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# AIIMS
# New Delhi

## List of publications of AIIMS, New Delhi for the month of November, 2019 [Source: www.pubmed.com].

1: Abedini NC, Hechtman RK, Singh AD, Khateeb R, Mann J, Townsend W, Chopra V. Interventions to reduce aggressive care at end of life among patients with cancer: a systematic review. Lancet Oncol. 2019 Nov;20(11):e627-e636. doi: 10.1016/S1470-2045(19)30496-6. Review. PubMed PMID: 31674321.

Little is known about effective interventions to reduce aggressive end-of-life care in patients with cancer. We did a systematic review to assess what interventions are associated with reductions in aggressive end-of-life cancer care. We searched MEDLINE, CINAHL, Embase, Scopus, and PsychINFO for randomised control trials (RCTs), quasi-experimental, and observational studies published before Jan 19, 2018, which aimed to improve measures of aggressive end-of-life care for patients with cancer. We developed a taxonomy of interventions using the Systems Engineering Initiative for Patient Safety (SEIPS) model to summarise existing interventions that addressed aggressive care for patients with cancer. Of the 6451 studies identified by our search, five RCTs and 31 observational studies met the final inclusion criteria. Using the SEIPS framework, 16 subcategories of interventions were identified. With the exception of documentation of end-of-life discussions in the electronic medical record, no single intervention type or SEIPS domain led to consistent improvements in aggressive end-of-life care measures. The ability to discern the interventions' effectiveness was limited by inconsistent use of validated measures of aggressive care. Seven (23%) of 31 observational studies and no RCTs were at low risk of bias according to Cochrane's Risk of Bias tool. Evidence for improving aggressive end-of-life cancer care is limited by the absence of standardised measurements and poor study design. Policies and studies to address the gaps present in end-of-life care for cancer are necessary.



DOI: 10.1016/S1470-2045(19)30496-6
PMID: 31674321

2: Agarwal A, Gupta S, Yadav AK, Nema RK, Ansari K, Biswas D. Molecular and phylogenetic analysis of Chikungunya virus in Central India during 2016 and 2017 outbreaks reveal high similarity with recent New Delhi and Bangladesh strains. Infect Genet Evol. 2019 Nov;75:103940. doi: 10.1016/j.meegid.2019.103940. Epub 2019 Jun 24. PubMed PMID: 31247338.

Central India witnessed Chikungunya virus (CHIKV) outbreaks in 2016 and 2017. The present report is a hospital based cross-sectional study on the serological and molecular epidemiology of the outbreak. Mutational and phylogenetic analysis was conducted to ascertain the genetic relatedness of the central Indian strains with other Indian and global strains. Chikungunya infection was confirmed in the clinically suspected patients by the detection of anti-CHIKV IgM antibody by ELISA and viral RNA by RT-PCR. A representative set of the RT-PCR positive samples were sequenced for E1 gene and analyzed to identify the emerging mutations and establish their phylogenetic relationship, particularly with other contemporary strains. Phylogenetic analysis revealed the present strains to be of East Central South African (ECSA) genotype. Emergence of a variant strain was observed in the year 2016, which became the predominant strain in this region in 2017. The strains showed significant identity with recent New Delhi strains of 2015 and 2016 and Bangladesh strains of 2017. The epidemic mutation A226V which emerged in 2006 outbreaks of India and Indian Ocean Islands was found to be absent in the current strains. Among the important mutations viz. K211E, M269V, D284E, I317V & V322A observed in the recent strains. I317V is a novel mutation which has emerged very recently as it was found only in central Indian (2016, 2017), New Delhi strains (2015, 2016) and Bangladesh strains (2017). This study

has identified a unique mutation E1:I317V in the Central Indian strains, which is present only in recent New Delhi and Bangladesh strains till date. This study highlights the need for continuous molecular surveillance of circulating CHIKV strains in order to facilitate the prompt identification of novel strains of this virus and enable the elucidation of their clinical correlates.



DOI: 10.1016/j.meegid.2019.103940
PMID: 31247338

3: Agarwal M, Johnston MV, Stafstrom CE. SYNGAP1 mutations: Clinical, genetic, and pathophysiological features. Int J Dev Neurosci. 2019 Nov;78:65-76. doi: 10.1016/j.ijdevneu.2019.08.003. Epub 2019 Aug 24. Review. PubMed PMID: 31454529.

