality. In May 2015, 54 researchers from 10 countries met in Da Lat, Vietnam, to discuss advances in TBM. Among the attendees were researchers involved in pivotal studies on the use of Xpert MTB/Rif for TBM diagnosis. Attendees discussed the 2014 World Health Organization strong recommendation favoring the use of Xpert "in preference to conventional microscopy and culture as the initial diagnostic test for cerebrospinal fluid (CSF) if the sample volume is low or if additional specimens cannot be obtained to make a quick diagnosis." Attendees were concerned that the limitations of Xpert testing for TBM are not emphasized. Clear guidance is needed for the investigational pathway for TBM, including recommendations on the diagnostic package of investigations, which does not stop with Xpert testing. Second, emphasis on the large CSF volumes (ideally 8-10 mL) needed for Xpert testing is required. Guidelines should also emphasize that TBM is a medical emergency and early treatment reduces mortality.

DOI: 10.1093/cid/ciw083
PMCID: PMC4826457 [Available on 2017-05-01]
PMID: 26966284 [PubMed - in process]

9: Bajpai D, Banerjee A, Pathak S, Thakur B, Jain SK, Singh N. Single nucleotide polymorphisms in the DNA repair genes in HPV-positive cervical cancer. Eur J Cancer Prev. 2016 May;25(3):224-31. doi: 10.1097/CEJ.0000000000000159. PubMed PMID: 25812040.

Genetic variation in DNA repair genes can modulate DNA repair capacity and may be related to the risk of cancer. The human papillomavirus is considered to be a necessary but not sufficient cause for cervical cancer and, therefore, other factors contribute to the carcinogenesis. A hereditary component for this neoplasia has been reported. Evaluation of the association of six polymorphisms was carried out in the following DNA repair genes: XRCC1 (Arg194Trp, Arg280His, and Arg399Gln), ERCC1 (Asp118Asp), ERCC2 (Lys751Gln), and ERCC4 (Arg415Gln). The cases (n=110) included 65 squamous cell carcinomas (SCCs) and 45 squamous intraepithelial lesions (SIL). Controls (n=68) were recruited from among women without cervical abnormalities. Genotypes were determined by PCR-restriction fragment length polymorphism and DNA sequencing. A positive association was observed between the polymorphisms of XRCC1 genes, that is, in codons 194 [P=0.001, odds ratio (OR)=20.1, 95% confidence interval (CI)=5.9-68.8], 280 (P=0.001, OR=5.4, 95% CI=2.3-12.6), and 399 (P=0.008, OR=4.2, 95% CI=1.5-12.1) and cervical cancer. SIL patients also showed a significant association with codon 194 (P=0.012, OR=3.8, 95% CI=1.3-10.6), but not with 280 (P=0.35) and 399 (P=0.81). A positive correlation was also found in ERCC4 Gln415Gln in both SCCs and SILs (P=0.001, OR=21.3, 95% CI=7.1-64.0 and P=0.001, OR=7.8, 95% CI=2.9-20.9, respectively). For ERCC2 Gln751Gln, the association was significant for both SCCs (P=0.001, OR=10.1, 95% CI=2.6-37.9) and SILs (P=0.001, OR=8.9, 95% CI=2.8-28.3).

However, the risk of SCC did not appear to differ significantly among individuals with the ERCC1 Asp118Asp genotype (P=0.404). For SILs, it appeared to be a protective genotype (95% CI=0.1-0.7). This study indicates that variant types of DNA repair genes play an important role in modifying individual susceptibility to SCC.

DOI: 10.1097/CEJ.0000000000000159
PMID: 25812040 [PubMed - indexed for MEDLINE]

10: Bandivadekar P, Gupta S, Sharma N. Intraoperative Suprachoroidal Hemorrhage After Penetrating Keratoplasty: Case Series and Review of Literature. Eye Contact Lens. 2016 May;42(3):206-10. doi: 10.1097/ICL.0000000000000164. PubMed PMID: 25996421.

OBJECTIVE: To describe four cases of intraoperative suprachoroidal hemorrhage (SCH) during penetrating keratoplasty and to review the literature.
METHODS: Cases with intraoperative SCH during penetrating keratoplasty over 3-year period were reviewed. The parameters evaluated were ocular and systemic risk factors, intraoperative details, and postoperative outcomes. A review of literature of intraoperative SCH during penetrating keratoplasty was also conducted.
RESULTS: Of the 543 cases that underwent penetrating keratoplasty for optical indications during the study period, four cases developed intraoperative SCH, which is an incidence of 0.73%. Suprachoroidal hemorrhage occurred in the following cases: failed pediatric graft, donor eye in a case of contralateral autokeratoplasty, Marfan syndrome with aphakic bullous keratopathy who had undergone multiple ocular surgeries, and a case of healed keratitis with corneoiridic scar. The mean age, axial length, and intraocular pressure were 32.75±22.17 years (range, 4-57 years), 23.29±2.12 mm (range, 20.38-25.2 mm), and 16.25±3.86 mm Hg (range, 16-20 mm Hg), respectively. Postoperatively, two eyes had a best-corrected visual acuity (BCVA) of counting fingers. The third case had BCVA of light perception (LP), and fourth eye had no LP.
CONCLUSION: The visual outcomes in cases of open-sky penetrating keratoplasty with SCH continue to be abysmally poor. The importance of thoroughly informing the patient about this complication cannot be underrated.

DOI: 10.1097/ICL.0000000000000164
PMID: 25996421 [PubMed - in process]

11: Bansal S, Singh N, Gupta P, Malhotra N, Mahendru R. Does basal luteinizing hormone help predict the fate of in vitro fertilization? JBRA Assist Reprod. 2016 May 1;20(2):66-71. doi: 10.5935/1518-0557.20160016. PubMed PMID: 27244764.

OBJECTIVE: Evaluate the role of baseline serum luteinizing hormone (LH) in predicting the success of in-vitro fertilization (IVF) in terms of clinical pregnancy and live birth rate.
METHODS: Women who underwent IVF and/or intracytoplasmic sperm injection (ICSI), following either the agonist or the antagonist protocol, were retrospectively evaluated over a period of two years at the All India Institute of Medical Sciences, New Delhi. We investigated the correlation of serum LH levels in the follicular phase with pregnancy outcomes. A P-value lower than 0.05 was considered as statistically significant.
RESULTS: The individuals (351) were divided into four groups based on LH and FSH baseline values, and the levels were correlated with clinical pregnancy and live births. The highest clinical pregnancy rate (25%) was achieved in women with low LH (< 2IU/l); whereas the miscarriage rate was almost similar in all the groups. The pregnancy rate was the lowest (16%) in women with high LH levels (> 8IU/L). Pregnancy rates were intermediate (20%) if LH was intermediate (2-8IU/L). However, none of the results had statistical significance.
CONCLUSIONS: Early follicular serum LH levels before an IVF/ICSI treatment cycle did not have any clear relationship with clinical pregnancy or live birth rates.

DOI: 10.5935/1518-0557.20160016

PMID: 27244764 [PubMed - indexed for MEDLINE]

12: Benson R, Mallick S, Julka PK, Rath GK. Anti EGFR therapy in the treatment of non-metastatic head and neck squamous cell carcinoma: The current evidence. J Egypt Natl Canc Inst. 2016 Sep;28(3):141-8. doi: 10.1016/j.jnci.2016.04.003. Review. PubMed PMID: 27160750.

Head and neck squamous cell carcinoma (HNSCC) accounts for a large oncologic burden in the developing countries. In patients with locally advanced head and neck cancer multimodality treatment is warranted. Radiation therapy with concurrent chemotherapy has long been considered the standard for patients with disease involving the oropharynx, larynx and hypopharynx. However, addition of chemotherapy to radiotherapy increases treatment related toxicity by many folds and compliance rates decrease. In this context a systemic therapy, which when used concurrent with radiation with favorable toxicity profile is of great importance for improving disease control in locally advanced HNSCC. Anti-epithelial growth factor receptor targeted therapy emerged as a potential treatment option. In recent years many trials were conducted to find the optimum treatment option with the combination of these targeted agents. The initial trials showed excellent results with minimal morbidity and led to great enthusiasm across the globe to incorporate these regimens as a standard of care. However, subsequently many trials failed to maintain such results and now there is little agreement to the initial results achieved with these drugs. Based on the current evidence we cannot recommend the replacement of cisplatin with targeted therapy in concurrent setting. It may be considered in patients with altered renal parameters, hypersensitivity or intolerance to cisplatin. The addition of targeted therapy in addition to chemotherapy in the concurrent setting can't also be recommended as the benefit is doubtful and is associated with a significant increase in toxicity.

DOI: 10.1016/j.jnci.2016.04.003
PMID: 27160750 [PubMed - in process]

13: Benson R, Madan R, Julka PK, Rath GK. Metaplastic carcinoma of breast: A case series of seven patients from a tertiary care center and review of literature. Gulf J Oncolog. 2016 May;1(21):74-6. PubMed PMID: 27250894.

PURPOSE: Metaplastic carcinoma of breast (MCB) is a rare histological subtype of breast carcinoma and accounts for less than 1 percent of the total breast cancer cases. Here we are reporting a series of seven patients of MCB from single institute along with review of literature.
MATERIAL AND METHODS: Patients records from January 2008 to August 2014 were retrieved to search for MCB patients. A etrospective review was conducted to document the clinicopathological features, treatment and outcomes of these patients. The data was entered in a predesigned proforma document.
RESULTS: Seven patients were diagnosed to have MCB during this period. Most common symptom at presentation was lump in the breast with associated discharge per nipple in one patient. On histology, there was no definite differentiation in four patients while one patient had spindle cell neoplasia, one had osteoid and chondroid neoplasia respectively. Five patients underwent modified radical mastectomy while other two patients underwent simple mastectomy. All the patients were pathologically node negative and triple negative breast cancer. Adjuvant chemo-radiotherapy was given to all patients. Median follow up was 4 years (Range 3-6 years). Three out of seven patients completed 5 years of follow up. One patient developed isolated liver metastasis six years after completion of the treatment and she lost to follow up for further treatment.
CONCLUSION: Metaplastic carcinoma of breast is a rare disease entity and there are no specific treatment guidelines. The prognosis of patients in this rare sub group remains poor and multi institutional studies evaluating role of new therapies may be required to improve outcome.

PMID: 27250894 [PubMed - in process]

14: Bhagat M, Palanichamy JK, Ramalingam P, Mudassir M, Irshad K, Chosdol K, Sarkar C, Seth P, Goswami S, Sinha S, Chattopadhyay P. HIF-2α mediates a marked increase in migration and stemness characteristics in a subset of glioma cells under hypoxia by activating an Oct-4/Sox-2-Mena (INV) axis. Int J Biochem Cell Biol. 2016 May;74:60-71. doi: 10.1016/j.biocel.2016.02.017. PubMed PMID: 26923292.

Hypoxia is a salient feature of most solid tumors and plays a central role in tumor progression owing to its multiple contributions to therapeutic resistance, metastasis, angiogenesis and stemness properties. Reports exist in literature about hypoxia increasing stemness characteristics and invasiveness potential of malignant cells. In order to delineate molecular crosstalk among factors driving glioma progression, we used knockdown and overexpression strategies. We have demonstrated that U87MG and A172 glioma cells inherently have a subset of cells with high migratory potential due to migration-inducing Mena transcripts. These cells also have elevated stemness markers (Sox-2 and Oct-4). There was a significant increase of number in this subset of migratory cells on exposure to hypoxia with corresponding elevation (over 1000 fold) in migration-inducing Mena transcripts. We were able to demonstrate that a HIF-2α-Sox-2/Oct-4-Mena (INV) axis that is strongly activated in hypoxia and markedly increases the migratory potential of the cells. Such cells also formed tumor spheres with greater efficiency. We have correlated our in-vitro results with human glioblastoma samples and found that hypoxia, invasiveness and stemness markers correlated well in native tumor samples. This study identifies a novel signaling mechanism mediated by HIF-2α in regulating invasiveness and stemness characteristics, suggesting that under hypoxic conditions, some tumor cells acquire more migratory potential by increased Pan Mena and Mena INV expression as a consequence of this HIF-2α mediated increase in Oct-4 and Sox-2. These properties would help the cells to form a new nidus after local invasion or metastasis.

DOI: 10.1016/j.biocel.2016.02.017
PMID: 26923292 [PubMed - in process]

15: Bhargava M, Kandpal SD, Aggarwal P, Sati HC. Overweight and Obesity in School Children of a Hill State in North India: Is the Dichotomy Urban-Rural or Socio-Economic? Results from a Cross-Sectional Survey. PLoS One. 2016 May 26;11(5):e0156283. doi: 10.1371/journal.pone.0156283. PubMed PMID: 27227780; PubMed Central PMCID: PMC4881983.

INTRODUCTION: Overweight and obesity are a public health problem in India not only in adults but also in children. The authors sought to estimate the prevalence of overweight and obesity in school-going children of 6-17 years of age and examine its demographic and dietary correlates in context of their urban-rural status and socio-economic status.
METHODS: In this cross-sectional survey height and weight were measured in 1266 school children in government and private schools of urban and rural areas. Dietary assessment was done using single day 24-hour dietary recall method. The data were analyzed using SPSS (IBM SPSS Statistics Version 19) and WHO AnthroPlus Software. Factorial ANOVA was used for testing interaction within and between subgroups for continuous variables and Chi-square test was used for categorical variables.
RESULTS: It was found that the overall prevalence of overweight was 15.6% of which 5.4% were obese, with maximum prevalence in boys attending urban private schools. The mean caloric intake in the study population with 24-hour dietary recall method was 1558.2 kilocalories (SD: 428 kilocalories).
CONCLUSION: Overweight and obesity is a significant problem in school-going children. Higher socio-economic status continues to remain an important driver of this epidemic in the younger generation and affects demographic and dietary

determinants of this problem.

DOI: 10.1371/journal.pone.0156283
PMCID: PMC4881983
PMID: 27227780 [PubMed - in process]

16: Bhatnagar S, Gupta M. Integrated pain and palliative medicine model. Ann Palliat Med. 2016 Jul;5(3):196-208. doi: 10.21037/apm.2016.05.02. PubMed PMID: 27334349.

Pain is one of the most common, distressing and feared symptom among cancer and other patients in need of palliative care. An estimated 25% of cancer patients and 25 million people die in pain each year. Effective pain and symptom management are the core elements of palliative care which aims at reducing suffering and improving quality of life (QOL) throughout the course of illness starting from diagnosis, in sync with curative treatments and at end of life. There is a prevailing shortage of manpower apt to deal with pain and providing cost-effective palliative care and with the rise of cancer, other chronic diseases and explosion of new life-prolonging therapeutic modalities, this 'Patient-pain and palliative physician' discrepancy is only going to increase, more so in developing countries. The need of the hour is to train all healthcare physicians and nurses especially those working in the field of chronic pain in principles of effective pain and symptom palliation, to integrate cancer pain and symptom management into existing pain management fellowships and to introduce a holistic pain and palliative care model at all levels of healthcare system. Simultaneously, of equal importance is to conduct research, evidence building and formulate policies and guidelines for meticulous symptom management among the diverse category of patients and diseases so as to have a personalized and individualistic approach to patient management. In this comprehensive review, we have pondered upon the need, advantages, barriers and recommendations to achieve ideal 'Integrated pain and palliative medicine' services, their equitable implementation and delivery to 'whomsoever in need of them'.

DOI: 10.21037/apm.2016.05.02
PMID: 27334349 [PubMed - in process]

17: Bhattacharjee S, Baidya DK, Maitra S. Therapeutic hypothermia after cardiac arrest is not associated with favorable neurological outcome: a meta-analysis. J Clin Anesth. 2016 Sep;33:225-32. doi: 10.1016/j.jclinane.2016.03.001. PubMed PMID: 27555170.

BACKGROUND: Cardiac arrest is associated with very high mortality and causes neurological dysfunction in the survivors. Therapeutic hypothermia is one of the recommended modality in the postarrest management. However, recent findings question its benefit in postarrest management. This meta-analysis has been conceptualized to quantify clinical benefit of therapeutic hypothermia in post-cardiac arrest patients.
METHODS: Prospective, randomized, and quasi-randomized controlled trials comparing the efficacy of therapeutic hypothermia in post-cardiac arrest adult population with a post-cardiac arrest management protocol that does not include therapeutic hypothermia were included in this meta-analysis. Two authors independently searched PubMed, PubMed Central, Scopus, and Central Register of Clinical Trials of the Cochrane Collaboration for potentially eligible trials.
RESULTS: Data of 1399 patients from 6 controlled trials have been included in this systematic review and meta-analysis. Therapeutic hypothermia does not provide any benefit in favorable neurological outcome (P=.06; odds ratio, 1.80; 95% confidence interval [CI], 0.97-3.35; n=1384), in survival at hospital discharge (P=.58; odds ratio, 1.16; 95% CI, 0.69-1.96; n=1399), and in long-term survival (P=.36; odds ratio, 1.32; 95% CI, 0.73-2.39; n=1292). Therapeutic hypothermia also increases incidence of pneumonia (P=.02; odds ratio, 1.30; 95% CI, 1.04-1.64; n=1204; number needed to harm, 15).
CONCLUSION: Therapeutic hypothermia in the post-cardiac arrest management protocol does not provide any benefit in favorable neurological outcome, survival

to hospital discharge, and long term survival. Incidence of pneumonia may be increased with the use of therapeutic hypothermia.

DOI: 10.1016/j.jclinane.2016.03.001
PMID: 27555170 [PubMed - in process]

18: Bhute S, Pande P, Shetty SA, Shelar R, Mane S, Kumbhare SV, Gawali A, Makhani H, Navandar M, Dhotre D, Lubree H, Agarwal D, Patil R, Ozarkar S, Ghaskadbi S, Yajnik C, Juvekar S, Makharia GK, Shouche YS. Molecular Characterization and Meta-Analysis of Gut Microbial Communities Illustrate Enrichment of Prevotella and Megasphaera in Indian Subjects. Front Microbiol. 2016 May 9;7:660. doi: 10.3389/fmicb.2016.00660. PubMed PMID: 27242691; PubMed Central PMCID: PMC4860526.

The gut microbiome has varied impact on the wellbeing of humans. It is influenced by different factors such as age, dietary habits, socio-economic status, geographic location, and genetic makeup of individuals. For devising microbiome-based therapies, it is crucial to identify population specific features of the gut microbiome. Indian population is one of the most ethnically, culturally, and geographically diverse, but the gut microbiome features remain largely unknown. The present study describes gut microbial communities of healthy Indian subjects and compares it with the microbiota from other populations. Based on large differences in alpha diversity indices, abundance of 11 bacterial phyla and individual specific OTUs, we report inter-individual variations in gut microbial communities of these subjects. While the gut microbiome of Indians is different from that of Americans, it shared high similarity to individuals from the Indian subcontinent i.e., Bangladeshi. Distinctive feature of Indian gut microbiota is the predominance of genus Prevotella and Megasphaera. Further, when compared with other non-human primates, it appears that Indians share more OTUs with omnivorous mammals. Our metagenomic imputation indicates higher potential for glycan biosynthesis and xenobiotic metabolism in these subjects. Our study indicates urgent need of identification of population specific microbiome biomarkers of Indian subpopulations to have more holistic view of the Indian gut microbiome and its health implications.

DOI: 10.3389/fmicb.2016.00660
PMCID: PMC4860526
PMID: 27242691 [PubMed]

19: Chahal A, Gupta S, Das C. Penile fracture. BMJ Case Rep. 2016 May 13;2016. pii: bcr2016215385. doi: 10.1136/bcr-2016-215385. PubMed PMID: 27177939.

20: Chandra SP, Kurwale NS, Chibber SS, Banerji J, Dwivedi R, Garg A, Bal C, Tripathi M, Sarkar C, Tripathi M. Endoscopic-Assisted (Through a Mini Craniotomy) Corpus Callosotomy Combined With Anterior, Hippocampal, and Posterior Commissurotomy in Lennox-Gastaut Syndrome: A Pilot Study to Establish Its Safety and Efficacy. Neurosurgery. 2016 May;78(5):743-51. doi: 10.1227/NEU.0000000000001060. PubMed PMID: 26474092.

BACKGROUND: Corpus callosotomy is a palliative procedure especially for Lennox-Gastaut semiology without localization with drop attacks.
OBJECTIVE: To describe endoscopic-assisted complete corpus callosotomy combined with anterior, hippocampal, and posterior commissurotomy.
METHODS: Patients with drug refractory epilepsy having drop attacks as the predominant seizure type, bilateral abnormalities on imaging, and moderate to severe mental retardation were included. All underwent a complete workup (including magnetic resonance imaging).
RESULTS: Patients (n = 16, mean age 11.4 ± 6.4 years, range 6-19 years) had a mean seizure frequency of 24.5 ± 19.8/days (range 1-60) and a mean intelligence quotient of 25.23 ± 10.71. All had syndromic diagnosis of Lennox-Gastaut syndrome, with the following etiologies: hypoxic insult (10), lissencephaly (2),

bilateral band heterotropia (2), and microgyria and pachygyria (2). Surgery included complete callosotomy and the section of anterior and posterior commissure by microscopic approach through a mini craniotomy (11) and endoscopic-assisted approach (5). Complications included meningitis (1), hyperammonemic encephalopathy (2), and acute transient disconnection (5). There was no mortality or long-term morbidity. Mean follow-up was 18 ± 4.7 months (range 16-27 months). Drop attacks stopped in all. Seizure frequency/duration decreased >90% in 10 patients and >50% in 5 patients, and increased in 1 patient. All patients attained presurgical functional levels in 3 to 6 months. Child behavior checklist scores showed no deterioration. Parental questionnaires reported 90% satisfaction attributed to the control of drop attacks. The series was compared retrospectively with an age/sex-matched cohort (where a callosotomy only was performed), and showed better outcome for drop attacks ($P < .003$). CONCLUSION: This preliminary study demonstrated the efficacy and safety of complete callosotomy with anterior, hippocampal, and posterior commissurotomy in Lennox-Gastaut syndrome (drop attacks) with moderate to severe mental retardation.

DOI: 10.1227/NEU.0000000000001060
PMID: 26474092 [PubMed - indexed for MEDLINE]

21: Chandrashekhara SH, Triveni GS, Kumar R. Imaging of peritoneal deposits in ovarian cancer: A pictorial review. World J Radiol. 2016 May 28;8(5):513-7. doi: 10.4329/wjr.v8.i5.513. Review. PubMed PMID: 27247717; PubMed Central PMCID: PMC4882408.

As per incidence, ovarian carcinoma is the second most common gynaecological malignancy in women. In spite of advanced technology, patient awareness and effective screening methods, epithelial ovarian cancer is usually diagnosed at an advanced stage (stage III). Surgical debulking of disease is mainstay of improving the patient survival even in advanced stages. Thus exact delineation of cancer spread in the abdominal cavity guides the surgeon prior to the surgery, help them to decide resectability of lesion and plan for further need of other surgical speciality or need of neoadjuvant chemotherapy. Imaging particularly well-planned contrast-enhanced computed tomography answers most of the queries raised by the treating surgeon. The aim of this article is to review the way ovarian carcinoma spread in the peritoneal cavity and to stress the accurate interpretation of cancer deposits on imaging which can help the treating team to reach optimal management of patients.