SYNGAP1 is a gene that encodes the cytosolic protein SYNGAP1 (SYNaptic GTPase Activating Protein), an essential component of the postsynaptic density at excitatory glutamatergic neurons. SYNGAP1 plays critical roles in synaptic development, structure, function, and plasticity. Mutations in SYNGAP1 result in a neurodevelopmental disorder termed Mental retardation-type 5 (MRD5, OMIM #612621) with a phenotype consisting of intellectual disability, motor impairments, and epilepsy, attesting to the importance of this protein for normal brain development. Here we review the clinical and pathophysiological aspects of SYNGAP1 mutations with a focus on their effect on synaptogenesis, neural circuit function, and cellular plasticity. We conclude by comparing the molecular pathogenesis of SYNGAP1 mutations with those of another neurodevelopmental disorder that affects dendritic function and cellular plasticity, fragile X syndrome. Insights into the molecular similarities and differences underlying these disorders could lead to rationale therapy development.



DOI: 10.1016/j.ijdevneu.2019.08.003
PMID: 31454529

4: Agarwal R, Pujari A, Sharma N. Wooden foreign body in upper punctum: a commonly overlooked uncommon entity. Clin Exp Optom. 2019 Nov 26. doi: 10.1111/cxo.12997. [Epub ahead of print] PubMed PMID: 31773796.

5: Agarwal R, Bhardwaj M, Patil A, Sharma N. Phacolytic glaucoma in contralateral pseudophakes. Clin Exp Optom. 2019 Nov 10. doi: 10.1111/cxo.12986. [Epub ahead of print] PubMed PMID: 31709635.

6: Akdag AI, Gupta S, Khan N, Upadhayay A, Ray P. Epidemiology and clinical features of rotavirus, adenovirus, and astrovirus infections and coinfections in children with acute gastroenteritis prior to rotavirus vaccine introduction in Meerut, North India. J Med Virol. 2019 Nov 30. doi: 10.1002/jmv.25645. [Epub ahead of print] PubMed PMID: 31785000.

There are limited reports on the etiology of multiple enteric viruses causing acute gastroenteritis (AGE) in North India. In the present study we have determined the prevalence of three enteric viruses, namely rotavirus, astrovirus (AstV) and adenovirus (AdV) in a total of 312 diarrheic children (<5 years) hospitalized at Lala Lajpat Rai Memorial Medical College, Meerut, Uttar Pradesh from August 2014 to July 2016; and results were compared with data from Delhi. The fecal samples were individually screened for group A rotavirus (RVA), AdV,

and AstV using enzyme immunoassay kits. At least one viral agent was detected in 29.2% of 312 fecal specimens. RNA of rotavirus antigen-positive samples was extracted by TRIzol method. Rotavirus G/P genotyping was performed using seminested multiplex reverse transcriptase-polymerase chain reaction. RVA was the most predominant virus (18.3%) followed by AstV (12.5%), and AdV (9.9%). Coinfections were detected in 10.6% cases and the most common coinfection in diarrheic children was RVA combined with AstV (36.4%). Overall, the enteric viruses were found most prevalent in the 6 to 11 months age group (P = .01). Increased duration of vomiting (≥3 days) was significantly (P = .04) associated with AdV infection (61.3%) as compared with AstV (30.76%) and rotavirus (26.31%). G1P[8] was detected throughout as the most prevalent rotavirus strain (10.5%). Unusual RV strains like G2P[6] and G2P[8] were also detected. Of note G3, G4, and G12 rotavirus were detected for the first time in Meerut. This is the first report that demonstrated the important contribution of multiple enteric viruses causing AGE in young children in this part of Uttar Pradesh (Meerut).