DOI: 10.4329/wjr.v8.i5.513
PMCID: PMC4882408
PMID: 27247717 [PubMed]

22: Chaudhary N, Kabra M, Gulati S, Gupta YK, Pandey RM, Bhatia BD. Frequencies of CYP2C9 polymorphisms in North Indian population and their association with drug levels in children on phenytoin monotherapy. BMC Pediatr. 2016 May 14;16:66. doi: 10.1186/s12887-016-0603-0. PubMed PMID: 27179628; PubMed Central PMCID: PMC4868001.

BACKGROUND: Phenytoin, mainly metabolized by cytochrome P450 enzyme system, has a narrow therapeutic index and may have adverse effects due to inter-individual variation in the dose requirement and genetic polymorphisms. This cross-sectional study was done to study the prevalence of cytochrome P450 CYP2C9 polymorphisms in Indian epileptic children and to see the effect of polymorphisms on serum levels in epileptic children on phenytoin monotherapy.
METHODS: We studied 89 epileptic children of North Indian population, randomly selected, to see the genotypic and allelic frequency of CYP2C9 and its association with drug levels on phenytoin monotherapy. Analysis was done using STATA 9 Software. The results were analyzed as prevalence at 95 % C.I. (Confidence Interval). The difference in mean phenytoin serum levels between wild and mutant alleles was tested using Student`s T test for independent samples. P value less than 0.05 was considered statistically significant.
RESULTS: CYP2C9*1, *2 & *3 allelic frequencies were 85.4, 4.5 and 10.1 %

respectively. CYP2C9*3 allelic group showed significantly higher serum phenytoin levels compared to the wild variants (P=0.009). There was no statistically significant difference in the dose received (P=0.12) and side effects of CYP2C9*2 and CYP2C9*3 genotypes (P=0.442 and 0.597 respectively) when compared with wild variant.
CONCLUSION: CYP2C9*3 is more common than *2 in the present study. All the polymorphisms demonstrated in our study were heterozygous with no homozygosity. Serum phenytoin levels are higher in polymorphic groups (*3) which suggest their poor metabolizing nature. Genotyping may help to avoid toxicity and concentration-dependent adverse effects.

DOI: 10.1186/s12887-016-0603-0
PMCID: PMC4868001
PMID: 27179628 [PubMed - in process]

23: Chaudhary P, Ramos MV, Vasconcelos Mda S, Kumar VL. Protective Effect of High Molecular Weight Protein Sub-fraction of Calotropis procera Latex in Monoarthritic Rats. Pharmacogn Mag. 2016 May;12(Suppl 2):S147-51. doi: 10.4103/0973-1296.182151. PubMed PMID: 27279699; PubMed Central PMCID: PMC4883071.

BACKGROUND: Proteins present in the latex of Calotropis procera have been shown to produce anti-inflammatory effect and to afford protection in various disease models.
OBJECTIVES: To determine the efficacy of high molecular weight protein sub-fraction (LPPI) of latex of C. procera in ameliorating joint inflammation and hyperalgesia in a preclinical model of arthritis.
MATERIALS AND METHODS: Monoarthritis was induced in rats by intra-articular injection of Freund's complete adjuvant (FCA) and the effect of two doses of LPPI (5 and 25 mg/kg) and diclofenac (5 mg/kg) was evaluated on joint swelling, stair climbing ability, motility, and dorsal flexion pain on day 3. The rats were sacrificed on day 3 to measure tissue levels of reduced glutathione (GSH) and thiobarbituric acid reactive substances (TBARS). Evaluation of joint histology was also made.
RESULTS: Intra-articular injection of FCA produced joint swelling and difficulty in stair climbing ability, motility, and pain on flexion of the joint as revealed by scores obtained for these functional parameters. LPPI produced a dose-dependent decrease in joint swelling and improved joint functions. Arthritic rats also revealed altered oxidative homeostasis where joint tissue GSH levels were decreased and TBARS levels were increased as compared to normal rats. The levels of these oxidative stress markers were near normal in arthritic rats treated with LPPI. Moreover, treatment with LPPI also maintained the structural integrity of the joint. The protective effect of LPPI was comparable to the standard anti-inflammatory drug, diclofenac.
CONCLUSION: The findings of the present study show that LPPI fraction comprising high molecular weight proteins could be used for the alleviation of arthritic symptoms.
SUMMARY: High molecular weight protein sub-fraction of latex of Calotropis procera (LPPI) reduced joint swelling and hyperalgesia in arthritic ratsLPPI produced a significant improvement in stair climbing ability and motility in arthritic ratsLPPI normalized the levels of oxidative stress markers in the arthritic jointsTreatment with LPPI reduced neutrophil influx and edema in the arthritic joints Abbreviations used: FCA: Freund's complete adjuvant, GSH: Glutathione, TBARS: Thiobarbituric acid reactive substances, TBA: Thiobarbituric acid, MDA: Malondialdehyde, LPPI: Latex protein fraction PI.

DOI: 10.4103/0973-1296.182151
PMCID: PMC4883071
PMID: 27279699 [PubMed]

24: Chawla R, Venkatesh P. In-vivo immunofluorescent imaging in cases of posterior uveitis. Med Hypotheses. 2016 May;90:48-50. doi: 10.1016/j.mehy.2016.03.001. PubMed PMID: 27063084.

In-vitro immunofluorescent assays/imaging are routinely used methods of detecting antigens. The ability to perform ocular angiography to study the choroidal and retinal vasculature in real time provides us with a unique opportunity to perform real time in-vivo immunofluorescent imaging. This unique combination of in-vivo immunofluorescent imaging and live imaging of choroidal and retinal circulation can help detect antigens of infective organisms in-vivo to diagnose causative infective aetiology in cases of choroiditis/retinitis. The following paper describes the basic designing of such an imaging platform.

DOI: 10.1016/j.mehy.2016.03.001
PMID: 27063084 [PubMed - in process]

25: Dabar D, Das R, Nagesh S, Yadav V, Mangal A. A Community-based Study on Growth and Development of Under-Five Children in an Urbanized Village of South Delhi. J Trop Pediatr. 2016 Dec;62(6):446-456. PubMed PMID: 27143343.

BACKGROUND: Optimal development of children in their early months and years has a bearing on their achievement levels later in life.
OBJECTIVES: To assess the socio-emotional and cognitive development in children 0-5 years and to find out the proportion of children having developmental delay and its associated factors.
METHODS: A community-based cross-sectional study was carried out in 520 children in Delhi. Development was assessed using the Indian Council for Medical Research Development Screening Test.
RESULTS: In all, 10.6% of children <5 years old were found to be developmentally delayed. Maximum number of children (10.1%) were found to have a delay in the do main of 'hearing language, concept development'. Of all the factors, the strongest association was found with stunting, paternal education, alcohol abuse, attendance in anganwadi/playschool.
CONCLUSIONS: The study concludes that developmental delay is present in a sizable proportion of children <5 years of age and may be a significant factor in the overall achievement of life's potential in them.

DOI: 10.1093/tropej/fmw026
PMID: 27143343 [PubMed - in process]

26: Dash D, Sharma A, Yuvraj K, Renjith A, Mehta S, Vasantha PM, Arora A, Tripathi M. Can home video facilitate diagnosis of epilepsy type in a developing country? Epilepsy Res. 2016 Sep;125:19-23. doi: 10.1016/j.eplepsyres.2016.04.004. PubMed PMID: 27328162.

OBJECTIVES: The study aimed to evaluate the feasibility and yield of semiological features from home videos and compare them to those inferred from history provided by the caregiver of a person with epilepsy (PWE). A comparison of the accuracy of classification of epilepsy based on home videos and medical history was also done.
METHODS: We enrolled PWEs who were awaiting admission for video electroencephalography (VEEG) to the epilepsy monitoring unit (EMU) in this prospective observational study. In phase I of the study, we encouraged caregivers to make home videos which were analyzed. A structured questionnaire dealing with 29 different semiological features was completed based on the information gathered from home videos. In phase II of the study, the questionnaire was administered to the patient's caregivers. In phase III the patients underwent VEEG recording, and the semiology from VEEG was analyzed to

complete the same questionnaire. We also classified epilepsy type using home videos and medical history and compared it to that using VEEG finding. The information gathered from VEEG was considered the gold standard. Accuracy was calculated for the different semiological signs comparing medical history to VEEG findings.

RESULTS: A total of 340 PWE fulfilled the inclusion and exclusion criteria, and their caregivers completed the questionnaire. Home videos were collected from 312 patients and 624 seizures were analyzed. The mean number of signs of semiology recorded after analysis of home videos was 3.3±2.2, and from the medical history was 2.1±1.1 (P<0.01). A total of 572 seizures in 282 patients admitted in the EMU were evaluated on VEEG. Bilateral generalized clonic movements of limbs, motor movement around mouth, fear, visual phenomenon, hemisensory phenomenon, and post-ictal unilateral weakness had the highest accuracy. The overall agreement of semiological signs inferred from medical history versus VEEG was 0.75 and between home video recordings versus VEEG was 0.92. A larger number of patients were correctly categorized into the focal epilepsy group when home videos were used to classify compared to when medical history was used.
CONCLUSIONS: Home videos are more reliable in picking up semiological signs and classifying epilepsy type than history provided by caregivers of PWEs. Home videos are a complementary tool in a developing country like India.

DOI: 10.1016/j.eplepsyres.2016.04.004
PMID: 27328162 [PubMed - in process]

27: Dash SK, Patel S, Chavali K. Forensic nursing - Global scenario and Indian perspective. J Forensic Leg Med. 2016 Aug;42:88-91. doi: 10.1016/j.jflm.2016.05.020. Review. PubMed PMID: 27314972.

Sexual violence is a significant cause of physical and psychological harm and suffering for women and children. Although sexual violence mostly affects women and girls, boys are also subject to child sexual abuse. Nurse is the person who attends the victim first. In order to meet the rigid and ever-changing demands of providing care to the victim and complying with our confusing system of laws, the nursing should has been forced to expand into a Forensic nursing, specialty of its own. Nursing roles in the criminal justice service known by many names worldwide-Custody nursing, Prison/Correctional nursing, Immigration centre nursing, Sexual Assault Nurse Examiner (SANE) or Sexual Assault Forensic Examiner (SAFE), SARTs (Sexual assault response team), SARCs (Sexual assault referral centre) and FNDIs (Forensic nurse death investigator). In India the premier institutes like AIIMS New Delhi and The PGI Chandigarh, do not have forensic content in their nursing curriculum manuals. The WHO and IAFN have urged inclusion of forensic content in both undergraduate and postgraduate nursing programs. Forensic Nurse Specialist can provide direct services to individual clients, consultation services to nursing, medical and law-related agencies, as well as providing expert court testimony in areas dealing with trauma and/or questioned death investigative processes, adequacy of services delivered, and specialized diagnoses of specific medical conditions. Research Findings on the Effectiveness of Sexual Assault Nurse Examiner (SANE) Programs suggests various improvements in each and every step in care of victim of sexual assault.

DOI: 10.1016/j.jflm.2016.05.020
PMID: 27314972 [PubMed - in process]

28: Deka D, Dadhwal V, Sharma AK, Shende U, Agarwal S, Agarwal R, Vanamail P. Perinatal survival and procedure-related complications after intrauterine transfusion for red cell alloimmunization. Arch Gynecol Obstet. 2016 May;293(5):967-73. doi: 10.1007/s00404-015-3915-7. PubMed PMID: 26493554.

OBJECTIVES: To study the perinatal survival and procedure-related (PR)complications after intrauterine transfusions in red cell alloimmunization.
METHODS: Prospective data of 102 women with Rh-alloimmunized pregnancy undergoing intrauterine intravascular transfusion for fetal anemia, from January 2011 to October 2014 were analyzed. Main outcome measures were perinatal survival and procedure-related (PR) complications.
RESULTS: A total of 303 intrauterine transfusions were performed in 102 women. Of 102 fetuses, 22 were hydropic at first transfusion. The mean period of gestation and hematocrit at first transfusion was 26.9 ± 3.3 weeks (range 19.7-33.8 weeks) and 17 ± 7.82 % (range 5.7-30 %), respectively. Average number of transfusions was 2.97 (range 1-7) per patient. Overall survival was 93 % and mean period of gestation at delivery was 34.5 ± 1.94 (range 28.3-37.4) weeks. Mean hematocrit at delivery was 36.9 ± 8.77 % (range 10-66 %). Fetal death occurred in four cases (3PR), neonatal death occurred in three cases (2PR). Emergency cesarean delivery after transfusion was performed in four pregnancies. The total PR complication rate was 2.97 %, resulting in overall PR loss in 1.65 % per procedure.
CONCLUSION: Our results compare favorably with other studies published in the literature. Intravascular transfusion is a safe procedure improving perinatal survival in fetuses with anemia due to Rh-alloimmunization.

DOI: 10.1007/s00404-015-3915-7
PMID: 26493554 [PubMed - indexed for MEDLINE]

29: Dhooria S, Madan K, Pattabhiraman V, Sehgal IS, Mehta R, Vishwanath G, Srinivasan A, Sivaramakrishnan M, Mohan A, Mathew JL, Kabra SK, Guleria R, Behera D, Agarwal R. A multicenter study on the utility and safety of EBUS-TBNA and EUS-B-FNA in children. Pediatr Pulmonol. 2016 Oct;51(10):1031-1039. doi: 10.1002/ppul.23415. PubMed PMID: 27142997.

BACKGROUND AND AIM: Endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) and endoscopic ultrasound with an echobronchoscope-guided fine needle aspiration (EUS-B-FNA) are useful modalities in the evaluation of mediastinal lymphadenopathy in adults; however, there is sparse data in children. The aim of this multicenter study is to describe the efficacy and safety of EBUS-TBNA and EUS-B-FNA in children with mediastinal lymphadenopathy of undefined etiology.
METHODS: Retrospective analysis of consecutive pediatric (<18 years) subjects who underwent EBUS-TBNA or EUS-B-FNA for the evaluation of mediastinal lymphadenopathy. The demographic characteristics, indications, procedural details, pathological, cytological and microbiological diagnosis, diagnostic yield, and complications are presented.
RESULTS: Of the 3,424 EBUS/EUS-B-FNA procedures, 67 (1.9%) were performed in the pediatric (3-17 years) population. Of these, 19 (28.4%) were performed in children ≤12 years of age. Overall, EBUS-TBNA and EUS-B-FNA were performed in 53 and 12 subjects, respectively. In two subjects, no significant lymph node was seen on EBUS. The procedure was performed under moderate sedation in spontaneously breathing subjects in 54 (80.6%) instances. An adequate sample was obtained in 60 (92.3%) subjects while a diagnostic sample was obtained in 37 (56.9%) of the 65 subjects. The diagnostic yield was not significantly different (P = 0.59) between EBUS-TBNA (58.5%) and EUS-B-FNA (50%). The sensitivity of EBUS-TBNA/EUS-B-FNA was 79.1% and led to a change in diagnosis in 28 (41.8%) subjects. Complications, all minor were encountered in six (8.9%) subjects.
CONCLUSIONS: EBUS-TBNA and EUS-B-FNA are safe techniques with a good diagnostic yield in the evaluation of children with mediastinal lymphadenopathy. Pediatr Pulmonol. 2016;51:1031-1039. © 2016 Wiley Periodicals, Inc.

DOI: 10.1002/ppul.23415
PMID: 27142997 [PubMed - in process]

30: Dinda AK, Bhat M, Srivastava S, Kottarath SK, Prashant CK. Novel nanocarrier for oral Hepatitis B vaccine. Vaccine. 2016 Jun 8;34(27):3076-81. doi: 10.1016/j.vaccine.2016.04.084. PubMed PMID: 27156634.

Oral vaccination is a safe, cost effective and non-invasive method suitable for mass immunization. We fabricated nanoparticle (NP) with 14kd polycaprolactone (PCL) entrapping hepatitis B surface antigen (HBsAg) stabilized with Pluronics® F127 and used it as oral delivery vehicle. We evaluated its efficacy for specific antibody production and compared with parenteral routes of immunization in mice. We found a superior antibody response with a higher titer of anti-HBsAg antibody till 2 months following single oral administration compared to other routes of immunization and conventional alum-based HBsAg vaccine. The NPs with the antigen were found in the macrophages in small intestinal villi, peripheral lymph nodes and other reticulo-endothelial organs 2 months after oral administration. This study suggests the efficacy of the current nanocarrier system for efficient antigen presentation disseminated in peripheral lymphoid tissues following oral administration with a prolonged antibody response, which can minimize the requirement of booster dose.

DOI: 10.1016/j.vaccine.2016.04.084
PMID: 27156634 [PubMed - in process]

31: Dubey R, Chakrabarty B, Saini L, Madaan P, Gulati S. Bilateral ophthalmoplegia in a child with migraine. Brain Dev. 2016 May;38(5):525-8. doi: 10.1016/j.braindev.2015.10.014. PubMed PMID: 26577169.

BACKGROUND: In children, migraine with or without aura is a common entity, however variants like recurrent painful optic neuropathy (RPON) is rarely encountered.
CASE RESULT: A 9 year old boy presented with headache for 1 week and restricted movements and drooping in both eyes for last 3 days. On examination he had bilateral ophthalmoplegia and ptosis. History of migrainous headache was present in the patient as well as his mother. His MRI brain with venogram, serum autoimmune markers, serum and urine toxicology screen and repetitive nerve stimulation test were normal. He received intravenous pulse followed by oral steroids for 6 weeks and was started on antimigraine prophylaxis. Eighteen months since the attack, he has improved completely with mild asymmetric mydriasis persisting.
DISCUSSION AND CONCLUSION: This may represent first attack of RPON in a child with migraine. Rarely this may herald the onset of migraine as well, index of suspicion should be high as it is a diagnosis of exclusion and a treatable entity.

DOI: 10.1016/j.braindev.2015.10.014
PMID: 26577169 [PubMed - in process]

32: Dwivedi DK, Kumar R, Bora GS, Sharma S, Thulkar S, Gupta SD, Jagannathan NR. Multiparametric MR can identify high grade prostatic intraepithelial neoplasia (HGPIN) lesions and predict future detection of prostate cancer in men with a negative initial prostate biopsy. Magn Reson Imaging. 2016 Oct;34(8):1081-6. doi: 10.1016/j.mri.2016.05.006. PubMed PMID: 27211254.

PURPOSE: This study aims to determine the pre-biopsy diffusion-weighted imaging (DWI) and magnetic resonance spectroscopic imaging (MRSI) characteristics of patients with high-grade prostatic intraepithelial neoplasia (HGPIN) and perform

follow-up studies in these patients to assess the clinical implications.
MATERIALS AND METHODS: One hundred sixteen men with prostate specific antigen between 4 and 10ng/ml underwent pre-biopsy MR examinations. Nine of them had HGPIN lesions without concomitant prostate cancer (PCa) on biopsy. Apparent diffusion coefficient (ADC) and metabolite ratio [Citrate/(Choline+Creatine)] were calculated and these 9 patients were followed to determine the clinical outcomes.
RESULTS: Mean ADC for HGPIN foci was 1.01±0.16×10(-3)mm(2)/s while for the normal peripheral zone it was 1.69±0.25×10(-3)mm(2)/s (p<0.005). Mean metabolite ratio for voxels in the HGPIN region of initial biopsy was 0.24±0.16 while for the normal peripheral zone the value was 2.66±1.57 (p<0.005). Four of 5 patients who were available for follow-up were detected to have prostate cancer on repeat biopsy. No significant change in metabolite ratio and PSA was observed while ADC showed further reduction on follow-up.
CONCLUSION: HGPIN foci have ADC and metabolite ratio values similar to adenocarcinoma prostate, indicating that such patients have a high likelihood of developing cancer. DWI may help identify such men who may be candidates for close follow-up.

DOI: 10.1016/j.mri.2016.05.006
PMID: 27211254 [PubMed - in process]

33: Gagnani SP, Agarwal B, Bhutia O, Roychoudhury A. New method of harvesting a buccal fat pad for interposition after gap arthroplasty of the temporomandibular joint. Br J Oral Maxillofac Surg. 2016 May;54(4):469-70. doi: 10.1016/j.bjoms.2015.09.004. PubMed PMID: 26395214.

34: Ganie MA, Marwaha RK, Nisar S, Farooqi KJ, Jan RA, Wani SA, Gojwari T, Shah ZA. Impact of hypovitaminosis D on clinical, hormonal and insulin sensitivity parameters in normal body mass index polycystic ovary syndrome women. J Obstet Gynaecol. 2016 May;36(4):508-12. doi: 10.3109/01443615.2015.1103715. PubMed PMID: 26772667.

Earlier data on the relationship of 25 hydroxyvitamins (25OHD) levels with various components of polycystic ovary syndrome (PCOS) has been conflicting. We studied 122 normal body mass index (BMI) women with PCOS (cases) and 46 age and BMI-matched healthy women (controls) and assessed the impact of serum 25OHD levels on clinical, biochemical and insulin sensitivity parameters in these lean Indian women with PCOS. The mean age and BMI of the cases and controls were comparable. Mean serum 25OHD levels respectively were 10.1 ± 9.9 and 7.9 ± 6.8 ng/ml with 87.7% and 91.1% vitamin D (VD) deficient. No significant correlation was noted between 25OHD levels and clinical, biochemical and insulin sensitivity parameters except with the total testosterone levels (p = 0.007). Also, no significant difference in these parameters was observed once the PCOS women were stratified into various subgroups based on the serum 25OHD levels. We conclude that VD deficiency being common in normal BMI Indian women with or without PCOS does not seem to alter the metabolic phenotype in these women.

DOI: 10.3109/01443615.2015.1103715
PMID: 26772667 [PubMed - in process]

35: Gautam S, Srivastava A, Kataria K, Dhar A, Ranjan P, Kumar J. New Breast Pain Chart for Objective Record of Mastalgia. Indian J Surg. 2016 Jun;78(3):245-8. doi: 10.1007/s12262-016-1492-z. PubMed PMID: 27358525; PubMed Central PMCID: PMC4907922.

Mastalgia is the commonest affliction of mammary gland among ladies of the reproductive age group. Since etiopathogenesis and therapy are different for cyclical and noncyclical pain, it is imperative to ascertain the exact type correctly. This is usually done in the breast clinics by advising the patient to

fill a pain diary over a period of 2 months over two menstrual cycles. The Cardiff pain chart records the severity of pain in the form of a triangle for mild to moderate pain and a square for severe pain. Moreover, Cardiff pain chart does not allow a patient to record the severity of pain on days of menses, as she has to put the letter "P" in the box. These problems have been resolved in the new breast pain chart. In the new pain chart, the lady records pain severity in the form of visual linear analogue scale score on every day of menstrual cycle. She enters her menstrual experience on a separate part of chart, which allows us to visualize the full month's pain severity in an uncluttered way.

DOI: 10.1007/s12262-016-1492-z
PMCID: PMC4907922 [Available on 2017-06-01]
PMID: 27358525 [PubMed]

36: Ghosh-Jerath S, Singh A, Magsumbol MS, Kamboj P, Goldberg G. Exploring the Potential of Indigenous Foods to Address Hidden Hunger: Nutritive Value of Indigenous Foods of Santhal Tribal Community of Jharkhand, India. J Hunger Environ Nutr. 2016 Oct 1;11(4):548-568. PubMed PMID: 27867449.