DOI: 10.1002/jmv.25645
PMID: 31785000

7: Alameda L, Ashok A, Avery S, Bani-Fatemi A, Berkhout S, Best M, Bonfils K, Colizzi M, Dauvermann M, Plessis SD, Dwyer D, Eisner E, Ganesh S, Hernaus D, Ithal D, Kowalchuk C, Kristensen T, Lavigne K, Lee E, Lemmers-Jansen I, O'Donoghue B, Oliver L, Oluwoye O, Park MT, Di Carlo P, Joaquim HPG, Pinheiro A, Ramsay I, Rodriguez V, Sami M, Soni S, Sonnenschein S, Taylor J, Thomas M, Waterreus A, Wojtalik J, Yang Z, Emsley R, Kilian S. The 2019 Schizophrenia International Research Society Conference, 10-14 April, Orlando, Florida: A summary of topics and trends. Psychiatry Res. 2019 Nov 9:112672. doi: 10.1016/j.psychres.2019.112672. [Epub ahead of print] Review. PubMed PMID: 31780184.

The Schizophrenia International Research Society (SIRS) recently held its first North American congress, which took place in Orlando, Florida from 10-14 April 2019. The overall theme of this year's congress was United in Progress - with the aim of cultivating a collaborative effort towards advancing the field of schizophrenia research. Student travel awardees provided reports of the oral sessions and concurrent symposia that took place during the congress. A collection of these reports is summarized and presented below and highlights the main themes and topics that emerged during the congress. In summary, the congress covered a broad range of topics relevant to the field of psychiatry today.



DOI: 10.1016/j.psychres.2019.112672
PMID: 31780184

8: Ambereen A, Lal B, Agarwal B, Yadav R, Roychoudhury A. Sandwich technique for the surgical management of oral submucous fibrosis. Br J Oral Maxillofac Surg. 2019 Nov;57(9):944-945. doi: 10.1016/j.bjoms.2019.07.020. Epub 2019 Aug 9. PubMed PMID: 31402194.

9: Anand V, Khandelwal M, Appunni S, Gupta N, Seth A, Singh P, Mathur S, Sharma A. CD44 splice variant (CD44v3) promotes progression of urothelial carcinoma of bladder through Akt/ERK/STAT3 pathways: novel therapeutic approach. J Cancer Res Clin Oncol. 2019 Nov;145(11):2649-2661. doi: 10.1007/s00432-019-03024-9. Epub 2019 Sep 16. PubMed PMID: 31529191.

PURPOSE: The incidence of Urothelial carcinoma of bladder (UBC) is gradually increasing by changing lifestyle and environment. The development of a tumor has been noted to be accompanied by modifications in the extracellular matrix (ECM) consisting of CD44, hyaluronic acid (HA) and its family members. The importance of CD44 splice variants and HA family members has been studied in UBC.
METHODS: The cohort of study included 50 UBC patients undergoing radical cystectomy and 50 healthy subjects. The molecular expression of CD44 and HA family members was determined. Effect of CD44 variant-specific silencing on downstream signaling in HT1376 cells was investigated. Combinatorial treatment of 4-MU (4-methylumbelliferone) with cisplatin or doxorubicin on chemosensitivity was also explored.
RESULTS: Higher expression of HA, HAS2, and CD44 was observed in Indian UBC patients which also showed the trend with severity of disease. Splice variant assessment of CD44 demonstrated the distinct role of CD44v3 and CD44v6 in bladder cancer progression. shRNA-mediated downregulation of CD44v3 showed an increase effect on cell cycle, apoptosis and multiple downstream signaling cascade including pAkt, pERK and pSTAT3. Furthermore, 4-MU, an HA synthesis inhibitor, observed to complement the effect of Cisplatin or Doxorubicin by enhancing the chemosensitivity of bladder cancer cells.
CONCLUSIONS: Our findings exhibit involvement of CD44 splice variants and HA family members in UBC and significance of 4-MU in enhancing chemosensitivity suggesting their novel therapeutic importance in disease therapeutics.

DOI: 10.1007/s00432-019-03024-9
PMID: 31529191 [Indexed for MEDLINE]

10: Arffman RK, Saraswat M, JoenvÃ¤Ã¤rÃ¤ S, Khatun M, Agarwal R, Tohmola T, SundstrÃ¶m-Poromaa I, Renkonen R, Piltonen TT. Thromboinflammatory changes in plasma proteome of pregnant women with PCOS detected by quantitative label-free proteomics. Sci Rep. 2019 Nov 26;9(1):17578. doi: 10.1038/s41598-019-54067-4. PubMed PMID: 31772271; PubMed Central PMCID: PMC6879536.

Polycystic ovary syndrome (PCOS) is the most common endocrinological disorder of fertile-aged women. Several adverse pregnancy outcomes and abnormalities of the placenta have been associated with PCOS. By using quantitative label-free proteomics we investigated whether changes in the plasma proteome of pregnant women with PCOS could elucidate the mechanisms behind the pathologies observed in PCOS pregnancies. A total of 169 proteins with ≥2 unique peptides were detected to be differentially expressed between women with PCOS (n = 7) and matched controls (n = 20) at term of pregnancy, out of which 35 were significant (p-value < 0.05). A pathway analysis revealed that networks related to humoral immune responses, inflammatory responses, cardiovascular disease and cellular growth and proliferation were affected by PCOS. Classification of cases and controls was carried out using principal component analysis, orthogonal projections on latent structure-discriminant analysis (OPLS-DA), hierarchical clustering, self-organising maps and ROC-curve analysis. The most significantly enriched proteins in PCOS were properdin and insulin-like growth factor II. In the dataset, properdin had the best predictive accuracy for PCOS (AUC = 1). Additionally, properdin abundances correlated with AMH levels in pregnant women.

DOI: 10.1038/s41598-019-54067-4
PMCID: PMC6879536
PMID: 31772271

11: Ayub A, Talawar P, Gupta SK, Kumar R, Alam A. Erector spinae plane block: A safe, simple and effective alternative for knee surgery. Anaesth Intensive Care. 2019 Sep;47(5):469-471. doi: 10.1177/0310057X19877655. Epub 2019 Nov 4. PubMed

PMID: 31684742.

12: Baghel V, Tripathi M, Parida G, Gupta R, Yadav S, Kumar P, Dey AB, Damle NA, Kumar R, Bal C. In Vivo Assessment of Tau Deposition in Alzheimer Disease and Assessing Its Relationship to Regional Brain Glucose Metabolism and Cognition. Clin Nucl Med. 2019 Nov;44(11):e597-e601. doi: 10.1097/RLU.0000000000002791. PubMed PMID: 31584490.

AIM: In this study, we investigated the relationship of cerebral tau deposition (F-tau-AD-ML 104 PET/CT) with glucose metabolism (F-FDG PET/CT) and cognitive function in patients with Alzheimer disease (AD).
PATIENTS AND METHODS: Seventy subjects (Mini Mental State Examination [MMSE] score <18 = 37 [AD]; MMSE score, 18-24 = 16 [early AD]) and 17 controls were included in this study. All participants underwent detailed neurological and neuropsychological evaluation, followed by F-tau-AD-ML 104 and F-FDG PET/CT imaging. Region-wise SUVmax ratios at 50 to 60 minutes postinjection were calculated for F-tau-AD-ML 104 and F-FDG, using the cerebellar cortex as the reference region. Linear models were used to investigate the association of regional F-tau-AD-ML 104 retention with F-FDG uptake and cognition (MMSE scores).
RESULTS: F-Tau-AD-ML 104 retention was observed in the parietal lobe, temporal lobe, hippocampus, parahippocampus, frontal lobe, anterior and posterior cingulate, and precuneus in advanced and early AD patient as compared with normal controls with regional hypometabolism in overlapping regions on F-FDG PET. Significant negative association was found between F-tau-AD-ML 104 regional retention and glucose metabolism in the parietal lobe, temporal lobe, hippocampus, parahippocampus, frontal lobe, anterior and posterior cingulate, and precuneus among patients with advanced and early AD. In advanced and early AD patients, a negative association was found between F-tau-AD-ML 104 regional retention (precuneus) and cognition (MMSE score), whereas a positive association was observed between F-FDG regional uptake (precuneus) and cognition (MMSE score).
CONCLUSIONS: Tau pathology overlapped with areas of hypometabolism on FDG PET in the brains of AD patients. Tau deposition was found to have negative association with cognitive scores in these patients.