Traditional foods of indigenous communities can be explored as a sustainable means of addressing undernutrition. Our study aimed at identifying indigenous foods of the Santhal tribal community of Godda district of Jharkhand, India, assessing their nutritive value, and appraising their potential role in addressing hidden hunger. A cross-sectional survey using qualitative methods like focus group discussions with women of childbearing age (15-49 years), adult males, and elderly people was conducted for food identification. This was followed by taxonomic classification and quantitative estimate of nutritive value of the identified foods either in a certified laboratory or from secondary data. The community was well aware of the indigenous food resources in their environment. More than 100 different types of indigenous foods including a number of green leafy vegetables were identified. Taxonomic classification was available for 25 food items and an additional 26 food items were sent for taxonomic classification. Many indigenous foods (more than 50% of which were green leafy vegetables) were found to be rich sources of micronutrients like calcium, iron, vitamin A as beta carotene, and folate. Maximizing utilization of indigenous foods can be an important and sustainable dietary diversification strategy for addressing hidden hunger in this indigenous community.

DOI: 10.1080/19320248.2016.1157545
PMID: 27867449 [PubMed]

37: Gielen J, Bhatnagar S, Chaturvedi SK. Prevalence and Nature of Spiritual Distress Among Palliative Care Patients in India. J Relig Health. 2016 May 6. [Epub ahead of print] PubMed PMID: 27154352.

In palliative care research, little attention has been paid to the empirical study of spirituality in patients in non-Western countries. This study describes the prevalence and nature of spiritual distress among Indian palliative care patients. Data from 300 adult cancer patients who had completed a questionnaire with 36 spirituality items were analyzed. Spirituality was shaped by the Indian religious and economic context. A latent class analysis resulted in three clusters: trustful patients (46.4 %), spiritually distressed patients (17.4 %), and patients clinging to divine support (36.2 %). After regression, the clusters were found to be associated with pain scores ($p < .001$), gender ($p = .034$), and educational level ($p < .006$). More than half of the patients would benefit from spiritual counselling. More research and education on spirituality in Indian palliative care is urgently required.

DOI: 10.1007/s10943-016-0252-5
PMID: 27154352 [PubMed - as supplied by publisher]

38: Giridhar P, Mallick S, Laviraj MA, Bhasker S. Esthesioneuroblastoma with large intracranial extension treated with Induction chemotherapy, de-bulking surgery and image guided intensity modulated radiotherapy. Eur Arch Otorhinolaryngol. 2016 May;273(5):1323-5. doi: 10.1007/s00405-015-3672-z. PubMed PMID: 26041440.

INTRODUCTION: Esthesioneuroblastoma is a rare tumour of the sino-nasal tract. One-third cases present with intracranial extension. However, treatment options are limited for such cases.
METHODOLOGY: We herein report a case with large intracranial extension treated with Induction chemotherapy, de-bulking surgery, and image guided intensity modulated radiotherapy.
RESULTS: The patient was treated with IGIMRT technique to a dose of 64 Gy in 32 fractions. Cone bean CT verification was done twice a week to eliminate set up error. The patient achieved complete resolution of the disease and was disease free 6 months after completion of treatment.
CONCLUSION: IGIMRT even after a de-bulking surgery may help to achieve long-term disease control for patients with large intracranial extension with minimal morbidity.

DOI: 10.1007/s00405-015-3672-z
PMID: 26041440 [PubMed - indexed for MEDLINE]

39: Goel S, Goel M, Dinkar AD. Odontogenic Myxoma of Mandible with Unusual (Sunburst) Appearance: A Rare Case Report. J Clin Diagn Res. 2016 May;10(5):ZJ05-7. doi: 10.7860/JCDR/2016/20123.7812. PubMed PMID: 27437382; PubMed Central PMCID: PMC4948558.

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

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

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

41: Gupta D, Sharma D, Kannan N, Prapruettham S, Mock C, Wang J, Qiu Q, Pandey RM, Mahapatra A, Dash HH, Hecker JG, Rivara FP, Rowhani-Rahbar A, Vavilala MS. Guideline Adherence and Outcomes in Severe Adult Traumatic Brain Injury for the CHIRAG (Collaborative Head Injury and Guidelines) Study. World Neurosurg. 2016

May;89:169-79. doi: 10.1016/j.wneu.2015.12.097. PubMed PMID: 26806065; PubMed Central PMCID: PMC4870118.

42: Gupta D, Bijarnia-Mahay S, Kohli S, Saxena R, Puri RD, Shigematsu Y, Yamaguchi S, Sakamoto O, Gupta N, Kabra M, Thakur S, Deb R, Verma IC. Seventeen Novel Mutations in PCCA and PCCB Genes in Indian Propionic Acidemia Patients, and Their Outcomes. Genet Test Mol Biomarkers. 2016 Jul;20(7):373-82. doi: 10.1089/gtmb.2016.0017. PubMed PMID: 27227689.

AIMS: The goal of this study was to identify mutations in the propionyl-CoA carboxylase alpha subunit (PCCA) and propionyl-CoA carboxylase beta subunit (PCCB) genes, and to assess their effects on propionic academia (PA) patients.
METHODOLOGY: Twenty-five Indian children with PA were enrolled in this study. Bidirectional Sanger sequencing was performed on both the coding and flanking regions of the PCCA and PCCB genes and the chromatograms were analyzed. Bioinformatic tools were used to classify novel variations into pathogenic or benign.
RESULTS: The majority of the cases (19/25, 76%) were of the early-onset (<90 days of age) type and 5 were of the late-onset type. The majority of patients had mutations in the PCCA gene (18/25). A total of 26 mutations were noted: 20 in the PCCA gene and 6 in PCCB gene. Seventeen mutations were novel (14 in PCCA and 3 in PCCB). The SNP c.937C>T (p.Arg313Ter), was noted in 9/36 (25%) alleles in the PCCA gene. All of the children were symptomatic and only three survived who are doing well with no major disabilities.
CONCLUSION: The spectrum of mutations in the PCCA and PCCB genes among Indians is distinct from other populations. The absence of a common mutation signifies the heterogeneity and admixture of various subpopulations. These findings also suggest that individuals of Indian origin may not benefit from the mutation-based "carrier screening panels" offered by many genetic laboratories.

DOI: 10.1089/gtmb.2016.0017
PMID: 27227689 [PubMed - in process]

43: Gupta N, Ganger A. Keratoglobus: a close entity to megalophthalmos. Springerplus. 2016 May 17;5:634. doi: 10.1186/s40064-016-2307-1. PubMed PMID: 27330900; PubMed Central PMCID: PMC4870505.

BACKGROUND: Keratoglobus closely resembles buphthalmos and anterior megalophthalmos.
FINDINGS: A 45-year-old man presented with gradually progressive, painless, diminution of vision in both eyes since childhood. On examination, visual acuity of right (RE) and left eye (LE) was 20/60 and 2/20 respectively. Clinical pictures of the patient are shown in panel A, B, C, D. Keratometry values were 46.47/47.94 D at 42/132° in RE and 46.90/47.23 D at 174/84° in LE, signifying steep, ectatic cornea. Axial lengths, anterior chamber depth and corneal thickness in RE/LE was 23.53/27.12 mm, 5.18/4.48 mm and 413/420 µm respectively. Iridodonesis was noted in left eye. Retinal evaluation of LE revealed retinal detachment (RD) with posterior staphyloma due to high myopia, hereas RE was within normal limits. Intraocular pressure was normal in both eyes. Final diagnosis was keratoglobus with LE myopic RD. The patient improved to 20/30 in right eye with no improvement in LE with scleral contact lens.
CONCLUSION: Keratoglobus, Megalophthalmos and Buphthalmos are exceedingly close entities and it is very essential to make correct diagnosis, as management options differ significantly for all three diseases.

DOI: 10.1186/s40064-016-2307-1
PMCID: PMC4870505
PMID: 27330900 [PubMed]

44: Gupta P, Rath GP, Banik S, Mahajan C. Increased airway pressure due to superior mediastinal hematoma during endovascular coiling by transcarotid approach. J Clin Anesth. 2016 May;30:63-5. doi: 10.1016/j.jclinane.2015.12.039. PubMed PMID: 27041267.

An elderly woman with subarachanoid hemorrhage presented to our interventional neuroradiology suite for coil embolization of multiple intracranial aneurysms. The patient had difficult vascular access for the passage of microcatheter; hence, the embolization procedure was carried out with direct puncture of the left common carotid artery. During the procedure, the patient developed thromboembolism which was treated by administration of an antiplatelet agent, abciximab. At the end of procedure, she developed airway compromise due to extension of a local neck hematoma into the superior mediastinum. The management issues in such a scenario have been discussed.

DOI: 10.1016/j.jclinane.2015.12.039
PMID: 27041267 [PubMed - in process]

45: Hari S, Kumari S, Srivastava A, Thulkar S, Mathur S, Veedu PT. Image guided versus palpation guided core needle biopsy of palpable breast masses: a prospective study. Indian J Med Res. 2016 May;143(5):597-604. doi: 10.4103/0971-5916.187108. PubMed PMID: 27488003; PubMed Central PMCID: PMC4989833.

BACKGROUND & OBJECTIVES: Biopsy of palpable breast masses can be performed manually by palpation guidance or under imaging guidance. Based on retrospective studies, image guided biopsy is considered more accurate than palpation guided breast biopsy; however, these techniques have not been compared prospectively. We conducted this prospective study to verify the superiority and determine the size of beneficial effect of image guided biopsy over palpation guided biopsy.
METHODS: Over a period of 18 months, 36 patients each with palpable breast masses were randomized into palpation guided and image guided breast biopsy arms. Ultrasound was used for image guidance in 33 patients and mammographic (stereotactic) guidance in three patients. All biopsies were performed using 14 gauge automated core biopsy needles. Inconclusive, suspicious or imaging-histologic discordant biopsies were repeated.
RESULTS: Malignancy was found in 30 of 36 women in palpation guided biopsy arm and 27 of 36 women in image guided biopsy arm. Palpation guided biopsy had sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of 46.7, 100, 100, 27.3 per cent, respectively, for diagnosing breast cancer. Nineteen of 36 women (52.8%) required repeat biopsy because of inadequate samples (7 of 19), suspicious findings (2 of 19) or imaging-histologic discordance (10 of 19). On repeat biopsy, malignancy was found in all cases of imaging-histologic discordance. Image guided biopsy had 96.3 per cent sensitivity and 100 per cent specificity. There was no case of inadequate sample or imaging-histologic discordance with image guided biopsy.
INTERPRETATION & CONCLUSIONS: Our results showed that in palpable breast masses, image guided biopsy was superior to palpation guided biopsy in terms of sensitivity, false negative rate and repeat biopsy rates.

DOI: 10.4103/0971-5916.187108
PMCID: PMC4989833
PMID: 27488003 [PubMed - in process]

46: Irshad M, Gupta P, Mankotia DS, Ansari MA. Multiplex qPCR for serodetection and serotyping of hepatitis viruses: A brief review. World J Gastroenterol. 2016 May 28;22(20):4824-34. doi: 10.3748/wjg.v22.i20.4824. Review. PubMed PMID: 27239109; PubMed Central PMCID: PMC4873875.

The present review describes the current status of multiplex quantitative real time polymerase chain reaction (qPCR) assays developed and used globally for

detection and subtyping of hepatitis viruses in body fluids. Several studies have reported the use of multiplex qPCR for the detection of hepatitis viruses, including hepatitis A virus (HAV), hepatitis B virus (HBV), hepatitis C virus (HCV), hepatitis D virus (HDV), and hepatitis E virus (HEV). In addition, multiplex qPCR has also been developed for genotyping HBV, HCV, and HEV subtypes. Although a single step multiplex qPCR assay for all six hepatitis viruses, i.e., A to G viruses, is not yet reported, it may be available in the near future as the technologies continue to advance. All studies use a conserved region of the viral genome as the basis of amplification and hydrolysis probes as the preferred chemistries for improved detection. Based on a standard plot prepared using varying concentrations of template and the observed threshold cycle value, it is possible to determine the linear dynamic range and to calculate an exact copy number of virus in the specimen. Advantages of multiplex qPCR assay over singleplex or other molecular techniques in samples from patients with co-infection include fast results, low cost, and a single step investigation process.

DOI: 10.3748/wjg.v22.i20.4824
PMCID: PMC4873875
PMID: 27239109 [PubMed - in process]

47: Jagannath S, Shalimar. Advances in Management of Hepatocellular Carcinoma. J Clin Exp Hepatol. 2016 Mar;6(1):68-70. doi: 10.1016/j.jceh.2016.03.006. PubMed PMID: 27194901; PubMed Central PMCID: PMC4862105.

48: Jain P, Sharma S, Dua T, Barbui C, Das RR, Aneja S. Efficacy and safety of anti-epileptic drugs in patients with active convulsive seizures when no IV access is available: Systematic review and meta-analysis. Epilepsy Res. 2016 May;122:47-55. doi: 10.1016/j.eplepsyres.2016.02.006. Review. PubMed PMID: 26922313.

OBJECTIVES: To explore the existing evidence for anti-convulsant drugs and their routes of administration in treating acute seizures in children and adults when intravenous access is not available.
METHODS: All major databases including Medline via Ovid, PubMed, Cochrane CENTRAL, Embase, and Google Scholar were searched till May 2015. Randomized and quasi-randomized controlled trials comparing two anti-convulsant drugs (at least one comparator being administered through non-intravenous route) for treatment of acute seizures were included.
OUTCOME MEASURES: Primary outcome measure was proportion of children with clinical seizure cessation within 10min of drug administration. Secondary outcome measures were time taken to clinical seizure cessation from the time of admission and from the time of drug administration, and incidence of significant adverse effects.
RESULTS: Out of the 19,165 citations, 26 studies were finally included. Regarding the primary outcome measure, the quality of evidence was 'moderate' for following 3 comparisons: buccal midazolam being superior to per-rectal diazepam (RR 1.14; 95% CI, 1.06-1.24), intra-nasal lorazepam being same as intravenous lorazepam (RR 1.04; 95% CI, 0.89-1.22) and intramuscular paraldehyde (RR 1.22; 95% CI, 0.99-1.52). The quality of evidence was 'very-low' for 1 comparison: per-rectal lorazepam being superior to per-rectal diazepam (RR 3.17; 95% CI, 1.63-6.14). The quality of evidence was 'low' for following 2 comparisons: sub-lingual lorazepam being inferior to rectal diazepam (RR 0.71; 95% CI, 0.62-0.81), and intranasal midazolam being superior to per-rectal diazepam (RR 1.14; 95% CI, 1.05-1.25). The rest of the comparisons did not show any difference, but the quality of evidence was 'low' to 'very low'. The time to seizure cessation after drug administration was lower in the intravenous group. However, time to seizure cessation after presentation (includes time for drug administration) was lower in the non-intravenous group. Significant adverse effects were infrequently reported and when present, were similar in both the groups.
CONCLUSIONS: When intravenous access is not available, non-intravenous routes of administration of benzodiazepines should be considered for the control of acute

seizures in children/adults. The preference may be guided by availability, expertise and social preference. [PROSPERO No: CRD42015019012].

DOI: 10.1016/j.eplepsyres.2016.02.006
PMID: 26922313 [PubMed - in process]

49: Jakhetiya A, Garg PK, Prakash G, Sharma J, Pandey R, Pandey D. Targeted therapy of gastrointestinal stromal tumours. World J Gastrointest Surg. 2016 May 27;8(5):345-52. doi: 10.4240/wjgs.v8.i5.345. Review. PubMed PMID: 27231512; PubMed Central PMCID: PMC4872062.

Gastrointestinal stromal tumours (GISTs) are mesenchymal neoplasms originating in the gastrointestinal tract, usually in the stomach or the small intestine, and rarely elsewhere in the abdomen. The malignant potential of GISTs is variable ranging from small lesions with a benign behaviour to fatal sarcomas. The majority of the tumours stain positively for the CD-117 (KIT) and discovered on GIST-1 (DOG-1 or anoctamin 1) expression, and they are characterized by the presence of a driver kinase-activating mutation in either KIT or platelet-derived growth factor receptor α. Although surgery is the primary modality of treatment, almost half of the patients have disease recurrence following surgery, which highlights the need for an effective adjuvant therapy. Traditionally, GISTs are considered chemotherapy and radiotherapy resistant. With the advent of targeted therapy (tyrosine kinase inhibitors), there has been a paradigm shift in the management of GISTs in the last decade. We present a comprehensive review of targeted therapy in the management of GISTs.

DOI: 10.4240/wjgs.v8.i5.345
PMCID: PMC4872062
PMID: 27231512 [PubMed]

50: Jat KR. Vitamin D deficiency and lower respiratory tract infections in children: a systematic review and meta-analysis of observational studies. Trop Doct. 2017 Jan;47(1):77-84. Review. PubMed PMID: 27178217.

Studies related to vitamin D deficiency and lower respiratory tract infections (LRTI) in children have inconsistent findings. The objective of this systematic review was to assess the prevalence of vitamin D deficiency in children with LRTI, and to evaluate the correlation between vitamin D levels and the incidence and severity of LRTI. A total of 12 studies enrolling 2279 participants were included in our analysis. Children with LRTI were found to have significantly lower mean vitamin D levels as compared to controls There was likewise a correlation between vitamin D levels and incidence and severity of LRTI. Large randomised controlled trials are needed to evaluate effect of vitamin D supplementation for LRTI.

DOI: 10.1177/0049475516644141
PMID: 27178217 [PubMed - in process]

51: Jha P, Agarwal KK, Sahoo MK, Kumar R. Mammillary Body: Chronic Refractory Epilepsy Seizure Focus Detected by 18F-FDG PET-CT. Clin Nucl Med. 2016 May;41(5):419-20. doi: 10.1097/RLU.0000000000001142. PubMed PMID: 26859207.

Epilepsy is one of the most common neurological conditions, which affect nearly 1% of the entire population. We present F-FDG PET-CT findings of a mammillary body epileptic focus in a 50-year-old woman with a 5-year history of seizure and behavior disturbance and memory problems for the past 4 years.

DOI: 10.1097/RLU.0000000000001142
PMID: 26859207 [PubMed - indexed for MEDLINE]

52: Kamble N, Sharma N, Maharana PK, Bandivadekar P, Nagpal R, Agarwal T, Velpandian T, Mittal S, Vajpayee RB. Evaluation of the Role of Umbilical Cord Serum and Autologous Serum Therapy in Reepithelialization After Keratoplasty: A Randomized Controlled Clinical Trial. Eye Contact Lens. 2016 May 18. [Epub ahead of print] PubMed PMID: 27196995.

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

DOI: 10.1097/ICL.0000000000000277
PMID: 27196995 [PubMed - as supplied by publisher]

53: Kanabar K, Sharma SK, Sreenivas V, Biswas A, Soneja M. Validation of a Hindi version of the Epworth Sleepiness Scale (ESS) at AIIMS, New Delhi in sleep-disordered breathing. Sleep Breath. 2016 Dec;20(4):1225-1230. PubMed PMID: 27193743.

PURPOSE: The Epworth Sleepiness Scale (ESS) is one of the most widely used questionnaire for the assessment of excessive daytime sleepiness (EDS) in sleep-disordered breathing (SDB). This study was conducted to assess the validity of ESS in the Hindi language.
METHODS: The Hindi version was developed by translation and back translation by independent translators. The English and Hindi versions were administered to 115 bilingual subjects who presented with symptoms of SDB, of whom 98 underwent a polysomnography at a tertiary care hospital in North India.
RESULTS: The questionnaire had a high level of internal consistency as measured by Cronbach's alpha ($\alpha = 0.84$). There was no significant difference between the mean ESS scores of Hindi and English versions (11.65 ± 5.47 vs 11.70 ± 5.49, respectively; $p = 0.80$). The Hindi version of ESS showed a strong correlation with the English version (Spearman's correlation $\rho = 0.98$ and weighted kappa = 0.94). Each of the 8 individual questions of Hindi ESS demonstrated a good agreement with the corresponding English version. The Hindi ESS score was significantly higher in subjects with OSA compared to those without OSA (12.67 ± 5.29 vs 7.76 ± 5.44, respectively; $p = 0.002$). However, there was no difference in ESS score between mild and moderate OSA or between moderate and severe OSA.
CONCLUSIONS: The Hindi version of the ESS showed a good internal consistency and a strong correlation with the English version and can be used in the Hindi-speaking population.

DOI: 10.1007/s11325-016-1344-x

PMID: 27193743 [PubMed - in process]

54: Kar P, Chawla H, Saha S, Tandon N, Goswami R. Identification of reference housekeeping-genes for mRNA expression studies in patients with type 1 diabetes. Mol Cell Biochem. 2016 Jun;417(1-2):49-56. doi: 10.1007/s11010-016-2712-3. PubMed PMID: 27160934.

Selection of appropriate housekeeping-genes as reference is important in mRNA expression-related experiments. It is more important in diabetes since hyperglycemia per se can influence expression of housekeeping-genes. RNA expression of Glyceraldehyde-3-phosphate-dehydrogenase, β-actin and 18S-ribosomal-RNA, Hypoxanthine-phosphoribosyl-transferase (HPRT), Tyrosine-3-monooxygenase/tryptophan (YHWAZ), β2-microglobin (β2M), TATA-binding-protein (TBP), and Ubiquitin C and cytochrome1 (CYC1) assessed in circulating-lymphocytes-(PBMC) of patients with type-1-diabetes and healthy controls. The stability ('M' value <1.02) and number of housekeeping-genes required for normalization in qRT-PCR were determined by 'ge-norm software.' Vitamin-D-receptor (VDR) was used as a target gene. All the nine genes tested had sufficient 'M' value in diabetes and healthy controls. However, housekeeping-genes indicated a relatively higher stability of expression in healthy controls in comparison to diabetes. Use of single housekeeping-genes brought gross variation in the calculation of VDR-mRNA copies. The ge-norm software suggested geometric mean of five housekeeping-genes for ideal normalization in diabetes (CYC1, β-actin, YHWAZ, HPRT, and β2M) and only three in controls (CYC1, β-actin, and TBP). HbA1c did not correlate with expression of any of the nine housekeeping-genes. Thus, geometric mean of CYC1, β-actin, YHWAZ, HPRT, and β2M needs to be used for ideal normalization of mRNA in type-1-diabetes. Similar studies are required in other population.

DOI: 10.1007/s11010-016-2712-3
PMID: 27160934 [PubMed - in process]

55: Kashyap S, Meel R, Singh L, Singh M. Uveal melanoma. Semin Diagn Pathol. 2016 May;33(3):141-7. doi: 10.1053/j.semdp.2015.10.005. Review. PubMed PMID: 26972224.

Uveal melanoma is the most common primary intraocular malignancy in adults. It is associated with a high rate of distant tumor spread and consequent mortality. Unlike retinoblastoma, for which treatment advances over the last few decades have resulted in a dramatic improvement in survival, outcomes for patients with uveal melanoma remain unchanged. Despite improvement in local control of this tumor, roughly 50% of patients develop metastatic disease within 15 years. Delays in diagnosis and marked vascularity of this tumor may underlie that situation. Tumor size, location, histopathologic appearance, cytogenetic abnormalities, and molecular profiling are used in prognostication. The revised 7th edition of the American Joint Committee on Cancer (AJCC) manual has presented new information that may improve that process as well. Herein, we review current knowledge on uveal melanoma.