DOI: 10.1097/RLU.0000000000002791
PMID: 31584490 [Indexed for MEDLINE]

13: Bains L, Bhatia S, Kaushik R, Jain SK, Singh CB, Mandal S, Kaur D. Pre-sternal thyroid swellings: a case of rare aberrant site recurrence and review of literature. Thyroid Res. 2019 Nov 21;12:12. doi: 10.1186/s13044-019-0073-1. eCollection 2019. PubMed PMID: 31832104; PubMed Central PMCID: PMC6868756.

Background: Thyroid swellings enlarge caudally into the mediastinum behind the sternum. Pre-sternal swelling of thyroid origin is very rare. We present our case of pre-sternal thyroid swelling which was albeit a surprisingly rare site of papillary thyroid carcinoma recurrence and review of pre-sternal thyroid swellings reported till date.
Case summary: A 60 year old female presented with a painless, progressive swelling on the anterior part of the chest for the past 2 years. A 15 cm × 8 cm vertically aligned, non tender, well defined swelling was present on the pre-sternal region, with consistency ranging from soft to firm. The swelling was fixed to the underlying tissues and a fixed level IV lymph node was palpable on the right side. Ultrasonography revealed a large mass of 15 × 7 cm with multiple cystic areas. Fine needle aspiration cytology was inconclusive twice. Patient had undergone a total thyroidectomy for papillary carcinoma 10 years back. Computed tomography findings revealed a large 15 × 6.6 × 7 cm lobulated, pre-sternal, soft

tissue lesion with solid & cystic components. The mass was infiltrating the right sided strap muscles and sternocleidomastoid. FNAC was inconclusive and thyroid scan could not pick up any activity in the mass. Henceforth a PET scan was done that showed increased FDG uptake by the lesion and the level IV lymph node. The patient underwent wide excision of the mass with right functional neck dissection, along with removal with both sternal head of sternocleido-mastoid, the strap muscles and the surrounding fascia. Histopathology confirmed papillary thyroid carcinoma. Patient received post-operative radioactive iodine ablation and is healthy with no recurrence up to 30 months of follow up.
Discussion: The mechanisms for pre-sternal thyroid swelling are not understood due to paucity of cases. The mechanisms proposed are invasion of strap muscles and cervical linea alba and tumor cells spread anterior to sternum, truly ectopic thyroid tissue, de novo carcinogenesis in the embryonal remnants like the thyro-thymic residues, sequestered thyroid tissue which grows later or migration of thyroid cells, incomplete clearance at the time of primary surgery or intraoperative seeding.
Conclusion: Pre-sternal region masses of thyroid origin are very rare. A proper work up, suspicion for thyroid mass and array of tests will be required to come to a provisional diagnosis. Since the masses reported in literature were primarily malignant, any such mass may be treated on lines of malignancy with radical surgery.



DOI: 10.1186/s13044-019-0073-1
PMCID: PMC6868756
PMID: 31832104

14: Ballal S, Yadav MP, Bal C, Sahoo RK, Tripathi M. Broadening horizons with (225)Ac-DOTATATE targeted alpha therapy for gastroenteropancreatic neuroendocrine tumour patients stable or refractory to (177)Lu-DOTATATE PRRT: first clinical experience on the efficacy and safety. Eur J Nucl Med Mol Imaging. 2019 Nov 10. doi: 10.1007/s00259-019-04567-2. [Epub ahead of print] PubMed PMID: 31707430.