DOI: 10.1053/j.semdp.2015.10.005
PMID: 26972224 [PubMed - indexed for MEDLINE]

56: Kaur K, Kakkar A, Kumar A, Mallick S, Julka PK, Gupta D, Suri A, Suri V, Sharma MC, Sarkar C. Integrating Molecular Subclassification of Medulloblastomas into Routine Clinical Practice: A Simplified Approach. Brain Pathol. 2016 May;26(3):334-43. doi: 10.1111/bpa.12293. PubMed PMID: 26222673.

Medulloblastoma (MB) is composed of four molecular subgroups viz. WNT, SHH, groups 3 and 4, identified using various high-throughput methods. Translation of this molecular data into pathologist-friendly techniques that would be applicable in laboratories all over the world is a major challenge. Ninety-two MBs were analyzed using a panel of 10 IHC markers, real-time PCR for mRNA and miRNA

expression, and FISH for MYC amplification. β-catenin, GAB1 and YAP1 were the only IHC markers of utility in classification of MBs into three subgroups viz. WNT (9.8%), SHH (45.6%) and non-WNT/SHH (44.6%). mRNA expression could further classify some non-WNT/SHH tumors into groups 3 and 4. This, however, was dependent on integrity of RNA extracted from FFPE tissue. MYC amplification was seen in 20% of non-WNT/SHH cases and was associated with the worst prognosis. For routine diagnostic practice, we recommend classification of MBs into three subgroups: WNT, SHH and non-WNT/SHH, with supplementation by prognostic markers like MYC for non-WNT/SHH tumors. Using this panel, we propose a new three-tier risk stratification system for MBs. Molecular subgrouping with this limited panel is rapid, economical, works well on FFPE tissue and is reliable as it correlates significantly with clinicopathological parameters and patient survival.

DOI: 10.1111/bpa.12293
PMID: 26222673 [PubMed - in process]

57: Kaur K, Kakkar A, Binyaram, Suri V, Garg A, Sharma SC, Sharma BS, Sarkar C, Sharma MC. Neuroblastoma-like schwannoma of the skull base: an enigmatic peripheral nerve sheath tumor variant. Neuropathology. 2016 Dec;36(6):573-578. doi: 10.1111/neup.12309. PubMed PMID: 27151231.

Neuroblastoma-like schwannoma is an extremely rare histological variant of schwannoma, which histologically mimics a malignant small round cell tumor. Only 19 cases have been reported in the literature to date. We report a case of this tumor located at the skull base in a 44-year-old woman who presented with symptoms of right-sided earache and hearing loss. MRI revealed a large, lobulated, extra-axial mass measuring 8.8 cm × 3.6 cm × 4.2 cm in the floor of the middle and posterior cranial fossa. Microscopic examination revealed a perplexing histopathology with peculiar collagenous rosettes. Differential diagnoses included a broad range of benign and malignant tumors. Typical schwannoma seldom poses a difficulty in diagnosis; however, this unusual variant is a diagnostic challenge which requires an extensive clinico-radiological correlation and immunohistochemical work-up. Hence, knowledge of this entity is a must to avoid erroneous diagnosis and inappropriate treatment.

DOI: 10.1111/neup.12309
PMID: 27151231 [PubMed - in process]

58: Khadgawat R, Marwaha RK, Mehan N, Surana V, Dabas A, Sreenivas V, Gaine MA, Gupta N. Age of Onset of Puberty in Apparently Healthy School Girls from Northern India. Indian Pediatr. 2016 May 8;53(5):383-7. PubMed PMID: 27254044.

OBJECTIVE: To determine the age of pubertal onset and menarche in school-going girls, and to assess the impact of obesity on pubertal timing.
DESIGN: Cross-sectional.
SETTING: Seven schools across Delhi, India.
PARTICIPANTS: 2010 school girls, aged 6-17 years.
METHODS: Anthropometric measurement and pubertal staging was performed for all subjects. Menarche was recorded by status quo method. Body mass index was used to define overweight/obesity. Serum gonadotropins and serum estradiol were measured in every sixth participant.
MAIN OUTCOME MEASURES: Age at thelarche and menarche analyzed for entire cohort and stratified based on body mass index.
RESULTS: Median (95% CI) ages of thelarche, pubarche and menarche were 10.8 (10.7-10.9) y, 11.0. y (10.8-11.2) y and 12.4 y (12.2-12.5) y. Overweight/obese girls showed six months earlier onset of thelarche and menarche than those with normal BMI ($P<0.05$). Serum gonadotropins did not vary significantly in overweight/obese subjects.
CONCLUSION: The study provides the normative data for pubertal growth in Indian girls. Pubertal onset occurs earlier in overweight and obese girls.

PMID: 27254044 [PubMed - in process]

59: Khare A, Joshi D, Majumdar K, Goel G, Kapoor N. Negative shadows conveying a positive note. Diagn Cytopathol. 2016 May;44(5):410-2. doi: 10.1002/dc.23455. PubMed PMID: 26879040.

60: Khatri K, Sharma V, Farooque K, Tiwari V. Surgical Treatment of Unstable Distal Radius Fractures With a Volar Variable-Angle Locking Plate: Clinical and Radiological Outcomes. Arch Trauma Res. 2016 May 9;5(2):e25174. doi: 10.5812/atr.25174. PubMed PMID: 27679785; PubMed Central PMCID: PMC5035514.

BACKGROUND: Unstable distal end radius fractures are difficult to manage and so various treatment modalities have been described. The use of variable-angle locking plates is promoted for the management of these fractures.
OBJECTIVES: This study aimed to evaluate the functional and radiological outcomes in unstable distal end radius fractures treated with variable-angle locking plates.
PATIENTS AND METHODS: We reviewed 23 unstable distal end radius fractures that were treated at our institution with volar variable-angle locking plates. The mean age of the patients was 32.82 ± 11.81 years (range 19 to 62) and the mean duration of follow-up was 11.04 ± 2.47 months (range 6 to 15). All of the patients underwent open reduction and internal fixation with a variable-angle locking plate. Radiological parameters such as radial inclination, length, tilt, and ulnar variance were measured at six weeks and at the final follow-up. The functional evaluation was conducted by measuring the range of motion at the wrist joint as well as the grip strength. Gartland and Werley's demerit scoring system was used to assess the final outcome.
RESULTS: There were two cases of superficial infection that responded to oral antibiotics. One patient had developed a hypertrophic scar, while another had carpal tunnel syndrome that was conservatively managed. There was a significant improvement in the functional indices from six weeks to the final follow-up, while the radiological parameters were maintained. According to Gartland and Werley, excellent results were reported in 65.2% cases, while good results were present in 35% cases.
CONCLUSIONS: The use of variable-angle locking plates in treating unstable distal end radius fractures is associated with excellent to good functional outcomes with minimal complications.

DOI: 10.5812/atr.25174
PMCID: PMC5035514
PMID: 27679785 [PubMed]

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Primary angle closure glaucoma (PACG) is a major cause of blindness worldwide. We conducted a genome-wide association study (GWAS) followed by replication in a combined total of 10,503 PACG cases and 29,567 controls drawn from 24 countries across Asia, Australia, Europe, North America, and South America. We observed significant evidence of disease association at five new genetic loci upon meta-analysis of all patient collections. These loci are at EPDR1 rs3816415 (odds ratio (OR) = 1.24, P = 5.94 × 10(-15)), CHAT rs1258267 (OR = 1.22, P = 2.85 × 10(-16)), GLIS3 rs736893 (OR = 1.18, P = 1.43 × 10(-14)), FERMT2 rs7494379 (OR = 1.14, P = 3.43 × 10(-11)), and DPM2-FAM102A rs3739821 (OR = 1.15, P = 8.32 × 10(-12)). We also confirmed significant association at three previously described loci (P < 5 × 10(-8) for each sentinel SNP at PLEKHA7, COL11A1, and PCMTD1-ST18), providing new insights into the biology of PACG.

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BACKGROUND & AIMS: Celiac disease is a common disorder with a worldwide distribution, although the prevalence among different ethnicities varies. We aimed to measure the prevalence of duodenal villous atrophy among patients of different ethnicities throughout the United States.
METHODS: We performed a cross-sectional study of all patients who had duodenal biopsies submitted to a national pathology laboratory between January 2, 2008 and April 30, 2015. The prevalence of villous atrophy was calculated for the following ethnicities by using a previously published algorithm based on patient names: North Indian, South Indian, East Asian, Hispanic, Middle Eastern, Jewish, and other Americans.
RESULTS: Among all patients (n = 454,885), the median age was 53 years, and 66% were female. The overall prevalence of celiac disease was 1.74%. Compared with other Americans (n = 380,163; celiac disease prevalence, 1.83%), celiac disease prevalence was lower in patients of South Indian (n = 177, 0%; P = .08), East Asian (n = 4700, 0.15%; P ≤ .0001), and Hispanic (n = 31,491, 1.06%; P ≤ .0001) ethnicities. Celiac disease was more common in patients from the Punjab region (n = 617, 3.08%) than in patients from North India (n = 1195, 1.51%; P = .02). The prevalence of celiac disease among patients of Jewish (n = 17,806, 1.80%; P = .78) and Middle Eastern (n = 1903, 1.52%; P = .33) ethnicities was similar to that of other Americans. Among Jewish individuals (n = 17,806), the prevalence of celiac disease was 1.83% in Ashkenazi persons (n = 16,440) and 1.39% in Sephardic persons (n = 1366; P = .24).
CONCLUSIONS: Among patients undergoing duodenal biopsy, individuals from the Punjab region of India constitute the ethnic group in the United States with the

highest prevalence of villous atrophy consistent with celiac disease. Compared with other Americans, villous atrophy prevalence on duodenal biopsy is significantly lower among U.S. residents of South Indian, East Asian, and Hispanic ancestry.

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PMCID: PMC4955830 [Available on 2017-08-01]
PMID: 27155557 [PubMed - in process]

63: Kumar A, Misra S, Kumar P, Sagar R, Prasad K, Pandit AK, Chakravarty K, Kathuria P, Yadav AK. Association between Endothelial nitric oxide synthase G894T gene polymorphism and risk of ischemic stroke in North Indian population: a case-control study. Neurol Res. 2016 Jul;38(7):575-9. doi: 10.1080/01616412.2016.1181376. PubMed PMID: 27168380.

BACKGROUND AND PURPOSE: Stroke is a multi-factorial disease influenced by both genetic and environmental factors. The aim of this case-control study was to determine the association between Endothelial Nitric Oxide Synthase G894T (rs1799983) gene polymorphism and susceptibility to ischemic stroke (IS) in North Indian population.
METHODS: In this present case-control study, genotyping was performed by using Polymerase chain reaction - Restriction fragment length polymorphism (PCR-RFLP) method for 250 IS patients and 250 age and sex matched controls. PCR results were confirmed by DNA sequencing. Frequency distribution of genotypes and alleles were compared between cases and controls using conditional logistic regression.
RESULTS: Hypertension, Diabetes, Dyslipidemia, Low Socioeconomic Status and Family History of Stroke were found to be independent risk factors for IS. Mean age of cases and controls were 52.83 ± 12.59 and 50.97 ± 12.70 years. Multivariate logistic regression analysis showed a significant association between eNOS G894T (rs1799983) polymorphism and risk of IS [OR = 1.57; 95%CI 1.05-2.37; p = 0.028] under dominant model. Based on Trial of Org 10172 in Acute Stroke Treatment classification, an independent association of large vessel disease (LVD) was observed with the risk of IS under the dominant [OR = 2.09; 95% CI 1.17-3.75; p = 0.01] and recessive [4.09 95% CI 1.06-15.68; p = 0.04] models. All the observed genotype frequencies were in accordance with the Hardy-Weinberg equilibrium (HWE) in both cases and controls.
CONCLUSION: The findings of the present study suggest that polymorphism in G894T position of eNOS gene might be a risk factor for IS mainly for LVD stroke subtype in North Indian population. Further large prospective studies are required to confirm these findings.

DOI: 10.1080/01616412.2016.1181376
PMID: 27168380 [PubMed - in process]

64: Kumar A, Agrawal M, Prakash S, Somorendra S, Singh PK, Garg A, Singh M, Sharma BS. Acute Foramen Magnum Syndrome Following Single Diagnostic Lumbar Puncture: Consequence of a Small Posterior Fossa? World Neurosurg. 2016 Jul;91:677.e1-7. doi: 10.1016/j.wneu.2016.04.111. PubMed PMID: 27157279.

BACKGROUND: Type I Chiari malformation (CMI) is a rare complication of lumbar cerebrospinal fluid (CSF) drainage that is usually reported after lumbar drain or lumboperitoneal shunt placement. It usually remains asymptomatic; however, even if it becomes symptomatic, symptoms are usually mild. There are only a few reports of acute foramen magnum syndrome following continuous lumbar CSF drainage, and acute foramen magnum syndrome after a single diagnostic lumbar puncture (LP) has not been previously reported. We encountered this catastrophic complication in one of our patient.
CASE DESCRIPTION: A 30-year-old woman with a large supratentorial meningioma and associated asymptomatic CMI presented with holocranial headache. She underwent successful and uneventful excision of the tumor. However, she developed quadriplegia and respiratory arrest 48 hours following a diagnostic LP performed

on postoperative day 9. She underwent urgent posterior fossa decompression after magnetic resonance imaging showed increased tonsillar impaction and swelling along with cervicomedullary compression. Postoperatively, she steadily improved and regained normal power after 3 months. Retrospective quantitative analysis of magnetic resonance imaging (MRI) revealed a small posterior fossa.
CONCLUSIONS: The association of intracranial tumors and lumbar CSF drainage with CMI is uncommon. The documentation of a small posterior fossa signifies the importance of both developmental (small posterior fossa) and acquired (intracranial tumor/lumbar CSF drainage) factors in pathogenesis of CMI. Although the extreme rarity of acute deterioration following a single LP does not warrant LP to be contraindicated in such patients, documentation of resolution of CMI with postoperative MRI before performing lumbar CSF drainage (whether therapeutic or diagnostic), might be helpful in avoiding this rare complication.

DOI: 10.1016/j.wneu.2016.04.111
PMID: 27157279 [PubMed - in process]

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67: Kumar M, Mehra S, Thakar A, Shukla NK, Roychoudhary A, Sharma MC, Ralhan R, Chauhan SS. End Binding 1 (EB1) overexpression in oral lesions and cancer: A biomarker of tumor progression and poor prognosis. Clin Chim Acta. 2016 Aug 1;459:45-52. doi: 10.1016/j.cca.2016.05.012. PubMed PMID: 27208742.

INTRODUCTION: Oral squamous cell carcinoma (OSCC) patients are at high risk of loco-regional recurrence and despite the improvement in treatment strategy, 5-year survival rates are about 50%. Identification of patients at high risk of recurrence may enable rigorous personalized post-treatment management. In an earlier proteomics study we observed overexpression of End Binding Protein (EB1) in OSCC. In the present study we investigated the diagnostic and prognostic significance of alterations in expression of EB1 in oral cancer.
METHODS: In this retrospective study, the expression of EB1 protein was evaluated in 259 OSCCs, 41 dysplasia, 166 hyperplasia and 126 normal tissues using immunohistochemistry and correlated with clinical-pathological parameters and prognosis of OSCC patients over a follow-up period of up to 91months.
RESULTS: Significantly higher expression of cytoplasmic EB1 was observed in hyperplasia [p<0.001, OR=7.2, 95% CI=4.1-12.8], dysplasia (p<0.001, OR=21.8, CI=8.8-50.2) and OSCCs (p<0.001, OR=10.1, CI=5.8-17.4) in comparison with normal mucosa. Univariate analysis revealed cytoplasmic EB1 association with tumor grade, tumor size and recurrence of the disease. Kaplan Meier survival analysis of EB1 expression showed significantly reduced disease free survival (DFS) (p=0.003). Notably, OSCC patients showing cytoplasmic EB1 overexpression demonstrated significantly reduced DFS (p=0.004, HR=2.1).
CONCLUSION: EB1 overexpression is an early event in oral tumorigenesis and cytoplasmic EB1 accumulation is associated with poor prognosis and tumor recurrence in OSCC patients.

DOI: 10.1016/j.cca.2016.05.012
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68: Kumar R, Gupta YK, Singh S, Raj A. Anti-inflammatory Effect of Picrorhiza kurroa in Experimental Models of Inflammation. Planta Med. 2016 Nov;82(16):1403-1409. PubMed PMID: 27163229.

Picrorhiza kurroa is an important medicinal plant in the Ayurvedic system of medicine. The root and rhizome of this plant are used for the treatment of various liver and inflammatory conditions. In the present study, we sought to investigate the anti-inflammatory activity of P. kurroa rhizome extract against carrageenan-induced paw edema and cotton pellet implantation-induced granuloma formation in rats. In addition, its immunomodulatory activity was evaluated in Complete Freund's Adjuvant-induced stimulation of a peritoneal macrophage model and lipopolysaccharide-stimulated RAW 264.7 murine macrophages. Pretreatment with P. kurroa rhizome extract inhibited carrageenan-induced paw edema and cotton pellet-induced granuloma formation in a dose-dependent manner. This was associated with reduced levels of inflammatory cytokines (TNF-α, IL-1β, IL-6) accompanied with increased anti-inflammatory cytokine (IL-10) in the serum and peritoneal macrophages. Additionally, P. kurroa rhizome extract inhibited inflammatory TNF-receptor 1 and cyclooxygenase-2 in Complete Freund's Adjuvant-induced activated peritoneal macrophages. Furthermore, P. kurroa rhizome extract treatment significantly inhibited iNOS and suppressed the activation of NF-κB through inhibition of its phosphorylation and by blocking the activation of IκB kinase alpha in lipopolysaccharide-stimulated RAW264.7 macrophages. Taken together, these results suggest that P. kurroa has anti-inflammatory activity that is mediated through the suppression of macrophage-derived cytokine and mediators via suppression of NF-κB signaling.

Georg Thieme Verlag KG Stuttgart · New York.

DOI: 10.1055/s-0042-106304
PMID: 27163229 [PubMed - in process]

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Malignant biliary obstruction is commonly caused by gall bladder carcinoma, cholangiocarcinoma and metastatic nodes. Percutaneous interventions play an important role in managing these patients. Biliary drainage, which forms the major bulk of radiological interventions, can be palliative in inoperable patients or pre-operative to improve liver function prior to surgery. Other interventions include cholecystostomy and radiofrequency ablation. We present here the indications, contraindications, technique and complications of the radiological interventions performed in patients with malignant biliary obstruction.

DOI: 10.4329/wjr.v8.i5.518
PMCID: PMC4882409
PMID: 27247718 [PubMed]

70: Mahapatra A, Sharma P, Sagar R. Psychotic Symptoms in a Child with Long Standing SLE Nephritis: Neuropsychiatric Manifestation or Sequelae to Lupus? J Can Acad Child Adolesc Psychiatry. 2016 Spring;25(2):125-9. PubMed PMID: 27274749; PubMed Central PMCID: PMC4879953.

Systemic Lupus Erythematosus (SLE) is a prototypic autoimmune disease of unknown etiology, which affects multiple organ systems including the central nervous system (CNS). Though not common, childhood onset SLE is a known and established entity. Neuropsychiatric symptoms are common in childhood onset SLE. Of these, psychosis and behavioural symptoms are relatively rare, and there is no consensus on the proper treatment of such cases. We report a case of 13-year-old boy, diagnosed with lupus nephritis, and presented with psychosis and behavioural symptoms. The highlight of this case is that the psychiatric symptoms were

present despite the primary illness being quiescent. Thus, the patient was treated with Olanzapine and lorazepam, while continuing immunosuppressive therapy as previously. Also, MRI brain revealed vasculitic changes in the right hemisphere, which might be one of the etiological factors playing role in the development of these neuropsychiatric symptoms.

Publisher: Le lupus érythémateux systémique (LES) est une maladie auto-immune prototypique d'étiologie inconnue, qui affecte de multiples systèmes organiques, dont le système nerveux central (SNC). Bien qu'il ne soit pas commun, le LES qui apparaît dans l'enfance est une entité connue et établie. Les symptômes neuropsychiatriques sont communs dans le LES qui apparaît dans l'enfance. Parmi ces symptômes, la psychose et les symptômes comportementaux sont relativement rares, et il n'y a pas de consensus sur le traitement adéquat de ces cas. Nous rapportons le cas d'un garçon de 13 ans, ayant reçu un diagnostic de néphrite lupique, et présentant des symptômes de psychose et de comportement. Le fait saillant de ce cas est que les symptômes psychiatriques étaient présents malgré que la maladie primaire fût dormante. Donc, le patient a été traité par olanzapine et lorazépam, tout en poursuivant une thérapie immunosuppressive comme auparavant. En outre, une IRM du cerveau a révélé des changements vasculitiques dans l'hémisphère droit, ce qui pourrait être l'un des facteurs étiologiques impliqués dans le développement de ces symptômes neuropsychiatriques.

PMCID: PMC4879953
PMID: 27274749 [PubMed]

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Mycotic keratitis is a major cause of corneal blindness, especially in tropical and subtropical countries. The prognosis is markedly worse compared to bacterial keratitis. Delayed diagnosis and scarcity of effective antifungal agents are the major factors for poor outcome. Over the last decade, considerable progress has been made to rapidly diagnose cases with mycotic keratitis and increase the efficacy of treatment. This review article discusses the recent advances in diagnosis and management of mycotic keratitis with a brief discussion on rare and emerging organisms. A MEDLINE search was carried out for articles in English language, with the keywords, mycotic keratitis, fungal keratitis, emerging or atypical fungal pathogens in mycotic keratitis, investigations in mycotic keratitis, polymerase chain reaction in mycotic keratitis, confocal microscopy, treatment of mycotic keratitis, newer therapy for mycotic keratitis. All relevant articles were included in this review. Considering the limited studies available on newer diagnostic and therapeutic modalities in mycotic keratitis, case series as well as case reports were also included if felt important.

DOI: 10.4103/0301-4738.185592
PMCID: PMC4966371
PMID: 27380973 [PubMed - in process]

72: Maitra S, Baidya DK, Arora MK, Bhattacharjee S, Khanna P. Laryngeal mask airway ProSeal provides higher oropharyngeal leak pressure than i-gel in adult patients under general anesthesia: a meta-analysis. J Clin Anesth. 2016 Sep;33:298-305. doi: 10.1016/j.jclinane.2016.04.020. PubMed PMID: 27555181.

STUDY OBJECTIVE: i-gel is a single-use supraglottic airway device that has a gastric drain tube similar to laryngeal mask airway (LMA) ProSeal. Randomized trials, when compared i-gel with LMA ProSeal, reported a differing results. Primary objective of this study is to compare LMA ProSeal and i-gel in terms of oropharyngeal leak pressure.
DESIGN: Meta-analysis of randomized controlled trials where i-gel has been compared to LMA ProSeal in adult airway management during general anesthesia.
SETTING: Teaching institutions.

MEASUREMENTS: PubMed, PubMed Central, and Cochrane databases were searched with search words "i-gel," "i-gel laryngeal mask airway," "i-gel ProSeal," and "i-gel LMA ProSeal" to find out the randomized controlled trials that compared i-gel with LMA ProSeal in terms of safety and efficacy. A total of 10 prospective randomized trials have been included in this meta-analysis.
MAIN RESULTS: LMA ProSeal provides higher oropharyngeal leak pressure than i-gel (mean difference, 3.37 cm H2O; 95% confidence interval, 1.80-4.95 cm H2O; P< .0001). Time to insert the device, first insertion success rate, and ease of gastric tube insertion are similar with both the devices, but i-gel may be easier to insert. Although the reported complications are not frequent and not very serious, a significantly higher blood staining on the mask has been noted with LMA ProSeal (odds ratio, 0.27; 95% confidence interval, 0.13-0.56; P= .0004).
CONCLUSION: LMA ProSeal may still remain the supraglottic device of choice over i-gel in adult patients during general anesthesia as it provided better seal against leak pressure with comparable device insertion characteristics.

DOI: 10.1016/j.jclinane.2016.04.020
PMID: 27555181 [PubMed - in process]

73: Maitra S, Som A, Bhattacharjee S, Arora MK, Baidya DK. Comparison of high-flow nasal oxygen therapy with conventional oxygen therapy and noninvasive ventilation in adult patients with acute hypoxemic respiratory failure: A meta-analysis and systematic review. J Crit Care. 2016 Oct;35:138-44. doi: 10.1016/j.jcrc.2016.05.013. Review. PubMed PMID: 27481749.

PURPOSE: The role of high-flow nasal oxygen (HFNO) therapy in adult patients with acute hypoxemic respiratory failure is controversial.
METHODS: This meta-analysis of prospective randomized controlled trials (RCTs) has been designed to compare HFNO with noninvasive ventilation (NIV) and conventional oxygen therapy in such patients.
RESULTS: Initial database searching revealed 336 RCTs, of which 7 were included in this meta-analysis. Five RCTs compared HFNO with standard oxygen therapy, one compared HFNO with NIV, and one compared all three. HFNO did not decrease the requirement of higher respiratory support compared with control group. HFNO was associated with improved respiratory rate and dyspnea score, and better comfort in 3 RCTs, whereas other studies did not find any difference.
CONCLUSION: High-flow nasal oxygen does not offer any benefit over NIV or conventional oxygen therapy in terms of requirement of higher respiratory support.

DOI: 10.1016/j.jcrc.2016.05.013
PMID: 27481749 [PubMed - in process]

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75: Malik S, Khadgawat R, Anand S, Gupta S. Non-invasive detection of fasting blood glucose level via electrochemical measurement of saliva. Springerplus. 2016 May 23;5(1):701. doi: 10.1186/s40064-016-2339-6. PubMed PMID: 27350930; PubMed Central PMCID: PMC4899397.

Machine learning techniques such as logistic regression (LR), support vector machine (SVM) and artificial neural network (ANN) were used to detect fasting blood glucose levels (FBGL) in a mixed population of healthy and diseased individuals in an Indian population. The occurrence of elevated FBGL was estimated in a non-invasive manner from the status of an individual's salivary electrochemical parameters such as pH, redox potential, conductivity and

concentration of sodium, potassium and calcium ions. The samples were obtained from 175 randomly selected volunteers comprising half healthy and half diabetic patients. The models were trained using 70 % of the total data, and tested upon the remaining set. For each algorithm, data points were cross-validated by randomly shuffling them three times prior to implementing the model. The performance of the machine learning technique was reported in terms of four statistically significant parameters-accuracy, precision, sensitivity and F1 score. SVM using RBF kernel showed the best performance for classifying high FBGLs with approximately 85 % accuracy, 84 % precision, 85 % sensitivity and 85 % F1 score. This study has been approved by the ethical committee of All India Institute of Medical Sciences, New Delhi, India with the reference number: IEC/NP-278/01-08-2014, RP-29/2014.

DOI: 10.1186/s40064-016-2339-6
PMCID: PMC4899397
PMID: 27350930 [PubMed]

76: Malik S, Suchal K, Bhatia J, Gamad N, Dinda AK, Gupta YK, Arya DS. Molecular mechanisms underlying attenuation of cisplatin-induced acute kidney injury by epicatechin gallate. Lab Invest. 2016 Aug;96(8):853-61. doi: 10.1038/labinvest.2016.60. PubMed PMID: 27239733.

Cisplatin, a platinum compound, is used as a first-line agent against various forms of solid cancers. Nephrotoxicity is an important adverse effect of cisplatin therapy, which involves increased oxidative stress, inflammation, apoptosis, and activation of the mitogen-activated protein kinase (MAPK) pathway. It is well known that the bioactive compounds present in green tea are used to treat various disorders due to their biological activities. With this background, the present study was aimed to investigate the effect of epicatechin gallate (ECG), a green tea polyphenol, in cisplatin-induced nephrotoxicity in rats. To achieve this, ECG (1.25, 2.5, and 5mg/kg; intraperitoneal (i.p.)) was administered to male albino Wistar rats for the period of 10 days. On the 7th day, a single i.p. injection of cisplatin (8mg/kg) was injected into rats to produce kidney injury and the animals were then killed on the 10th day. Cisplatin toxicity was associated with enhanced oxidative stress, impaired renal function along with marked tubular necrosis in Histopathology. Furthermore, cisplatin activated the MAPK pathway, which contributed to inflammation and apoptosis in the kidney of treated rats. In contrast, ECG (5mg/kg) pretreatment normalized cisplatin-induced oxidative stress, renal function, and histopathological changes. ECG also prevented the activation of the MAPK pathway, and attenuated inflammation and apoptosis in rats. These findings suggest that ECG prevented cisplatin-induced oxidative stress, inflammation, and apoptosis by downregulating the MAPK pathway and resulted in improved renal function.

DOI: 10.1038/labinvest.2016.60
PMID: 27239733 [PubMed - in process]

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We report an unusual morphological mucoid variant of Staphylococcus haemolyticus associated with linezolid resistance from a patient with sepsis. Linezolid resistance and mucoid character together made this pathogen difficult to treat. To our knowledge this is the first such report.

DOI: 10.1016/j.nmni.2016.02.010
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Infection in Critically Ill: Is Molecular Diagnosis the Magic Bullet? Crit Care Med. 2016 May;44(5):e314-5. doi: 10.1097/CCM.0000000000001549. PubMed PMID: 27083038.

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80: Mukherjee A, Velpandian T, Singla M, Kanhiya K, Kabra SK, Lodha R. Pharmacokinetics of isoniazid, rifampicin, pyrazinamide and ethambutol in HIV-infected Indian children. Int J Tuberc Lung Dis. 2016 May;20(5):666-72. doi: 10.5588/ijtld.15.0288. PubMed PMID: 27084822.

SETTING: Co-infection with the human immunodeficiency virus (HIV) may lead to inadequate plasma concentrations of anti-tuberculosis drugs in children with tuberculosis (TB).
OBJECTIVE: To describe the influence of HIV infection on the pharmacokinetics of isoniazid, rifampicin, pyrazinamide and ethambutol in children.
DESIGN: Prospective drug estimation study in two cohorts of children: HIV-infected (n = 24) and non-HIV-infected (n = 32) with TB. Dosages used were based on earlier World Health Organization recommendations. All four drugs were estimated simultaneously using liquid chromatography mass spectrometry.
RESULTS: The HIV-TB co-infected children had a mean age of 105.9 months (standard deviation 43.1); there were 10 girls (41.7%). The maximum plasma concentration (Cmax), time taken to achieve Cmax, area under curve from 0-4 h and 2 h concentrations of isoniazid (INH), rifampicin (RMP) and pyrazinamide (PZA) were not affected by the HIV status of the children. Ethambutol (EMB) concentrations were lower in HIV-TB co-infected children. Inadequate 2 h concentrations of INH, RMP and EMB were found in the majority of the children in both groups. PZA concentrations were adequate in almost all children. Younger age and lower dose were associated with lower 2 h concentrations of INH and RMP.
CONCLUSION: Inadequate concentrations of INH, RMP and EMB in both HIV-TB-infected and non-HIV-infected children provide support for the recently revised recommended doses of INH and RMP. EMB levels were lower in HIV-infected children; however, more studies are needed to validate this observation.

DOI: 10.5588/ijtld.15.0288
PMID: 27084822 [PubMed - in process]

81: Nair A, Guleria R, Kandasamy D, Sharma R, Tandon N, Singh UB, Goswami R. Prevalence of pulmonary tuberculosis in young adult patients with Type 1 diabetes mellitus in India. Multidiscip Respir Med. 2016 May 10;11:22. doi: 10.1186/s40248-016-0058-z. PubMed PMID: 27168934; PubMed Central PMCID: PMC4862037.

BACKGROUND: There is limited information on prevalence of pulmonary tuberculosis (PTB) in patients with type-1-diabetes. We assessed the prevalence of PTB in patients with type-1-diabetes attending the outpatient-clinic in a tertiary-care hospital.
METHODS: 151 patients with type-1-diabetes were screened for PTB by clinical examination and chest-radiography. Sputum Acid-Fast Bacilli Test (AFB) and Mycobacterium tuberculosis (M.tb) culture were performed in patients with clinical and radiological features suggestive of a possibility of PTB and also in those with history of PTB in the past. Their average glycated haemoglobin (HbA1c) during preceding 2 years was assessed. Sputum culture positive patients were managed by a pulmonologist.
RESULTS: 5/151 patients had respiratory symptoms and radiographic findings suggestive of PTB. 20/151 patients were asymptomatic but had history of PTB. Four of the five symptomatic patients and 12 with past PTB were positive for sputum M.tb by culture, giving a prevalence of 10.6 % sputum culture positive in type-1-diabetes. Average HbA1c was comparable in patients with and without positive sputum culture. ESR and Mantoux test were not discriminatory in these groups. Four clinically symptomatic M.tb culture positive and four asymptomatic

patients with sputum culture positive for M.tb on two occasions (6 weeks apart) were put on antitubercular treatment (ATT). Patients who were culture positive for M.tb only on one occasion were kept on a close follow up.
CONCLUSIONS: Patients with type-1-diabetes mellitus in India have high prevalence of PTB. They need to be actively screened for PTB by sputum M.tb culture in order to initiate early treatment and to prevent transmission in the community.

DOI: 10.1186/s40248-016-0058-z
PMCID: PMC4862037
PMID: 27168934 [PubMed]

82: Natarajan CK, Sankar MJ, Jain K, Agarwal R, Paul VK. Surfactant therapy and antibiotics in neonates with meconium aspiration syndrome: a systematic review and meta-analysis. J Perinatol. 2016 May;36 Suppl 1:S49-54. doi: 10.1038/jp.2016.32. PubMed PMID: 27109092; PubMed Central PMCID: PMC4848739.

Meconium aspiration syndrome (MAS), a common cause of respiratory failure in neonates, is associated with high mortality and morbidity. The objectives of this review were to evaluate the effects of administration of (a) surfactant-either as lung lavage (SLL) or bolus surfactant (BS) and (b) antibiotics on mortality and severe morbidities in neonates with MAS. We searched the following databases: MEDLINE via PubMed, Cochrane CENTRAL, WHOLIS and CABI using sensitive search strategies. We included eight studies on use of surfactant and three studies on use of antibiotics. Neither SLL nor BS reduced the risk of mortality in neonates with MAS (relative risk (RR) 0.38, 95% confidence interval (CI) 0.09 to 1.57; and RR 0.80, 95% CI 0.39 to 1.66, respectively). Both SLL and BS reduced the duration of hospital stay (mean difference -2.0, 95% CI -3.66 to -0.34; and RR -4.68, 95% CI -7.11 to -2.24 days, respectively) and duration of mechanical ventilation (mean difference -1.31, 95% CI -1.91 to -0.72; and mean difference 5.4, 95% CI -9.76 to -1.03 days). Neonates who received BS needed extracorporeal membrane oxygenation (ECMO) less often than the controls (RR 0.64, 95% CI 0.46 to 0.91). Use of antibiotics for MAS did not result in significant reduction in the risk of mortality, sepsis or duration of hospital stay. Surfactant administration either as SLL or BS for MAS was found to reduce the duration of mechanical ventilation and hospital stay; BS also reduced the need for ECMO. Administration of antibiotics did not show any significant clinical benefits in neonates with MAS and no evidence of sepsis. Given the limited number of studies and small number of neonates enrolled, there is an urgent need to generate more evidence on the efficacy and cost-effectiveness of these two treatment modalities before recommending them in routine clinical practice.

DOI: 10.1038/jp.2016.32
PMCID: PMC4848739
PMID: 27109092 [PubMed - in process]

83: Nisa N, Sunkesula G, Dhar KJ. Failed caudal block in a child with pelvic neuroblastoma. Paediatr Anaesth. 2016 May;26(5):568-9. doi: 10.1111/pan.12891. PubMed PMID: 27059421.

84: Ojha S, Al Taee H, Goyal S, Mahajan UB, Patil CR, Arya DS, Rajesh M. Cardioprotective Potentials of Plant-Derived Small Molecules against Doxorubicin Associated Cardiotoxicity. Oxid Med Cell Longev. 2016;2016:5724973. doi: 10.1155/2016/5724973. Review. PubMed PMID: 27313831; PubMed Central PMCID: PMC4893565.

Doxorubicin (DOX) is a potent and widely used anthracycline antibiotic for the treatment of several malignancies. Unfortunately, the clinical utility of DOX is often restricted due to the elicitation of organ toxicity. Particularly, the increased risk for the development of dilated cardiomyopathy by DOX among the cancer survivors warrants major attention from the physicians as well as researchers to develop adjuvant agents to neutralize the noxious effects of DOX on the healthy myocardium. Despite these pitfalls, the use of traditional

cytotoxic drugs continues to be the mainstay treatment for several types of cancer. Recently, phytochemicals have gained attention for their anticancer, chemopreventive, and cardioprotective activities. The ideal cardioprotective agents should not compromise the clinical efficacy of DOX and should be devoid of cumulative or irreversible toxicity on the naïve tissues. Furthermore, adjuvants possessing synergistic anticancer activity and quelling of chemoresistance would significantly enhance the clinical utility in combating DOX-induced cardiotoxicity. The present review renders an overview of cardioprotective effects of plant-derived small molecules and their purported mechanisms against DOX-induced cardiotoxicity. Phytochemicals serve as the reservoirs of pharmacophore which can be utilized as templates for developing safe and potential novel cardioprotective agents in combating DOX-induced cardiotoxicity.

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PMCID: PMC4893565
PMID: 27313831 [PubMed - in process]

85: Pananghat AN, Aggarwal H, Prakash SS, Makhdoomi MA, Singh R, Lodha R, Ali S, Srinivas M, Das BK, Pandey RM, Kabra SK, Luthra K. IL-8 Alterations in HIV-1 Infected Children With Disease Progression. Medicine (Baltimore). 2016 May;95(21):e3734. doi: 10.1097/MD.0000000000003734. PubMed PMID: 27227934; PubMed Central PMCID: PMC4902358.

Disease progression in HIV-1 infected children is faster than in adults. Less than 5% of the infected children maintain stable CD4 counts beyond 7 years of infection and are termed long-term nonprogressors (LTNPs). Delineating the host immune response in antiretroviral naïve (ART) and treated HIV-1 infected children at different disease stages will help in understanding the immunopathogenesis of the disease.A total of 79 asymptomatic, perinatally HIV-1 infected children (50 ART naïve and 29 ART treated) and 8 seronegative donors were recruited in this study. T- and B-cell activation PCR arrays were performed from the cDNA, using total RNA extracted from the peripheral blood mononuclear cells (PBMCs) of 14 HIV-1 infected children at different stages of the disease. The differentially expressed genes were identified. Quantitative RT-PCR was performed for the (interleukin-8) IL-8 gene and its transcriptional mediators, that is, SHP2, GRB2, and IL-8R (IL-8 receptor/CXCR1). Plasma levels of IL-8 were measured by flow cytometry.Gene array data revealed a higher expression of IL-8 in the ART naïve HIV-1 infected progressors and in ART nonresponders than LTNPs and ART responders, respectively. Quantitative RT-PCR analysis demonstrated a significant higher expression of IL-8 ($P<0.001$), its receptor CXCR1 ($P=0.03$) and the upstream signaling molecule SHP2 ($P=0.04$) in the progressors versus LTNPs. Plasma levels of IL-8 were significantly higher in progressors versus LTNPs ($P<0.001$), and ART nonresponders versus ART responders ($P<0.001$). A significant negative correlation of plasma levels of IL-8 with CD4 counts (cells/μL) was observed in HIV-1 infected ART naïve subjects ($r=-0.488$; $P<0.001$), while the IL-8 levels positively correlated with viral load in the ART treated children ($r=0.5494$; $P<0.001$). ART naïve progressors on follow up demonstrated a significant reduction in the mRNA expression ($P=0.05$) and plasma levels of IL-8 ($P=0.05$) post 6 months of ART initiation suggesting the beneficial role of ART therapy in reducing inflammation in infected children.Our data suggest that IL-8 may serve as a potential prognostic marker in adjunct with CD4 counts to monitor disease progression in the HIV-1 infected children and the efficacy of ART.

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PMCID: PMC4902358
PMID: 27227934 [PubMed - in process]

86: Pawar S, Ganakumar V, Jha S, Ragesh R, Ray A, Kakkar A, Sharma MC, Sharma SK. Pulmonary Cryptococcoma Masquerading as Lung Cancer. J Assoc Physicians India. 2016 May;64(5):66-68. PubMed PMID: 27735154.

We report a case of pulmonary cryptococcoma, in an adult with recently detected diabetes, mimicking as lung cancer. A 45-year-old gentleman with past history of pulmonary tuberculosis presented with fever, cough with expectoration, pleuritic chest pain and hemoptysis. Chest radiograph and computed tomography revealed right lower lobe mass which significantly enhanced on contrast administration. Ultrasound guided biopsy was done which on histopathological examination showed non-necrotizing granulomas with narrow-based budding yeast cells suggestive of cryptococcosis. Detailed work-up for dissemination of infection was negative. A dramatic response to anti-fungal treatment was observed and the patient is doing fine on follow-up.

PMID: 27735154 [PubMed - in process]

87: Peyvandi F, Mannucci PM, Garagiola I, El-Beshlawy A, Elalfy M, Ramanan V, Eshghi P, Hanagavadi S, Varadarajan R, Karimi M, Manglani MV, Ross C, Young G, Seth T, Apte S, Nayak DM, Santagostino E, Mancuso ME, Sandoval Gonzalez AC, Mahlangu JN, Bonanad Boix S, Cerqueira M, Ewing NP, Male C, Owaidah T, Soto Arellano V, Kobrinsky NL, Majumdar S, Perez Garrido R, Sachdeva A, Simpson M, Thomas M, Zanon E, Antmen B, Kavakli K, Manco-Johnson MJ, Martinez M, Marzouka E, Mazzucconi MG, Neme D, Palomo Bravo A, Paredes Aguilera R, Prezotti A, Schmitt K, Wicklund BM, Zulfikar B, Rosendaal FR. A Randomized Trial of Factor VIII and Neutralizing Antibodies in Hemophilia A. N Engl J Med. 2016 May 26;374(21):2054-64. doi: 10.1056/NEJMoa1516437. PubMed PMID: 27223147.

BACKGROUND: The development of neutralizing anti-factor VIII alloantibodies (inhibitors) in patients with severe hemophilia A may depend on the concentrate used for replacement therapy.
METHODS: We conducted a randomized trial to assess the incidence of factor VIII inhibitors among patients treated with plasma-derived factor VIII containing von Willebrand factor or recombinant factor VIII. Patients who met the eligibility criteria (male sex, age <6 years, severe hemophilia A, and no previous treatment with any factor VIII concentrate or only minimal treatment with blood components) were included from 42 sites.
RESULTS: Of 303 patients screened, 264 underwent randomization and 251 were analyzed. Inhibitors developed in 76 patients, 50 of whom had high-titer inhibitors (≥5 Bethesda units). Inhibitors developed in 29 of the 125 patients treated with plasma-derived factor VIII (20 patients had high-titer inhibitors) and in 47 of the 126 patients treated with recombinant factor VIII (30 patients had high-titer inhibitors). The cumulative incidence of all inhibitors was 26.8% (95% confidence interval [CI], 18.4 to 35.2) with plasma-derived factor VIII and 44.5% (95% CI, 34.7 to 54.3) with recombinant factor VIII; the cumulative incidence of high-titer inhibitors was 18.6% (95% CI, 11.2 to 26.0) and 28.4% (95% CI, 19.6 to 37.2), respectively. In Cox regression models for the primary end point of all inhibitors, recombinant factor VIII was associated with an 87% higher incidence than plasma-derived factor VIII (hazard ratio, 1.87; 95% CI, 1.17 to 2.96). This association did not change in multivariable analysis. For high-titer inhibitors, the hazard ratio was 1.69 (95% CI, 0.96 to 2.98). When the analysis was restricted to recombinant factor VIII products other than second-generation full-length recombinant factor VIII, effect estimates remained similar for all inhibitors (hazard ratio, 1.98; 95% CI, 0.99 to 3.97) and high-titer inhibitors (hazard ratio, 2.59; 95% CI, 1.11 to 6.00).
CONCLUSIONS: Patients treated with plasma-derived factor VIII containing von Willebrand factor had a lower incidence of inhibitors than those treated with recombinant factor VIII. (Funded by the Angelo Bianchi Bonomi Foundation and others; ClinicalTrials.gov number, NCT01064284; EudraCT number, 2009-011186-88.).

DOI: 10.1056/NEJMoa1516437
PMID: 27223147 [PubMed - indexed for MEDLINE]

88: Prajapati SC, Chauhan SS. Human dipeptidyl peptidase III mRNA variant I and II are expressed concurrently in multiple tumor derived cell lines and translated at comparable efficiency in vitro. Mol Biol Rep. 2016 Jun;43(6):457-62. doi: 10.1007/s11033-016-3996-9. PubMed PMID: 27153830.

Dipeptidyl peptidase III (DPP III) is an emerging biomarker of human cancers. Expression, specificity, and function of human DPP III (hDPP III) mRNA variant I (V-I), II (V-II), and III (V-III) are poorly understood. Here, we investigated expression of these variants in multiple human tumor derived cell lines. DNA sequencing revealed concurrent expression of hDPP III V-I and V-II in U87MG (glioblastoma), SCC4 (squamous cell carcinoma), SiHa (carcinoma of uterus) cells. In SKOV1 cells, a cell line derived from ovarian carcinoma where a positive correlation between histological aggressiveness of the malignancy and hDPP III expression has previously been established, only V-II could be detected. Human DPP III V-III, which lacks an in-frame coding sequence, could not be detected in any of these cell lines. 5' untranslated region (UTR) of hDPP III V-II contains nucleotides GCA (-12 to -10 bp) upstream to the translation initiator codon (AUG). These nucleotides are absent from V-I and V-III, however, both V-I and V-II encode for the same hDPP III protein isoform-I. In vitro transcription coupled translation assay using hDPP III V-I and V-II expression vectors which contained full length V-I and V-II cDNA including the variable 5' UTR cloned under T7 promoter, respectively revealed a comparable translational efficiency for both the variants, abrogating involvement of nucleotides GCA (-12 to -10 bp) in translation of the variants. Our results, for the first time, demonstrate concurrent expression in multiple tumor derived cell lines and a comparable in vitro translational efficiency for hDPP III V-I and II.