PURPOSE: The objective of this study was to investigate and present the early results on the efficacy, safety, and quality of life of 225Ac-DOTATATE targeted alpha therapy (TAT) in patients with advanced, progressive, 177Lu-DOTATATE refractory, and somatostatin receptor (SSTR) expressing metastatic GEP-NETs.
METHODS: In this prospective study, we recruited patients with metastatic GEP-NETs who were stable or progressive disease on 177Lu-DOTATATE therapy. Systemic TAT using 225Ac-DOTATATE was performed in all the patients with 225Ac-DOTATATE (100 kBq/kg body weight) at an interval of 8 weeks. The primary end point was to assess the objective response (measured by RECIST 1.1 and functional M.D. Anderson criteria). The secondary end points included biochemical response assessment as per the Italian Trials in Medical Oncology (ITMO), adverse event profile as per CTCAE v5.0, and clinical response assessment by the quality of life (assessed with EORTC QLQ-GI.NET21 patient-based questionnaire).
RESULTS: Between April 2018 and March 2019, 32 patients (17 females, 15 males, mean age 52 ± 9.2 years, 35-72 years) with either stable disease after completing 177Lu-DOTATATE therapy (14, 44%) or progressive disease on 177Lu-DOTATATE therapy (18, 56%) were included in the study. The morphological response was assessed in 24/32 patients that revealed partial remission in 15 and stable disease in 9. There was no documented disease progression or deaths in the median follow-up of 8 months (range 2-13 months). There was a significant decrease in the plasma chromogranin level post-225Ac-DOTATATE therapy ($P < 0.0001$).
CONCLUSION: Our short-term clinical results indicate 225Ac-DOTATATE TAT as a promising treatment option which adds a new dimension in patients who are refractory to 177Lu-DOTATATE therapy or have reached the maximum prescribed

cycles of 177Lu-DOTATATE therapy.

DOI: 10.1007/s00259-019-04567-2
PMID: 31707430

15: Basu A, Basu D, Chattopadhyay A, Sanyal R, Rahman M, Goswami RP. Pediatric case of Graham Little Piccardi Lassueur syndrome - A rare entity. Drug Discov Ther. 2019 Nov 14;13(5):294-296. doi: 10.5582/ddt.2019.01055. Epub 2019 Oct 27. PubMed PMID: 31656251.

Graham Little Piccardi Lassueur syndrome (GLPLS) is a rare dermatosis characterized by patchy cicatricial alopecia of scalp, rapidly developing keratosis pilaris like follicular papules over trunk and extremities, and noncicatricial loss of axillary and pubic hair. This syndrome which is mostly seen in middle aged post-menopausal females (between ages 30-70)has rarely ever been described in the pediatric age group. We report a case of a 15 year old girl presenting to us with this rare syndrome.

DOI: 10.5582/ddt.2019.01055
PMID: 31656251

16: Bhat I, Bellapukonda S. A novel Technique for Arterial Cannulation in Neonates: Angulation of Arterial Cannula. Asian J Anesthesiol. 2019 Dec 1;57(4):132-134. doi: 10.6859/aja.201912_57(4).0006. Epub 2019 Nov 6. PubMed PMID: 31726802.

17: Bindra A, Pathak S, Sikka K. Split Larynx. Anesthesiology. 2019 Nov;131(5):1152. doi: 10.1097/ALN.0000000000002867. PubMed PMID: 31246601.

18: Bittner R, Bain K, Bansal VK, Berrevoet F, Bingener-Casey J, Chen D, Chen J, Chowbey P, Dietz UA, de Beaux A, Ferzli G, Fortelny R, Hoffmann H, Iskander M, Ji Z, Jorgensen LN, Khullar R, Kirchhoff P, KÃ¶ckerling F, Kukleta J, LeBlanc K, Li J, Lomanto D, Mayer F, Meytes V, Misra M, Morales-Conde S, Niebuhr H, Radvinsky D, Ramshaw B, Ranev D, Reinpold W, Sharma A, Schrittwieser R, Stechemesser B, Sutedja B, Tang J, Warren J, Weyhe D, Wiegering A, Woeste G, Yao Q. Update of Guidelines for laparoscopic treatment of ventral and incisional abdominal wall hernias (International Endohernia Society (IEHS)): Part B. Surg Endosc. 2019 Nov;33(11):3511-3549. doi: 10.1007/s00464-019-06908-6. Epub 2019 Jul 10. PubMed PMID: 31292742; PubMed Central PMCID: PMC6795640.

In 2014 the International Endohernia Society (IEHS) published the first international "Guidelines for laparoscopic treatment of ventral and incisional abdominal wall hernias". Guidelines reflect the currently best available evidence in diagnostics and therapy and give recommendations to help surgeons to standardize their techniques and to improve their results. However, science is a dynamic field which is continuously developing. Therefore, guidelines require regular updates to keep pace with the evolving literature.METHODS: For the development of the original guidelines all relevant literature published up to year 2012 was analyzed using the ranking of the Oxford Centre for Evidence-Based-Medicine. For the present update all of the previous authors were asked to evaluate the literature published during the recent years from 2012 to 2017 and revise their statements and recommendations given in the initial guidelines accordingly. In two Consensus Conferences (October 2017 Beijing, March 2018 Cologne) the updates were presented, discussed, and confirmed. To avoid redundancy, only new statements or recommendations are included in this paper.