DOI: 10.1007/s11033-016-3996-9
PMID: 27153830 [PubMed - in process]

89: Praveen EP, Chouhan S, Sahoo J, Goel SK, Dwivedi SN, Khurana ML, Kulshreshtha B, Ammini AC. Effect of Different Insulin Response Patterns During Oral Glucose Tolerance Test on Glycemia in Individuals with Normal Glucose Tolerance. Diabetes Technol Ther. 2016 May;18(5):316-26. doi: 10.1089/dia.2015.0379. PubMed PMID: 26886065.

BACKGROUND: Research is still going on for detecting the earliest glucose homeostasis derangements in individuals, which is crucial for the prevention of glucose intolerance. This cross-sectional study analyzes different insulin response patterns during the oral glucose tolerance test (OGTT) and their implications on glycemia in normoglycemic individuals.
SUBJECTS AND METHODS: The sample frame was the "Offspring of Individuals with Diabetes Study" database. All participants underwent OGTT. Blood samples were collected at 0, 30, 60, and 120 min for measurement of insulin, C-peptide, and proinsulin levels. Normal glucose tolerant individuals were selected for analysis.
RESULTS: Four hundred fifty subjects (mean age, 25 years) were included and divided into two groups according to timing of plasma insulin peaking during OGTT: Group 1, peaking at 30 min; and Group 2, peaking at 60 or 120 min. Body mass index (BMI) and insulin resistance were comparable between the groups; however, Group 2 showed a significantly higher 60- and 120-min glucose level and lower disposition index. Based on the magnitude of the insulin levels, Group 1 was subdivided into Group N (normal pattern) and Group E (exaggerated pattern) with a 30-min insulin cutoff of 74 μU/mL (Group E, ≥74 μU/mL). Group 2 was subdivided into Group DL (delayed and limited pattern; 60-min insulin <73.0 μU/mL and 120-min insulin <80.0 μU/mL) and Group DE (delayed and exaggerated pattern; 60-min insulin ≥73.0 μU/mL or 120-min insulin ≥80.0 μU/mL). Group DE showed a significantly higher area under the curve (AUC) of glucose compared with the other groups and had a lower disposition index and high-density lipoprotein levels. Group DL had significantly lower insulin resistance and BMI compared with Group E but showed a similar AUC of glucose.
CONCLUSIONS: A delayed insulin pattern was associated with higher postprandial

glucose levels. Individuals with delayed and exaggerated insulin secretion may have a higher risk for glucose intolerance.

DOI: 10.1089/dia.2015.0379
PMID: 26886065 [PubMed - in process]

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

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

91: Rajeshwari M, Suri V, Kaur K, Suri A, Garg A, Sharma MC, Sarkar C. Intracranial interhemispheric osteochondrolipoma: Diagnostic and surgical challenges in an extremely rare entity. Neuropathology. 2016 Oct;36(5):470-474. doi: 10.1111/neup.12294. PubMed PMID: 27195706.

Intracranial lipomas are rare developmental lesions, predominantly occurring in the interhemispheric location. Osteochondrolipoma is an extremely rare variant of lipoma with osseous and chondroid differentiation. We present a case of interhemispheric osteochondrolipoma, in a 2.5-years-old male child which was detected antenatally, in association with corpus callosum agenesis. The lesion progressively increased in size with resulting compression of surrounding structures, and was subjected to microsurgical decompression. To the best of our knowledge, this is the first case of intracranial interhemispheric osteochondrolipoma in the existing medical literature. Peculiarities of this case and the diagnostic and surgical challenges are discussed.

DOI: 10.1111/neup.12294
PMID: 27195706 [PubMed - in process]

92: Ramachandran R, Rewari V, Sharma A, Kumar R, Trikha A. Laparoscopic Surgery for Pheochromocytoma and Paraganglioma Removal: A Retrospective Analysis of Anaesthetic Management. Curr Hypertens Rev. 2016 May 10. [Epub ahead of print] PubMed PMID: 27160411.

INTRODUCTION: Minimal invasive approaches to pheochromocytoma (PCC) and

paraganglioma (PGL) removal may be complicated by the hemodynamic disturbances that are associated with the catecholamine secretion from the tumour. The anaesthetic and perioperative monitoring techniques need to be customized to handle these complications effectively. This retrospective analysis was undertaken to review the perioperative management of these patients handled by the same anaesthetic and surgical team.
METHODS: Case details were collected and data analysed for the perioperative management of 29 patients who underwent laparoscopic removal of PCC and PGL. Parameters collected included details of preoperative alpha-and beta blockade, tumour size, number of hypertensive surges, dose of sodium nitroprusside (SNP) and other vasodilators used and incidence of postoperative hypotension and other complications.
RESULTS: All patients received prazosin for pre-operative optimization. Hypertensive emergencies were seen in 4 patients during induction and endotracheal intubation and in 1 patient during pneumoperitoneum insufflation. Overall mean number of hypertensive emergencies was 3.41 (SD-2.45). The patients undergoing PGL removal had significantly more crisis compared to those undergoing unilateral PCC removal. The dose of SNP used correlated significantly with tumour size.
CONCLUSION: Laparoscopic surgery for PCC and PGL removal is associated with hypertensive emergencies which are amenable to usual doses of antihypertensives used intraoperatively. Surgical factors like tumour size and location affect the number of crisis and the dose of anti-hypertensives used more than the anaesthetic drugs and procedures.

PMID: 27160411 [PubMed - as supplied by publisher]

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Sigmoid volvulus is a rare and potentially life-threatening condition that is usually seen in adults, however, when diagnosed in children, it is often associated with Hirschsprung's disease (HD). We report a case of an 11-year-old boy who presented with a history of constipation since 1.5 months of age, with acute onset of severe abdominal pain and marked distention of the abdomen. Sigmoid volvulus was suspected, detected and successfully managed with resection of the sigmoid colon and primary Scott Boley's pull-through. This report underscores the importance of suspecting sigmoid volvulus in the pertinent clinical setting; also, a primary definitive procedure can be performed in select cases.

DOI: 10.1136/bcr-2016-214693
PMID: 27229747 [PubMed - in process]

95: Rastogi N, Singh A, Singh PK, Tyagi TK, Pandey S, Shin K, Kaur P, Sharma S, Singh TP. Structure of iron saturated C-lobe of bovine lactoferrin at pH 6.8 indicates a weakening of iron coordination. Proteins. 2016 May;84(5):591-9. doi: 10.1002/prot.25004. PubMed PMID: 26850578.

The bilobal lactoferrin is an approximately 76 kDa glycoprotein. It sequesters two Fe(3+) ions together with two CO(3)(2-) ions. The C-terminal half (residues, Tyr342-Arg689, C-lobe) of bovine lactoferrin (BLF) (residues Ala1-Arg689) was prepared by limited proteolysis using trypsin. Both C-lobe and intact BLF were saturated to 100%. Both of them retained up to nearly 85% of iron at pH 6.5. At

pH 5.0, C-lobe retained 75% of iron whereas intact protein could retain only slightly more than 60%. At pH 4.0 both contained 25% iron and at pH 2.0 they were left with iron concentration of only 10%. The structure of iron saturated C-lobe was determined at 2.79 Å resolution and refined to R(cryst) and R(free) factors of 0.205 and 0.273, respectively. The structure contains two crystallographically independent molecules, A and B. They were found to have identical structures with an r.m.s. shift of 0.5 Å for their C(α) atoms. A high solvent content of 66% was observed in the crystals. The average value of an overall B-factor was 68.0 Å(2). The distance of 2.9 Å observed for the coordination bond between Fe(3+) ion and N(e2) of His595 appeared to be considerably longer than the normally observed values of 1.9-2.2 Å. This indicated that the coordination bond involving His595 may be absent. Other coordination distances were observed in the range of 2.1-2.3 Å. Based on the present structure of iron saturated C-lobe, it may be stated that His595 is the first residue to dissociate from ferric ion when the pH is lowered.

DOI: 10.1002/prot.25004
PMID: 26850578 [PubMed - in process]

96: Ratan SK, Sharma A, Kapoor S, Polipalli SK, Dubey D, Mishra TK, Sinha SK, Agarwal SK. Polymorphism of 3' UTR of MAMLD1 gene is also associated with increased risk of isolated hypospadias in Indian children: a preliminary report. Pediatr Surg Int. 2016 May;32(5):515-24. doi: 10.1007/s00383-016-3856-7. PubMed PMID: 26815876.

OBJECTIVE: To study MAMLD1 gene polymorphisms, serum LH and testosterone levels amongst Indian children with isolated hypospadias (IH) and controls.
MATERIALS AND METHODS: Screening of the MAMLD1 gene was performed by PCR sequencing method in 100 Indian children aged 0-12 years presenting with IH and 100 controls. LH and testosterone hormone levels were also assessed (categorized in four age-wise groups).
RESULTS: IH subjects had significantly higher incidence of MAMLD1 polymorphism as compared to controls (33 vs 15 %, p = 0.01). Of various genomic variants identified in this study, the noteworthy novel ones were missense mutation P299A and single nucleotide polymorphism c.2960C>T in 3' UTR of Exon 7. While p 299A was found to cause protein structural instability consequent to amino acid change, eighty percent subjects with c.2960C>T in 3' UTR of Exon 7 (corresponding to newly discovered currently non-validated exon 11) were found to have lower testosterone levels when compared with their age group mean. IH showed statistically higher incidence of c.2960C>T in comparison to controls (22 vs 10 %, p value 0.046) and about 2.5-folds higher risk of this anomaly.
CONCLUSION: Occurrence of MAMDL1 gene polymorphisms, specially of c.2960C>T in 3' UTR of its exon 7 is associated with a higher risk of IH in Indian children, probably by lowering androgenic levels.

DOI: 10.1007/s00383-016-3856-7
PMID: 26815876 [PubMed - in process]

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98: Sankar MJ, Gupta N, Jain K, Agarwal R, Paul VK. Efficacy and safety of surfactant replacement therapy for preterm neonates with respiratory distress syndrome in low- and middle-income countries: a systematic review. J Perinatol. 2016 May;36 Suppl 1:S36-48. doi: 10.1038/jp.2016.31. PubMed PMID: 27109091; PubMed Central PMCID: PMC4848743.

Surfactant replacement therapy (SRT) has been shown to reduce mortality and air leaks in preterm neonates from high-income countries (HICs). The safety and

efficacy of SRT in low- and middle- income countries (LMICs) have not been systematically evaluated. The major objectives of this review were to assess the (1) efficacy and safety, and (2) feasibility and cost effectiveness of SRT in LMIC settings. We searched the following databases-MEDLINE, CENTRAL, CINAHL, EMBASE and WHOLIS using the search terms 'surfactant' OR 'pulmonary surfactant'. Both experimental and observational studies that enrolled preterm neonates with or at-risk of respiratory distress syndrome (RDS) and required surfactant (animal-derived or synthetic) were included. A total of 38 relevant studies were found; almost all were from level-3 neonatal units. Pooled analysis of two randomized controlled trials (RCTs) and 22 observational studies showed a significant reduction in mortality at the last available time point in neonates who received SRT (relative risk (RR) 0.67; 95% confidence interval (CI) 0.57 to 0.79). There was also a significant reduction in the risk of air leaks (five studies; RR 0.51; 0.29 to 0.90). One RCT and twelve observational studies reported the risk of bronchopulmonary dysplasia (BPD) with contrasting results; while the RCT and most before-after/cohort studies showed a significant reduction or no effect, the majority of the case-control studies demonstrated significantly higher odds of receiving SRT in neonates who developed BPD. Two studies-one RCT and one observational-found no difference in the proportion of neonates developing pulmonary hemorrhage, while another observational study reported a higher incidence in those receiving SRT. The failure rate of the intubate-surfactant-extubate (InSurE) technique requiring mechanical ventilation or referral varied from 34 to 45% in four case-series. No study reported on the cost effectiveness of SRT. Available evidence suggests that SRT is effective, safe and feasible in level-3 neonatal units and has the potential to reduce neonatal mortality and air leaks in low-resource settings as well. However, there is a need to generate more evidence on the cost effectiveness of SRT and its effect on BPD in LMIC settings.

DOI: 10.1038/jp.2016.31
PMCID: PMC4848743
PMID: 27109091 [PubMed - in process]

99: Sankar MJ, Chandrasekaran A, Kumar P, Thukral A, Agarwal R, Paul VK. Vitamin K prophylaxis for prevention of vitamin K deficiency bleeding: a systematic review. J Perinatol. 2016 May;36 Suppl 1:S29-35. doi: 10.1038/jp.2016.30. PubMed PMID: 27109090; PubMed Central PMCID: PMC4862383.

We conducted a systematic review to evaluate the burden of late vitamin K deficiency bleeding (VKDB) and the effect of vitamin K prophylaxis on the incidence of VKDB. We searched MEDLINE and other electronic databases, and included all observational studies including population surveys as well as randomized controlled trials (RCT). The median (interquartile range) burden of late VKDB was 35 (10.5 to 80) per 100 000 live births in infants who had not received prophylaxis at birth; the burden was much higher in low- and middle-income countries as compared with high-income countries-80 (72 to 80) vs 8.8 (5.8 to 17.8) per 100 000 live births. Two randomized trials evaluated the effect of intramuscular (IM) prophylaxis on the risk of classical VKDB. Although one trial reported a significant reduction in the incidence of any bleeding (relative risk (RR) 0.73, 95% confidence interval (CI) 0.56 to 0.96) and moderate to severe bleeding (RR 0.19, 0.08 to 0.46; number needed to treat (NNT) 74, 47 to 177), the other trial demonstrated a significant reduction in the risk of secondary bleeding after circumcision in male neonates (RR 0.18, CI 0.08 to 0.42; NNT 9, 6 to 15). No RCTs evaluated the effect of vitamin K prophylaxis on late VKDB. Data from four surveillance studies indicate that the use of IM/subcutaneous vitamin K prophylaxis could significantly reduce the risk of late VKDB when compared with no prophylaxis (pooled RR 0.02; 95% CI 0.00 to 0.10). When compared with IM prophylaxis, a single oral dose of vitamin K increased the risk of VKDB (RR 24.5; 95% CI 7.4 to 81.0) but multiple oral doses did not (RR 3.64; CI 0.82 to 16.3). There is low-quality evidence from observational studies that routine IM administration of 1 mg of vitamin K at birth reduces the incidence of late VKDB during infancy. Given the high risk of mortality and morbidity in infants with late VKDB, it seems appropriate to administer IM

vitamin K prophylaxis to all neonates at birth. Future studies should compare the efficacy and safety of multiple oral doses with IM vitamin K and also evaluate the optimal dose of vitamin K in preterm neonates.

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PMCID: PMC4862383
PMID: 27109090 [PubMed - in process]

100: Sankar MJ, Chandrasekaran A, Ravindranath A, Agarwal R, Paul VK. Umbilical cord cleansing with chlorhexidine in neonates: a systematic review. J Perinatol. 2016 May;36 Suppl 1:S12-20. doi: 10.1038/jp.2016.28. PubMed PMID: 27109088; PubMed Central PMCID: PMC4848738.

We conducted a systematic review and meta-analysis of randomized controlled trials (RCTs) to evaluate the efficacy of chlorhexidine application to the umbilical cord in neonates. We searched MEDLINE and other electronic databases, and included all RCTs that evaluated the effect of single or multiple chlorhexidine cord applications on the neonatal mortality rate (NMR) and/or the incidence of systemic sepsis and omphalitis. A total of six RCTs-four community-based cluster RCTs and two hospital-based trials-were included in the review. Of the four cluster RCTs, three were conducted in South Asia in settings with high rates of home births (>92%) while the fourth, available only as an abstract, was conducted in Africa. Pooled analysis by the 'intention-to-treat' principle showed a significant reduction in NMR after chlorhexidine application (four studies; relative risk (RR) 0.85; 95% confidence interval (CI) 0.76 to 0.95; fixed effects (FE) model). On subgroup analysis, only multiple applications showed a significant effect (four studies; RR 0.88; 95% CI 0.78 to 0.99) whereas a single application did not (one study; RR 0.86; 0.73 to 1.02). Similarly, only the community-based trials showed a significant reduction in NMR (three studies; RR 0.86; 95% CI 0.77 to 0.95), while the hospital-based study did not find any effect (RR 0.11; 0.01 to 2.03). Since all the studies were conducted in high-NMR settings (⩾30 per 1000 live births), we could not determine the effect in settings with low NMRs. Only one study-a hospital-based trial from India-reported the incidence of neonatal sepsis; it did not find a significant reduction in any sepsis (RR 0.67; 95% CI 0.35 to 1.28). Pooled analysis of community-based studies revealed significant reduction in the risk of omphalitis in infants who received the intervention (four studies; RR 0.71; 95% CI 0.62 to 0.81). The hospital-based trial had no instances of omphalitis in either of the two groups. Chlorhexidine application delayed the time to cord separation (four studies; mean difference 2.11 days; 95% CI 2.07 to 2.15; FE model). Chlorhexidine application to the cord reduces the risk of neonatal mortality and omphalitis in infants born at home in high-NMR settings. Routine chlorhexidine application, preferably daily for 7 to 10 days after birth, should therefore be recommended in these infants. Given the paucity of evidence, there is presently no justification for recommending this intervention in infants born in health facilities and/or low-NMR settings.

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PMCID: PMC4848738
PMID: 27109088 [PubMed - in process]

101: Sankar MJ, Natarajan CK, Das RR, Agarwal R, Chandrasekaran A, Paul VK. When do newborns die? A systematic review of timing of overall and cause-specific neonatal deaths in developing countries. J Perinatol. 2016 May;36 Suppl 1:S1-S11. doi: 10.1038/jp.2016.27. PubMed PMID: 27109087; PubMed Central PMCID: PMC4848744.

About 99% of neonatal deaths occur in low- and middle-income countries. There is a paucity of information on the exact timing of neonatal deaths in these settings. The objective of this review was to determine the timing of overall and cause-specific neonatal deaths in developing country settings. We searched MEDLINE via PubMed, Cochrane CENTRAL, WHOLIS and CABI using sensitive search strategies. Searches were limited to studies involving humans published in the last 10 years. A total of 22 studies were included in the review. Pooled results indicate that about 62% of the total neonatal deaths occurred during the first 3

days of life; the first day alone accounted for two-thirds. Almost all asphyxia-related and the majority of prematurity- and malformation-related deaths occurred in the first week of life (98%, 83% and 78%, respectively). Only one-half of sepsis-related deaths occurred in the first week while one-quarter occurred in each of the second and third to fourth weeks of life. The distribution of both overall and cause-specific mortality did not differ greatly between Asia and Africa. The first 3 days after birth account for about 30% of under-five child deaths. The first week of life accounts for most of asphyxia-, prematurity- and malformation-related mortality and one-half of sepsis-related deaths.

DOI: 10.1038/jp.2016.27
PMCID: PMC4848744
PMID: 27109087 [PubMed - in process]

102: Sareen N, Gupta A, Kapil R. Effect of Supplementation with Iron Fortified Biscuits on the Hemoglobin Status of Children in Rural Areas of Shimoga, Karnataka: Correspondence. Indian J Pediatr. 2016 Oct;83(10):1214. doi: 10.1007/s12098-016-2122-2. PubMed PMID: 27165473.

103: Saxena R, Sharma M, Singh D, Dhiman R, Sharma P. Medial transposition of split lateral rectus augmented with fixation sutures in cases of complete third nerve palsy. Br J Ophthalmol. 2016 May;100(5):585-7. doi: 10.1136/bjophthalmol-2015-307583. PubMed PMID: 26758537.

Surgical management of complete third nerve paralysis is a challenge. While several techniques have been described over the years, they result in less than satisfactory outcomes with residual deviations in primary gaze or postoperative drifts. One of the described techniques for management of oculomotor palsy has been medial transposition of the lateral rectus muscle which provides a good surgical alternative but often can result in undercorrection. We describe a modification of the existing technique of medial transposition of the split lateral rectus by force augmentation through the use of equatorial fixation sutures resulting in an improved outcome in primary gaze alignment. The modified technique involves splitting of the lateral rectus into two halves followed by transposing the superior half from below the superior oblique and superior rectus and inferior half from below the inferior oblique and inferior rectus to attach them at the superior and inferior edge of the medial rectus insertion, respectively. This is followed by placing non-absorbable sutures to fix each split belly of the transposed muscles to the sclera at the equator adjacent to the medial rectus such that the split muscles lie nearly parallel to the medial rectus till the equator before reflecting away. These sutures augment the force of the transposed muscles by redirecting the force vectors in the direction of action of the medial rectus. Satisfactory postoperative primary gaze alignment was achieved in three cases of complete third nerve paralysis.

DOI: 10.1136/bjophthalmol-2015-307583
PMID: 26758537 [PubMed - indexed for MEDLINE]

104: Senjam SS, Vashist P, Gupta N, Malhotra S, Misra V, Bhardwaj A, Gupta V. Prevalence of visual impairment due to uncorrected refractive error: Results from Delhi-Rapid Assessment of Visual Impairment Study. Indian J Ophthalmol. 2016 May;64(5):387-90. doi: 10.4103/0301-4738.185614. PubMed PMID: 27380979; PubMed Central PMCID: PMC4966377.

AIM: To estimate the prevalence of visual impairment (VI) due to uncorrected refractive error (URE) and to assess the barriers to utilization of services in the adult urban population of Delhi.

MATERIALS AND METHODS: A population-based rapid assessment of VI was conducted among people aged 40 years and above in 24 randomly selected clusters of East Delhi district. Presenting visual acuity (PVA) was assessed in each eye using Snellen's "E" chart. Pinhole examination was done if PVA was <20/60 in either eye and ocular examination to ascertain the cause of VI. Barriers to utilization of services for refractive error were recorded with questionnaires.
RESULTS: Of 2421 individuals enumerated, 2331 (96%) individuals were examined. Females were 50.7% among them. The mean age of all examined subjects was 51.32 ± 10.5 years (standard deviation). VI in either eye due to URE was present in 275 individuals (11.8%, 95% confidence interval [CI]: 10.5-13.1). URE was identified as the most common cause (53.4%) of VI. The overall prevalence of VI due to URE in the study population was 6.1% (95% CI: 5.1-7.0). The elder population as well as females were more likely to have VI due to URE (odds ratio [OR] = 12.3; P < 0.001 and OR = 1.5; P < 0.02). Lack of felt need was the most common reported barrier (31.5%).
CONCLUSIONS: The prevalence of VI due to URE among the urban adult population of Delhi is still high despite the availability of abundant eye care facilities. The majority of reported barriers are related to human behavior and attitude toward the refractive error. Understanding these aspects will help in planning appropriate strategies to eliminate VI due to URE.

DOI: 10.4103/0301-4738.185614
PMCID: PMC4966377
PMID: 27380979 [PubMed - in process]

105: Shabir I, Khurana ML, Marumudi E, Joseph AA, Mehta M, John J, Ammini AC. Homozygous p.R246Q Mutation and Impaired Spermatogenesis: Long Term Follow-up of 4 Children from One Family with 5 Alpha Reductase 2 Deficiency. Indian J Pediatr. 2016 May;83(5):481-2. doi: 10.1007/s12098-015-1915-z. PubMed PMID: 26446026.

106: Sharawat SK, Raina V, Kumar L, Sharma A, Bakhshi R, Vishnubhatla S, Gupta R, Bakhshi S. High fms-like tyrosine kinase-3 (FLT3) receptor surface expression predicts poor outcome in FLT3 internal tandem duplication (ITD) negative patients in adult acute myeloid leukaemia: A prospective pilot study from India. Indian J Med Res. 2016 May;143(Supplement):S11-S16. doi: 10.4103/0971-5916.191740. PubMed PMID: 27748272; PubMed Central PMCID: PMC5080919.

BACKGROUND & OBJECTIVES: Mutations in fms-like tyrosine kinase 3 (FLT3) receptor have significant role in assessing outcome in patients with acute myeloid leukaemia (AML). Data for FLT3 surface expression in relation to FLT3 internal tandem duplication (ITD) status and outcome are not available from India. The objective of the current study was to investigate adult patients with AML for FLT3 expression and FLT3 ITD mutation, and their association with long-term outcome.
METHODS: Total 51 consecutive de novo AML patients aged 18-60 yr were enrolled in the study. FLT3 ITD was detected by polymerase chain reaction (PCR); flowcytometry and qPCR (Taqman probe chemistry) were used for assessment of FLT3 protein and transcript, respectively. Kaplan Meier curves were obtained for survival analysis followed by log rank test.
RESULTS: FLT3 ITD was present in eight (16%) patients. Complete remission was achieved in 33 (64.6%) patients. At 57.3 months, event free survival (EFS) was 26.9±6.3 per cent, disease free survival (DFS) 52.0±9.2 per cent, and overall survival event (OS) 34.5±7.4 per cent. FLT3 surface expression was positive (>20%) by flow-cytometry in 38 (88%) of the 51 patients. FLT3 surface expression and transcripts were not associated with FLT3 ITD status. FLT3 expression was significantly associated with inferior EFS (P=0.026) and OS (P=0.018) in those who were negative for FLT3 ITD.
INTERPRETATION & CONCLUSIONS: This study evaluated FLT3 ITD mutation along with FLT3 expression in AML patients, and associated with survival. Negative impact of FLT3 surface expression on survival was observed in AML patients who were FLT3 ITD negative.

DOI: 10.4103/0971-5916.191740
PMCID: PMC5080919
PMID: 27748272 [PubMed - in process]

107: Sharma G, Singh R, Gn KK, Jain V, Gupta A, Gamanagatti S, Farooque K, Sharma V. Which AO/OTA 31-A2 pertrochanteric fractures can be treated with a dynamic hip screw without developing a lateral wall fracture? A CT-based study. Int Orthop. 2016 May;40(5):1009-17. doi: 10.1007/s00264-015-2835-2. PubMed PMID: 26141048.

PURPOSE: To determine whether radiographic measurements derived from standard computed tomography (CT) evaluation can be used to predict likelihood of a peri-operative lateral femoral wall fracture in AO/OTA 31-A2 pertrochanteric fractures treated with a dynamic hip screw (DHS).
METHODS: Fifty-one patients with AO/OTA 31-A2 classified pertrochanteric fractures were evaluated using a pre-operative CT scan of the pelvis with both hips. Dimensions of the lateral wall were calculated for each patient using four parameters: (1) height of the lateral wall above the vastus ridge; (2) circumference of the lateral wall 2 cm below the vastus ridge at an angle of 135°; this circumference was further divided into an anterior, lateral and posterior component; (3) cortical thickness at the centre of the lateral component of the lateral wall; and (4) cortical index. All patients were treated with a 135° DHS. Postoperative radiographs were assessed for lateral femoral wall fracture.
RESULTS: Patients with a lateral wall fracture (17/51) had a smaller circumference (4.47 cm vs 5.44 cm p value<0.001) as well as a lower height of the lateral femoral wall (1.37 cm vs 2.21 p value< 0.001). Analysis of the three components of the circumference revealed a significant difference for the anterior component only and not for the lateral and posterior components. There was no statistical difference in the cortical thickness or cortical index in the two groups. The cutoff values for height of the lateral wall and anterior component were calculated using ROC curves and found to be 1.68 cm (AUC 0.918) and 2.10 cm (AUC 0.851) respectively.
CONCLUSION: AO/OTA 31-A2 pertrochanteric fractures with a lateral wall height of > 1.68 cm and an anterior component of > 2.10 cm in circumference are not likely to sustain a lateral wall fracture when treated with a DHS.

DOI: 10.1007/s00264-015-2835-2
PMID: 26141048 [PubMed - in process]

108: Sharma JB, Kalra B. Female sexual dysfunction: Assessment. J Pak Med Assoc. 2016 May;66(5):623-6. PubMed PMID: 27183952.

Female sexual dysfunction (FSD) is a common complex clinical condition, with multiple etiologies, association and pathophysiologic correlations. This review includes the definition, etiology, and diagnosis of FSD. It calls for a bio psychosocial approach to FSD management, which incorporates, but is not limited to, only the psychological aspects of FSD.

PMID: 27183952 [PubMed - in process]

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

OBJECTIVE: To test the correlation of the serum erythropoietin levels, serum transferrrin receptor levels and serum ferritin levels along with other hematological parameters in normal pregnant and anemic pregnant patients.
STUDY DESIGN: In a prospective study, 120 pregnant women were recruited between 18 and 36 weeks of gestation; 53 normal pregnant patients, 67 anemic pregnant patients, in which, 17 had mild, 30 had moderate anemia, 20 had severe anemia. A blood sample was taken. The various hematological parameters, hemoglobin (Hb),

mean corpuscular volume (MCV), mean corpuscular hemoglobin concentration (MCHC), total iron binding capacity (TIBC), serum ferritin, percentage saturation of iron, serum erythropoietin (SEPO) levels, serum transferrin receptors (STfRS) were performed. For statistics, Student's 't' test, Pearson's Chi test, Mann Whitney test and Bartlett test were used as per data.
RESULTS AND CONCLUSION: MCV was significantly reduced in anemic pregnancies as compared to non-anemic pregnancies (80.2±9.6 vs 94.12±9.8fl, p=0.001), MCHC was also reduced in them (30.2±3.38% vs 34.2±2.33%, p=0.176), TIBC was significantly increased in anemic pregnancies (343.31±28.54% vs 322.88±23.84%, p=0.001), serum ferritin was significantly reduced (24.9±10.48µg/L vs 31.03±9.98µg/L, p=0.001), percentage saturation of iron was also reduced (53.85±13.21% vs 62.04±15.79%, p=0.0024), serum erythropoietin levels were significantly higher in anemic women (26.24±26.61mU/ml vs 18.12±19.08mU/ml, p=0.064). The levels were significantly higher in severe anemia (46.5±46.8mU/ml than in moderate anemia 27.4±28.1mU/ml and mild anemia 22.8±22.8mU/ml. Serum transferrin receptors were significantly higher in anemic pregnancies than in non-anemic pregnancies (1.40±0.0802µg/ml vs 1.08±0.641µg/ml, p=0.019) with rise being higher in severe anemia (2.28±0.986µg/ml) than in moderate (1.4±0.816µg/ml) and mild anemia (1.16±0.702µg/ml).
CONCLUSION: Various hematological parameters especially sTfR, serum erythropoietin, serum ferritin and sTfR/log ferritin levels correlate with the severity of anemia.

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PMID: 27267870 [PubMed - in process]

110: Sharma MC, Gupta RK, Kaushal S, Suri V, Sarkar C, Singh M, Kale SS, Sahoo RK, Kumar L, Raina V. A clinicopathological study of primary central nervous system lymphomas & their association with Epstein-Barr virus. Indian J Med Res. 2016 May;143(5):605-15. doi: 10.4103/0971-5916.187109. PubMed PMID: 27488004; PubMed Central PMCID: PMC4989834.

BACKGROUND & OBJECTIVES: Primary central nervous system lymphomas (PCNSLs) are relatively uncommon, accounting for 2-3 per cent of primary brain tumours. Majority of these are diffuse large B cell lymphomas (DLBCL) occurring both in immunocompromised and immunocompetent patients. We undertook this study to classify PCNSL into germinal centre (GC) and non-germinal centre (NGC) type based on Hans classification and to find the role of Epstein-Barr virus (EBV) in pathogenesis both by conventional immunohistochemistry (IHC) and chromogenic in situ hybridization (CISH).
METHODS: The consecutive cases of PCNSL during a 10 years period were analysed by IHC for CD45, CD20, CD3, B-cell lymphoma 2 and 6 (Bcl-2 and Bcl-6), B-cell specific octamer binding protein-1 (BOB-1), multiple myeloma oncogene-1 (MUM-1), EBV latent-membrane protein 1 (LMP-1), cyclin-D1, CD10, CD5 and CD23, as well as by CISH for EBV.
RESULTS: During a period of 10 years, 65 PCNSL were diagnosed which comprised 0.69 per cent (65/9476) of all intracranial tumours. The mean age of presentation was 49 yr with sex ratio (M:F) of 1.4:1. Most common location was supratentorial region with predominant involvement of frontal lobe. Single lesions were seen in 38 (58.4%) and multifocal lesions in 27 (41.5%) patients. None of the patients were immunocompromised. All cases were B cell immunophenotype and were DLBCL except one case of follicular lymphoma. According to Hans classification, majority of them were NGC (n=51, 79.6%) and 13 (20.3%) were GC type. Bcl-2 expression was noted in 34 (52.3%) tumours. EBV was positive in three (4.6%) cases; two were detected both by IHC and CISH and one case by CISH only.
INTERPRETATION & CONCLUSIONS: In Indian population, PCNSL occurs mainly in immunocompetent patients, and a decade earlier than in western population. Immunophenotyping revealed that all cases were DLBCL with predominance of NGC type. No prognostic difference was seen between GC and NGC DLBCL. Association of EBV was rare and this virus was possibly not involved in the pathogenesis of PCNSL in immunocompetent individuals. CISH was an easy, economical and less

cumbersome method for detection of EBV in PCNSL.

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PMCID: PMC4989834
PMID: 27488004 [PubMed - in process]

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

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

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

112: Sharma P, Saraya A, Sharma R. Potential diagnostic implications of miR-144 overexpression in human oesophageal cancer. Indian J Med Res. 2016 May;143(Supplement):S91-S103. doi: 10.4103/0971-5916.191796. PubMed PMID: 27748283; PubMed Central PMCID: PMC5080934.

BACKGROUND & OBJECTIVES: Insidious symptomatology, late clinical presentation and poor prognosis of oesophageal cancer (EC) highlight the pressing need for novel non-invasive biomarkers for early tumour diagnosis and better prognosis. The present study was carried out to evaluate the clinical significance of circulating and tissue miR-144 expression in oesophageal cancer.
METHODS: Clinical significance of miR-144 expression was evaluated in preneoplastic (12) and neoplastic (35) oesophageal cancer tissues as well as matched distant non-malignant tissues using real-time PCR (qPCR). Circulating levels of miR-144 were also analyzed in serum samples of EC patients as well as normal individuals to determine the diagnostic potential of miR-144. Further, targets of miR-144 were predicted using bioinformatic tools and their gene ontology (GO) terms were assigned.
RESULTS: Real-time PCR analysis revealed significant upregulation of miR-144 in 29 of 35 (83%) EC tissues as compared to matched distant non-malignant tissues (P=0.010). a0 ll the dysplastic tissues showed upregulation of miR-144 as compared to their matched distant non-malignant tissues. Relative levels of

circulating miR-144 in serum significantly distinguished EC patients from normal controls (P=0.015; AUC = 0.731) with high sensitivity of 94.7 per cent. Bioinformatically predicted target, PUR-aplha (PURA) was found to be significantly (P=0.018) downregulated in 81 per cent (26/32) EC patients and its expression was found to be significantly and negatively correlated with miR-144 expression at mRNA level.
INTERPRETATION & CONCLUSIONS: Our findings showed significant upregulation of miR-144 in serum samples of EC patients indicating its potential as minimally invasive marker. Further studies need to be done to understand the role of miR-144 in the pathogenesis of EC.

DOI: 10.4103/0971-5916.191796
PMCID: PMC5080934
PMID: 27748283 [PubMed - in process]

113: Sharma S, Das P, Dinda AK, Gupta DK. Disseminated histiocytic sarcoma in a child: a clinicopathological dichotomy with 8 years survival. BMJ Case Rep. 2016 May 17;2016. pii: bcr2015213871. doi: 10.1136/bcr-2015-213871. PubMed PMID: 27190112.

A 3-year-old girl presented with a non-healing ulcer, originating as a pustule over the right anterior chest wall of 1½ month duration associated with high fever. A subcutaneous nodule along with right apical and anterior axillary lymph nodes was palpable. Abdominal ultrasound and chest skiagram were normal. Fine needle aspiration cytology (FNAC) from the axillary lymph node was suggestive of embryonal rhabdomyosarcoma. Bone marrow aspirate was normal. The ulcer and subcutaneous nodule were excised completely with adequate margins. Histopathological examinations were compatible with malignancy of histiocytic origin with clear resected margins. The axillary nodes were free of tumour. Adjuvant chemotherapy was given for 13 months. The patient is doing well at 8 years follow-up.

DOI: 10.1136/bcr-2015-213871
PMID: 27190112 [PubMed - in process]

114: Sharma U, Sah RG, Agarwal K, Parshad R, Seenu V, Mathur SR, Hari S, Jagannathan NR. Potential of Diffusion-Weighted Imaging in the Characterization of Malignant, Benign, and Healthy Breast Tissues and Molecular Subtypes of Breast Cancer. Front Oncol. 2016 May 23;6:126. doi: 10.3389/fonc.2016.00126. PubMed PMID: 27242965; PubMed Central PMCID: PMC4876309.

The role of apparent diffusion coefficient (ADC) in the diagnosis of breast cancer and its association with molecular biomarkers was investigated in 259 patients with breast cancer, 67 with benign pathology, and 54 healthy volunteers using diffusion-weighted imaging (DWI) at 1.5 T. In 59 breast cancer patients, dynamic contrast-enhanced MRI (DCEMRI) was also acquired. Mean ADC of malignant lesions was significantly lower ($1.02 \pm 0.17 \times 10(-3)$ mm(2)/s) compared to benign ($1.57 \pm 0.26 \times 10(-3)$ mm(2)/s) and healthy ($1.78 \pm 0.13 \times 10(-3)$ mm(2)/s) breast tissues. A cutoff ADC value of $1.23 \times 10(-3)$ mm(2)/s (sensitivity 92.5%; specificity 91.1%; area under the curve 0.96) to differentiate malignant from benign diseases was arrived by receiver operating curve analysis. In 10/59 breast cancer patients, indeterminate DCE curve was seen, while their ADC value was indicative of malignancy, implying the potential of the addition of DWI in increasing the specificity of DCEMRI data. Further, the association of ADC with tumor volume, stage, hormonal receptors [estrogen receptor (ER), progesterone receptor (PR), and human epidermal growth factor (HER2)], and menopausal status was investigated. A significant difference was seen in tumor volume between breast cancer patients of stages IIA and IIIA, IIB and IIIA, and IIB and III (B+C), respectively ($P < 0.05$). Patients with early breast cancer ($n = 52$) had significantly lower ADC and tumor volume than those with locally advanced breast

cancer (n=207). No association was found in ADC and tumor volume with the menopausal status. Breast cancers with ER-, PR-, and triple-negative (TN) status showed a significantly larger tumor volume compared to ER+, PR+, and non-triple-negative (nTN) cancers, respectively. Also, TN tumors showed a significantly higher ADC compared to ER+, PR+, and nTN cancers. Patients with ER- and TN cancers were younger than those with ER+ and nTN cancers. The present study demonstrated that ADC may increase the diagnostic specificity of DCEMRI and be useful for treatment management in clinical setting. Additionally, it provides an insight into characterization of molecular types of breast cancer and may serve as an indicator of metabolic reprograming underlying tumor proliferation.

DOI: 10.3389/fonc.2016.00126
PMCID: PMC4876309
PMID: 27242965 [PubMed]

115: Shende T, Sood S, Singh R, Kapil A, Kar HK, Sharma VK. Comparison of E test and agar dilution for testing activity of ceftriaxone against Neisseria gonorrhoeae. J Med Microbiol. 2016 Jul;65(7):701-2. doi: 10.1099/jmm.0.000283. PubMed PMID: 27221395.

116: Singh L, Nag TC, Kashyap S. Ultrastructural changes of mitochondria in human retinoblastoma: correlation with tumor differentiation and invasiveness. Tumour Biol. 2016 May;37(5):5797-803. doi: 10.1007/s13277-015-4120-9. PubMed PMID: 26434937.

Retinoblastoma still represents a challenge for pediatric tumors. Mitochondria have been implicated in tumor progression, cell differentiation, and apoptotic pathways. Electron microscopy allows the study of mitochondrial morphology and it is still debated in human retinoblastoma. Demographic, clinical, and histopathological parameters were recorded in 17 enucleated retinoblastoma specimens. Hematoxylin and eosin staining was performed to study tumor characteristics and the extent of invasion in ocular structures. The aim of this study was to describe and analyze the mitochondrial morphology in human retinoblastoma by transmission electron microscopy (TEM). There was a male preponderance in our study. Ages ranged from 2 to 78 months. Histopathological analysis revealed that 15 (88.2 %) tumors were poorly differentiated retinoblastomas. Massive choroidal invasion was the most frequent histopathological high-risk factor among the others. Histopathological high-risk factors were found in 7/17 (41.1 %) cases. Tumor samples of all patients were examined by means of TEM. All cases showed tumor cells with high nucleocytoplasmic ratio. Poorly differentiated retinoblastoma cases showed fewer mitochondria, scant cytoplasm, disorganized organelles (mitochondria), and necrosis, whereas well-differentiated retinoblastomas had larger number of mitochondria and more organized organelles. However, there was no significant difference in mitochondrial changes between invasive and noninvasive tumors. Our study observed that cristolysis and swollen mitochondria were more frequent in retinoblastoma tumors. Understanding the structural and functional characteristics of mitochondria in retinoblastoma might be essential for the design of future therapeutic strategies. The authors have no proprietary or commercial interest in any materials discussed in this article.

DOI: 10.1007/s13277-015-4120-9
PMID: 26434937 [PubMed - in process]

117: Singh MB. 'Untreated epilepsy' - A conspiracy of silence? Epilepsy Behav. 2016 Jul;60:202-3. doi: 10.1016/j.yebeh.2016.04.032. PubMed PMID: 27232629.

118: Singh P, Garg PK. Pathophysiological mechanisms in acute pancreatitis: Current understanding. Indian J Gastroenterol. 2016 May;35(3):153-66. doi: 10.1007/s12664-016-0647-y. Review. PubMed PMID: 27206712.

The precise mechanisms involved in the pathophysiology of acute pancreatitis (AP) are still far from clear. Several earlier studies have focused mainly on pancreatic enzyme activation as the key intracellular perturbation in the pancreatic acinar cells. For decades, the trypsin-centered hypothesis has remained the focus of the intra-acinar events in acute pancreatitis. Recent advances in basic science research have lead to the better understanding of various other mechanisms such as oxidative and endoplasmic stress, impaired autophagy, mitochondrial dysfunction, etc. in causing acinar cell injury. Despite all efforts, the clinical outcome of patients with AP has not changed significantly over the years. This suggests that the knowledge of the critical molecular pathways in the pathophysiology of AP is still limited. The mechanisms through which the acinar cell injury leads to local and systemic inflammation are not well understood. The role of inflammatory markers and immune system activation is an area of much relevance from the point of view of finding a target for therapeutic intervention. Some data are available from experimental animal models but not much is known in human pancreatitis. This review intends to highlight the current understanding in this area.

DOI: 10.1007/s12664-016-0647-y
PMID: 27206712 [PubMed - in process]

119: Singh R, Shriyan R, Sharma R, Das S. Pilot Study to Assess the Quality of Life, Sleepiness and Mood Disorders among First Year Undergraduate Students of Medical, Engineering and Arts. J Clin Diagn Res. 2016 May;10(5):JC01-5. doi: 10.7860/JCDR/2016/19140.7878. PubMed PMID: 27437246; PubMed Central PMCID: PMC4948422.

INTRODUCTION: College students, who are in a phase of transition from adolescence to adulthood, face numerous challenges. Due to stress overload, students easily fall prey to mood disturbances like stress, anxiety and depression compromising their quality of life.
AIM: Present study was undertaken to see the effect of choice of professional course on quality of life and mood of the first year students of medical, engineering and arts students.
MATERIALS AND METHODS: A cross-sectional study was conducted amongst 150 students, 50 participants from each stream. Enrolled subjects were administered questionnaires pertaining to their quality of life (WHOQOL-BREF), mood disorders (DASS-42) and sleepiness (ESS).
RESULTS: Medical students showed significantly higher levels of stress (p-value=0.0001), depression (p-value=0.002) and anxiety (p-value=0.002), 30% of medicos labelled their quality of life as very good compared to 48% and 50% of engineering and arts students. A 38% of medical student's reported daytime sleepiness compared to 12% engineering and 6% arts students.
CONCLUSION: Present study shows that medical students are maximally vulnerable to mood disorders and have a poor quality life. As the student community forms the backbone of any nation, we as, educators should try to strengthen each individual by promoting not only physical and mental development but also aiming for overall holistic development.

DOI: 10.7860/JCDR/2016/19140.7878
PMCID: PMC4948422
PMID: 27437246 [PubMed]

120: Sinha DN, Suliankatchi RA, Amarchand R, Krishnan A. Prevalence and Sociodemographic Determinants of Any Tobacco Use and Dual Use in Six Countries of the WHO South-East Asia Region: Findings From the Demographic and Health Surveys. Nicotine Tob Res. 2016 May;18(5):750-6. doi: 10.1093/ntr/ntv286. PubMed PMID: 26729735.

BACKGROUND: Tobacco control is an important strategy to reduce the disease burden caused by several noncommunicable diseases. An in-depth understanding of the sociodemographic variations in tobacco use is an important step in achieving

effective tobacco control.
AIMS: We aimed to estimate the age-standardized prevalence of any tobacco use and dual tobacco use and determine their association with sociodemographic variables in six countries (Bangladesh, Indonesia, India, Maldives, Nepal, and Timor Leste) of the WHO South-East Asia Region.
METHODS: The main outcome variables "any tobacco use" and "current dual use" were created from the latest available Demographic and Health Surveys data for each country. The prevalence estimates were weighted using sample weights and age standardized using the WHO standard population. Associations between the sociodemographic variables and tobacco use were calculated by performing multivariable logistic regression analysis. Analyses were performed in Stata 12 using "svyset" and "svy" commands.
RESULTS: The highest prevalence of any tobacco use among men was in Indonesia (76.4%) and among women in Nepal (15.7%). Also, Nepal had the highest prevalence of dual tobacco use in both men (17.9%) and women (1.5%). With regard to sociodemographic determinants, despite the inter-country variations, any and dual tobacco use were significantly associated with age, higher education, greater wealth, rural residence, and ever-married marital status. The poor and uneducated had a higher odds ratio for these practices.
CONCLUSION: Prevalence of dual tobacco use and its underlying socioeconomic disparities should be taken into account for the planning of tobacco control activities in the region.
IMPLICATIONS: The dual tobacco use phenomenon is being increasingly recognized as a distinct entity in the fight against tobacco addiction. When compared with single product users, dual users have a greater risk of developing tobacco related diseases and are less likely to quit their habits. However, this phenomenon has not been studied adequately in the South-East Asia region. In this context, this study has provided a detailed and comprehensive view of dual tobacco use and its sociodemographic determinants in six countries of the region. This study recommends that tobacco control interventions should be targeted specifically at the disadvantaged sections of the society, such as the poor and the uneducated, who are more likely to engage in "dual" as well as "any" tobacco use. This study could prove as an important reference and tool for policy making in the South-East Asia region.