Therefore, for full understanding both of the guidelines, the original and the current, must be read. In addition, the new developments in repair of abdominal wall hernias like surgical techniques within the abdominal wall, release operations (transversus muscle release, component separation), Botox application, and robot-assisted repair methods were included.
RESULTS: Due to an increase of the number of patients and further development of surgical techniques, repair of primary and secondary abdominal wall hernias attracts increasing interests of many surgeons. Whereas up to three decades ago hernia-related publications did not exceed 20 per year, currently this number is about 10-fold higher. Recent years are characterized by the advent of new techniques-minimal invasive techniques using robotics and laparoscopy, totally extraperitoneal repairs, novel myofascial release techniques for optimal closure of large defects, and Botox for relaxing the abdominal wall. Furthermore, a concomitant rectus diastasis was recognized as a significant risk factor for recurrence. Despite still insufficient evidence with respect to these new techniques it seemed to us necessary to include them in the update to stimulate surgeons to do research in these fields.
CONCLUSION: Guidelines are recommendations based on best available evidence intended to help the surgeon to improve the quality of his daily work. However, science is a continuously evolving process, and as such guidelines should be updated about every 3 years. For a comprehensive reference, however, it is suggested to read both the initially guidelines published in 2014 together with the update. Moreover, the presented update includes also techniques which were not known 3 years before.

DOI: 10.1007/s00464-019-06908-6
PMCID: PMC6795640
PMID: 31292742

19: Bora S, Kumar A, Mishra S, Satyarthee GD, Singh PK, Sawarkar D, Verma S, Borkar S, Sharma R, Chandra SP, Kale SS. Intracranial aspergillosis amongst immunocompetent patients: An experience with combined surgical and medical management of 18 patients. Clin Neurol Neurosurg. 2019 Nov;186:105511. doi: 10.1016/j.clineuro.2019.105511. Epub 2019 Sep 3. PubMed PMID: 31505434.

OBJECTIVE: Fungal infections of central nervous system (CNS) commonly affect immunocompromised patients, however, recently such cases have been reported even amongst immunocompetent patients.
PATIENTS & METHODS: In this study, we retrospectively analyzed outcome of 18 immunocompetent patients with histopathologically proven intracranial Aspergillosis undergoing combined surgical and medical management.
RESULTS: The age of patients ranged from 5-65 years. Fourteen out of 18 patients had well defined lesions while 4 had diffuse disease. Paranasal sinuses were involved in 8 & cavernous sinus in 3 patients. Six patients had hydrocephalus. Four patients developed infarcts during their clinical course. Surgical interventions included gross (n = 4) or subtotal excision (n = 8), decompressive craniectomy & biopsy of lesion (n = 4), biopsy only (n = 2) and ventriculoperitoneal shunt placement (n = 6). All patients received postoperative antifungal therapy. The duration of follow up ranged from 10-60 months. Overall mortality was 44.4%. Mortality amongst patients undergoing gross total and subtotal excision was 25% & 50% respectively. Patients undergoing DC had a mortality of 25%. Both patients undergoing only biopsy died. Hydrocephalus was associated with a very high mortality (83.3%). Amongst surviving patients (n = 10), 6 patients became disease free & rest 4 had stable disease at last follow up.
CONCLUSIONS: Intracranial aspergillosis is associated with high morbidity & mortality even amongst immunocompetent patients. An aggressive multidisciplinary management is thus needed to improve outcome. Our study shows that a combination

of surgical excision or decompressive craniectomy and antifungal therapy can be helpful in improving prognosis of these patients.



DOI: 10.1016/j.clineuro.2019.105511
PMID: 31505434

20: Chandra PS, Kaur KD. Development of a Unique Retractor for Performing Endoscopic Pituitary Surgery-EASYTRAC. Neurol India. 2019 Nov-Dec;67(6):1509-1512. doi: 10.4103/0028-3886.273609. PubMed PMID: 31857547.