DOI: 10.1093/ntr/ntv286
PMID: 26729735 [PubMed - indexed for MEDLINE]

121: Sinha R, Bansal M, Sharma N, Dada T, Tandon R, Titiyal JS. Transscleral Suture-Fixated Versus Intrascleral Haptic-Fixated Intraocular Lens: A Comparative Study. Eye Contact Lens. 2016 May 26. [Epub ahead of print] PubMed PMID: 27243351.

PURPOSE: To compare the clinical outcomes between sutured transscleral-fixated and intrascleral haptic-fixated posterior chamber intraocular lens (IOL).
SETTING: Dr Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi.
DESIGN: A comparative case series.
METHODS: Forty eyes of 40 patients were included; 20 in each group. Patients in group 1 underwent sutured transscleral-fixated IOL and those in group 2 underwent intrascleral haptic-fixated IOL augmented by fibrin glue. Parameters evaluated were uncorrected visual acuity (UCVA), best corrected visual acuity (BCVA), intraocular pressure (IOP), central macular thickness (CMT), IOL tilt on ultrasound biomicroscopy (UBM), and pseudophakodonesis on slitlamp and UBM.
RESULTS: The most common cause of aphakia was complicated cataract surgery (50%). The mean preoperative UCVA in logarithm of minimum angle of resolution (logMAR) was 1.59±0.24 and 1.63±0.26 in group 1 and 2, respectively (P=0.45). There was significant improvement in UCVA in both groups (P=0.001) at 6 months (group 1:

0.33±0.17; group 2: 0.22±0.10); the improvement being greater in group 2 (P<0.05). Mean percentage endothelial cell loss and IOP change were comparable. Mean CMT (μm) was 250.95±23.98 and 225.85±21.13 in group 1 and 2, respectively (P=0.009). Pseudophakodonesis was more in group 1 as assessed on slitlamp (P=0.037) and as assessed on UBM (P=0.046). Macular edema was the most common complication seen more in group 1.
CONCLUSIONS: Intrascleral haptic-fixated IOL provides more stable fixation, better visual outcome, and lesser complication in comparison with sutured transscleral-fixated IOL.

DOI: 10.1097/ICL.0000000000000287
PMID: 27243351 [PubMed - as supplied by publisher]

122: Sinha R, Sharma A, Ray BR, Kumar Pandey R, Darlong V, Punj J, Chandralekha C, Upadhyay AD. Comparison of the Success of Two Techniques for the Endotracheal Intubation with C-MAC Video Laryngoscope Miller Blade in Children: A Prospective Randomized Study. Anesthesiol Res Pract. 2016;2016:4196813. doi: 10.1155/2016/4196813. PubMed PMID: 27293429; PubMed Central PMCID: PMC4884595.

Background. Ease of endotracheal intubation with C-MAC video laryngoscope (VLS) with Miller blades 0 and 1 has not been evaluated in children. Methods. Sixty children weighing 3–15 kg with normal airway were randomly divided into two groups. Intubation was done with C-MAC VLS Miller blade using either nonstyletted endotracheal tube (ETT) (group WS) or styletted ETT (group S). The time for intubation and total procedure, intubation attempts, failed intubation, blade repositioning or external laryngeal maneuver, and complications were recorded. Results. The median (minimum/maximum) time for intubation in group WS and group S was 19.5 (9/48) seconds and 13.0 (18/55) seconds, respectively ($p = 0.03$). The median (minimum/maximum) time for procedure in group WS was 30.5 (18/72) seconds and in group S was 24.5 (14/67) seconds, respectively ($p = 0.02$). Intubation in first attempt was done in 28 children in group WS and in 30 children in group S. Repositioning was required in 14 children in group WS and in 7 children in group S ($p = 0.06$). There were no failure to intubate, desaturation, and bradycardia in both groups. Conclusion. Styletted ETT significantly reduces time for intubation and time for procedure in comparison to nonstyletted ETT.

DOI: 10.1155/2016/4196813
PMCID: PMC4884595
PMID: 27293429 [PubMed]

123: Srivastava S, Shankar P, Mishra J, Singh S. Possibilities and challenges for developing a successful vaccine for leishmaniasis. Parasit Vectors. 2016 May 12;9(1):277. doi: 10.1186/s13071-016-1553-y. Review. PubMed PMID: 27175732; PubMed Central PMCID: PMC4866332.

Leishmaniasis is a vector-borne disease caused by different species of protozoan parasites of the genus Leishmania. It is a major health problem yet neglected tropical diseases, with approximately 350 million people worldwide at risk and more than 1.5 million infections occurring each year. Leishmaniasis has different clinical manifestations, including visceral (VL or kala-azar), cutaneous (CL), mucocutaneous (MCL), diffuse cutaneous (DCL) and post kala-azar dermal leishmaniasis (PKDL). Currently, the only mean to treat and control leishmaniasis is by rational medications and vector control. However, the number of available drugs is limited and even these are either exorbitantly priced, have toxic side effects or prove ineffective due to the emergence of resistant strains. On the other hand, the vector control methods are not so efficient. Therefore, there is an urgent need for developing a safe, effective, and affordable vaccine for the prevention of leishmaniasis. Although in recent years a large body of researchers has concentrated their efforts on this issue, yet only three vaccine candidates have gone for clinical trial, until date. These are: (i) killed vaccine in Brazil for human immunotherapy; (ii) live attenuated vaccine for humans in Uzbekistan; and (iii) second-generation vaccine for dog prophylaxis in Brazil. Nevertheless, there are at least half a dozen vaccine candidates in the pipeline. One can

expect that, in the near future, the understanding of the whole genome of Leishmania spp. will expand the vaccine discovery and strategies that may provide novel vaccines. The present review focuses on the development and the status of various vaccines and potential vaccine candidates against leishmaniasis.

DOI: 10.1186/s13071-016-1553-y
PMCID: PMC4866332
PMID: 27175732 [PubMed - in process]

124: Subramanian A, Albert V, Mishra B, Sanoria S, Pandey RM. Association Between the Pancreatic Enzyme Level and Organ Failure in Trauma Patients. Trauma Mon. 2016 May 12;21(2):e20773. doi: 10.5812/traumamon.20773. PubMed PMID: 27625999; PubMed Central PMCID: PMC5003472.

BACKGROUND: The literature suggests an association of pancreatic enzymes with systemic inflammation resulting in secondary organ injury and dysfunction following trauma. Elevation in serum enzymes may not always be predictive of pancreatic disease, and can reflect extra pancreatic production.
OBJECTIVES: This study was conducted to evaluate the rise in serum pancreatic enzyme levels with the incidence of organ failure following trauma.
PATIENTS AND METHODS: A retrospective review was performed on critically injured patients from December 2009 to March 2010. Patient's clinical demographics, routine laboratory investigations along with amylase and lipase levels were also extracted from the patients' records. Patients with pancreatic or duodenal injuries were excluded from the study.
RESULTS: From a total of 296 patients (mean age, 31 years), 85% were males. Blunt injury was seen in 91.6% of the cases and 8.4% had penetrating injury. One hundred and fifty-three patients had single organ failure, 96 had multiple organ failure and 47 had no organ failure. There was a significant difference in lipase levels (P = 0.04), potassium levels (P = 0.05) and hemoglobin levels (P = -0.004), among the three patient groups. There was no significant difference in amylase levels among the three patient groups. The observed independent predictors of mortality included coagulopathy (OR = 1.7), Glasgow coma scale (OR = 1.1, 4.7), pulmonary failure (OR = 0.0004), hepatic failure (OR = 0.048), renal failure (OR = 5.5), organ failure (OR =149.8), lipase levels (OR = 1.3), and infection (OR = 3.0).
CONCLUSIONS: There was a significant correlation between elevated lipase levels and the incidence of multiple organ failure. Moreover, No significant association was found between the elevated amylase levels and organ failure. However, on admission, measurement of these enzymes coupled with routine laboratory investigations can be a powerful tool in the early detection of patients progressing towards organ failure.

DOI: 10.5812/traumamon.20773
PMCID: PMC5003472
PMID: 27625999 [PubMed]

125: Takkar B, Azad S. RE: Campochiaro et al.: Scatter photocoagulation does not reduce macular edema or treatment burden in patients with retinal vein occlusion (Ophthalmology 2014;121:209-19). Ophthalmology. 2016 May;123(5):e33. doi: 10.1016/j.ophtha.2015.10.066. PubMed PMID: 27107361.

126: Talwar S, Agarwal P, Choudhary SK, Airan B. Functionally Univentricular Heart With Right Atrial Isomerism and Mixed Total Anomalous Pulmonary Venous Drainage. World J Pediatr Congenit Heart Surg. 2016 May;7(3):377-80. doi: 10.1177/2150135115590457. PubMed PMID: 26701620.

Patients with right atrial isomerism and total anomalous pulmonary venous connection (TAPVC) in a functionally univentricular heart are a challenging subset with a high mortality rate. We present the case of a patient with univentricular heart who had right atrial isomerism and associated mixed TAPVC (supracardiac, cardiac, and infracardiac). The anatomy was delineated precisely,

and the patient underwent first-stage univentricular palliation consisting of TAPVC repair and bilateral bidirectional superior cavopulmonary anastomosis.

DOI: 10.1177/2150135115590457
PMID: 26701620 [PubMed - in process]

127: Taywade SK, Damle NA, Bal C. PSMA Expression in Papillary Thyroid Carcinoma: Opening a New Horizon in Management of Thyroid Cancer? Clin Nucl Med. 2016 May;41(5):e263-5. doi: 10.1097/RLU.0000000000001148. PubMed PMID: 26914556.

Prostate-specific membrane antigen (PSMA) is a type 2 transmembrane protein highly expressed in prostate cancer cells. We present the case of a 50-year-old man with metastatic papillary carcinoma of the thyroid, with rising thyroglobulin level and negative whole-body radioiodine scan after total thyroidectomy. Considering the limited treatment options available, it was decided to perform Ga-PSMA-HBED-CC PET/CT scan. It revealed intense radiotracer uptake in mediastinal and left supraclavicular lymph nodes, brain metastases, bilateral lung nodules, and skeletal sites. Patient also underwent F-FDG PET/CT. It demonstrated similar findings; however, the number of lesions detected in brain was less compared with Ga-PSMA PET/CT.

DOI: 10.1097/RLU.0000000000001148
PMID: 26914556 [PubMed - indexed for MEDLINE]

128: Thukral A, Sankar MJ, Chandrasekaran A, Agarwal R, Paul VK. Efficacy and safety of CPAP in low- and middle-income countries. J Perinatol. 2016 May;36 Suppl 1:S21-8. doi: 10.1038/jp.2016.29. PubMed PMID: 27109089; PubMed Central PMCID: PMC4848740.

We conducted a systematic review to evaluate the (1) feasibility and efficacy and (2) safety and cost effectiveness of continuous positive airway pressure (CPAP) therapy in low- and middle-income countries (LMIC). We searched the following electronic bibliographic databases-MEDLINE, Cochrane CENTRAL, CINAHL, EMBASE and WHOLIS-up to December 2014 and included all studies that enrolled neonates requiring CPAP therapy for any indication. We did not find any randomized trials from LMICs that have evaluated the efficacy of CPAP therapy. Pooled analysis of four observational studies showed 66% reduction in in-hospital mortality following CPAP in preterm neonates (odds ratio 0.34, 95% confidence interval (CI) 0.14 to 0.82). One study reported 50% reduction in the need for mechanical ventilation following the introduction of bubble CPAP (relative risk 0.5, 95% CI 0.37 to 0.66). The proportion of neonates who failed CPAP and required mechanical ventilation varied from 20 to 40% (eight studies). The incidence of air leaks varied from 0 to 7.2% (nine studies). One study reported a significant reduction in the cost of surfactant usage with the introduction of CPAP. Available evidence suggests that CPAP is a safe and effective mode of therapy in preterm neonates with respiratory distress in LMICs. It reduces the in-hospital mortality and the need for ventilation thereby minimizing the need for up-transfer to a referral hospital. But given the overall paucity of studies and the low quality evidence underscores the need for large high-quality studies on the safety, efficacy and cost effectiveness of CPAP therapy in these settings.

DOI: 10.1038/jp.2016.29
PMCID: PMC4848740
PMID: 27109089 [PubMed - in process]

129: Tiwary M, Agarwal N, Dinda A, Yadav SC. Overexpression and purification of folded domain of prostate cancer related proteins MSMB and PSA. Mol Biol Rep. 2016 May;43(5):349-58. doi: 10.1007/s11033-016-3956-4. PubMed PMID: 27038170.

Overexpression of domains of a human protein using recombinant DNA technology has been challenging because individual domains intend to accumulate as non-soluble aggregate when expressed separately. Studies on identifying right sequences for a domain to be able to fold independently may help understand the folding pattern and underlying protein-engineering events to isolate the functional domains of a protein. In this report, individual domains of prostate cancer related biomarkers; MSMB and PSA were overexpressed in bacterial system and purified in their folded forms using affinity chromatography. The western blotting experiment using domain specific antibodies further confirmed these proteins. The designed nucleotide sequences domains were truncated using fold index software and folding were predicted by phyre2 and I-TASSER software. Other parameters were optimized for their overexpression and purification using Co-NTA affinity chromatography. Purified domains of each protein showed secondary structures such as α + β type for PSA, α/β and β type for the each domains of PSA and MSMB respectively. This is the first report on producing PSA and MSMB individual domains in functional folded forms. This study may help produce the folded domain of many such proteins to be used for better diagnostic purpose.

DOI: 10.1007/s11033-016-3956-4
PMID: 27038170 [PubMed - in process]

130: Tripathi A, Kabra SK, Sachdev HP, Lodha R. Home visits by community health workers to improve identification of serious illness and care seeking in newborns and young infants from low- and middle-income countries. J Perinatol. 2016 May;36 Suppl 1:S74-82. doi: 10.1038/jp.2016.34. PubMed PMID: 27109094; PubMed Central PMCID: PMC4848742.

The objectives of this review were to evaluate the effect of home visits by trained community health workers (CHWs) to successfully identify newborns and young infants (up to 59 days of age) with serious illness and improve care seeking from a health facility. The authors searched the Cochrane Central Register of Controlled Trials, MEDLINE and EMBASE. Abstracts of all articles were read by two authors independently and relevant articles selected. Data were extracted in a pretested questionnaire by two authors independently. Statistical analysis was performed using Review Manager software. A meta-analysis of included randomized controlled trials (RCTs) was carried out. Pooled estimates (risk ratios (RRs) with 95% confidence intervals (CIs)) of the evaluated outcome measures were calculated by the generic inverse variance method. Seven articles were identified for inclusion in the review. None of them compared the diagnosis of serious illness in young infants by health workers to a 'gold standard' diagnosis. Three studies were available for evaluating the ability of CHWs to identify seriously ill young infants/signs of serious illness. These studies suggest that sensitivity to identify serious illness ranged from 33.3 to 90.5% and specificity from 75.61 to 98.4%. For the outcome of improved care seeking from a health facility, after pooling the data from six RCTs with 4760 subjects in the intervention and 4398 subjects in the control arm, there was a significant improvement in care seeking in the home visit arm (RR=1.35; 95% CI=1.15 to 1.58). Moderate quality evidence indicated that home visits by trained CHWs were associated with improved care-seeking for sick young infants from health facilities by appropriate health care providers in resource-limited settings. However, there is a lack of data regarding successful identification of serious illness. Evidence from validation studies supports the implementation of home visits by trained CHWs for improving outcomes in sick newborns and young infants in resource-limited areas. Further well-designed studies evaluating the effect of home visits by CHWs on successful identification of seriously ill newborns and young infants should include verification by a 'gold standard'.

DOI: 10.1038/jp.2016.34
PMCID: PMC4848742
PMID: 27109094 [PubMed - in process]

131: Vashist P, Gupta N, Tandon R, Gupta SK, Dwivedi S, Mani K. Population-based assessment of vision-related quality of life in corneal disease: results from the CORE study. Br J Ophthalmol. 2016 May;100(5):588-93. doi: 10.1136/bjophthalmol-2015-307619. PubMed PMID: 26917676.

OBJECTIVE: To assess the impact of corneal disease on vision-related quality of life (VR-QoL) in a rural North Indian population.
DESIGN: Cross-sectional, population-based study.
METHODS: The Corneal Opacity Rural Epidemiological (CORE) study included 12 899 participants from 25 randomly selected clusters of rural Gurgaon, Haryana, India, with the primary objective of determining the prevalence of corneal disease in the general population during July 2011 to January 2013. VR-QoL was assessed through Indian Vision Function questionnaire (IND-VFQ-33) in adult participants (aged ≥18 years) detected with corneal opacity and equal number of healthy controls (no ocular pathology with visual acuity of 6/6 binocularly) selected from the same clusters. Scores of the three subscales of IND-VFQ-33 (vision-specific mobility, psychosocial impact and visual symptoms) were computed, analysed and compared separately across various groups.
RESULTS: Overall, 12 113 participants of all ages underwent detailed ophthalmic examination and VR-QoL was assessed in 435 cases with corneal disease and 435 controls without any ophthalmic disease. The diseased population had significantly higher scores and hence poorer VR-QoL across all three domains of vision function (scores of 28 vs 22; 6 vs 5 and 14 vs 9, respectively; $p<0.0001$) and the scores were inversely related with the level of visual impairment in patients with corneal disease. Patients with unilateral corneal disease also had poorer VR-QoL scores as compared with healthy controls ($p<0.0001$).
CONCLUSIONS: VR-QoL is impaired in patients with corneal disease, more so in patients with corneal blindness. This is the first population-based study to document VR-QoL through IND-VFQ-33 in the Indian population with corneal disease.

DOI: 10.1136/bjophthalmol-2015-307619
PMID: 26917676 [PubMed - indexed for MEDLINE]

132: Verma A, Chandele A, Nayak K, Kaja MK, Arulandu A, Lodha R, Ray P. High yield expression and purification of Chikungunya virus E2 recombinant protein and its evaluation for serodiagnosis. J Virol Methods. 2016 Sep;235:73-9. doi: 10.1016/j.jviromet.2016.05.003. PubMed PMID: 27180040.

Disease caused by Chikungunya virus (CHIKV) is clinically characterized by sudden-onset of fever and severe arthralgia, which may persist for weeks, months, or years after acute phase of the infection. CHIKV is spreading globally; in India it first appeared in the 1960s followed by a quiescent period and then a full-blown remergence in 2006 and sporadic persistence since then. Despite a large number of commercially available diagnostic kits for CHIKV, clinical preparedness and diagnostics suffer from sub-optimal assays. An international diagnostic laboratory survey suggested that there is a critical need for improved CHIKV diagnostics especially in the early acute phase of illness. With the recent studies indicating that a vast majority of human humoral response in CHIKV infection is directed against E2 protein, this supports strong interest to develop CHIKV E2 based serological tests. However, methods to produce large amounts of CHIKV protein are limited. Here we report cloning, expression and purification methods for obtaining a truncated 37kDa Chikungunya E2 protein at a high yield of 65-70mg/l. We found that this purified protein can be reliably used in ELISA and western blot to detect CHIKV specific antibodies in sera from patients who were PCR or IgM positive. Thus, using this protocol, laboratories can make large quantities of purified protein that can be potentially used in CHIKV serological analysis.

DOI: 10.1016/j.jviromet.2016.05.003
PMID: 27180040 [PubMed - in process]

133: Verma R, Jana M, Bhalla AS, Kumar A, Kumar R. Diagnosis of osteopetrosis in bilateral congenital aural atresia: Turning point in treatment strategy. World J Clin Pediatr. 2016 May 8;5(2):228-33. doi: 10.5409/wjcp.v5.i2.228. PubMed PMID: 27170934; PubMed Central PMCID: PMC4857237.

Aural atresia is a rare congenital malformation of the external and middle ear. There are several syndromic associations of this anomaly with those involving the first and second branchial arches. Occurrence of aural atresia with sclerosing skeletal dysplasia is unknown and has never been reported. The co-existence of a sclerosing dysplasia can make the surgical treatment in aural atresia difficult and risky; and the auditory improvement may not be as expected. Moreover, internal auditory canal narrowing and hence sensorineural hearing loss in sclerosing dysplasia might add to the already existing conductive hearing loss in such patients. In this case report we have described an unknown association of bilateral microtia with sclerosing skeletal dysplasia (autosomal dominant osteopetrosis) and clinical implications of these two conditions occurring together leading to a change in the management plan.

DOI: 10.5409/wjcp.v5.i2.228
PMCID: PMC4857237
PMID: 27170934 [PubMed]

134: Yadav R, Yadav RK, Pandey RM, Kochar KP. Effect of a Short-Term Yoga-Based Lifestyle Intervention on Health-Related Quality of Life in Overweight and Obese Subjects. J Altern Complement Med. 2016 Jun;22(6):443-9. doi: 10.1089/acm.2015.0268. PubMed PMID: 27136198.

OBJECTIVE: To study the effect of a short-term yoga-based lifestyle intervention on health-related quality of life (HRQOL) in overweight and obese persons.
DESIGN AND SETTING: Nonrandomized, single-arm interventional study conducted from August 2012 to March 2015 at Integral Health Clinic, Department of Physiology, All India Institute of Medical Sciences, New Delhi, India.
PARTICIPANTS: Overweight (body-mass index [BMI], 23-24.9 kg/m(2)) and obese (BMI, ≥25 kg/m(2)) persons (n = 279) aged 20-60 years.
INTERVENTION: Pretested yoga-based lifestyle intervention, including asanas (postures), pranayama (breathing exercises), relaxation techniques, lectures, group support, nutrition awareness program, and individualized advice.
OUTCOME MEASURES: Primary outcome measure was HRQOL, measured by using short version of World Health Organization Quality of Life (WHOQOL-BREF) questionnaire. Secondary outcome measures were anthropometric variables, systolic and diastolic blood pressure, pulse rate, lipid profile, and fasting glucose. A subgroup analysis according to sex was also performed.
RESULTS: The overall quality of life and health improved after short-term yoga-based lifestyle intervention in overweight and obese persons. Physical, psychological and environmental domain scores significantly increased from baseline to day 10, and efficacy was noted in both male and female subgroups. After 10 days of intervention, the following also decreased significantly: body weight, BMI, total body fat, waist and hip circumference, waist-to-hip ratio, systolic and diastolic blood pressure, total cholesterol, low-density lipoprotein, triglycerides, and fasting glucose.
CONCLUSION: A short-term yoga-based lifestyle intervention had a positive effect on HRQOL in overweight and obese persons.

DOI: 10.1089/acm.2015.0268
PMID: 27136198 [PubMed - in process]

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

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

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