Background: A unique self-expanding retractor (EASYTRAC®) is described, which provides several advantages for endoscopic pituitary surgery-enhanced visualization, creating more space, reducing the mucosal damage, and enhancing the nasal quality of life (QoF). Presented here is the proof of concept.
Methods: EASYTRAC® is made of an aircraft-grade, SS-titanium alloy to provide optimal opening strength with a low profile (0.5 mm thick). It has a nonreflective, smooth surface finish. Patented design and wire pulling method of the EASYTRAC® makes it easy to insert and deploy. EASYTRAC® is inserted through the submucosal tunnel using a small, unilateral mucocutaneous incision. Following this, the ring attached to the wire is pulled out to deploy the retractor. This provides expansion of the retractor leading to fracture of the septum to one side at the keel of the vomer. The rest of the surgery is performed in the standard manner using an endoscope. The retractor is a single-use, disposable instrument and available in three different sizes.
Results: Five endoscopic endonasal surgeries have been performed using the EASYTRAC®(four pituitary adenomas, one craniopharyngioma). Deviated nasal septum (DNS) was present in two of the surgeries. All surgeries were approached through the right mucoseptal corridor, and presence of DNS did not reduce exposure (<10 minutes for exposure). No hardware problem was observed in any of the cases. Intraoperative cerebrospinal fluid (CSF) leak (n = 1) was managed with intraoperative, standard, triple-layer closure with glue and lumbar drain.
Conclusion: Retractor seems to be safe, easy to use, and effective. The surgeon's capabilities are enhanced by the retractor's dynamicity, minimal fogging of scope, minimal trauma to the mucosa, and adequate space to allow the introduction of three instruments through a single nostril.

DOI: 10.4103/0028-3886.273609
PMID: 31857547

21: Chauhan V, Galwankar S, Deepak KK, Mohan A, Guleria R, Bhoi S, Aggarwal P. The 2019 WACEM and Academic College of Emergency Experts India Position Paper on Developing the Academic Department of Space Medicine in India - The Time Has Come! J Emerg Trauma Shock. 2019 Oct-Dec;12(4):229-231. doi: 10.4103/JETS.JETS_126_19. Epub 2019 Nov 18. PubMed PMID: 31798234; PubMed Central PMCID: PMC6883500.

22: Chawla R, Kumar A, Mandal S. Three-Dimensional Reconstruction Imaging of Peripapillary Intrachoroidal Cavitation in a Myopic Patient. Ophthalmol Retina. 2019 Nov;3(11):928. doi: 10.1016/j.oret.2019.06.009. PubMed PMID: 31699309.

23: Christa E, Srivastava P, Chandran DS, Jaryal AK, Yadav RK, Roy A, Deepak KK. Effect of Yoga-Based Cardiac Rehabilitation on Heart Rate Variability: Randomized Controlled Trial in Patients Post-MI. Int J Yoga Therap. 2019 Nov;29(1):43-50. doi: 10.17761/2019-00019. Epub 2019 Jan 31. PubMed PMID: 30702948.

Autonomic dysfunction is an independent predictor of cardiovascular and all-cause mortality after myocardial infarction (MI). We tested the effects of a 12-week yoga-based cardiac rehabilitation program on heart rate variability (HRV) in 80 patients post-MI. This randomized controlled trial with two parallel groups was carried out in a tertiary care institution in India. The yoga group received 13 hospital-based structured yoga sessions as an adjunct to standard care. Control group participants received enhanced standard care involving three brief educational sessions with a leaflet on the importance of diet and physical activity. HRV was measured in all participants with lead II electrocardiogram (ECG) signals. One yoga group patient's data were excluded due to ECG abnormalities. Baseline measurement was done 3 weeks post-MI, and postintervention assessment took place at the 13th week. HRV frequency and time domain indices were analyzed. There were no significant between-group differences in the HRV time domain indices. Frequency domain indices showed significant between-group differences in HF power (absolute) (yoga vs. control: 114.42 [-794.80-7,993.78] vs. -38.14 [-4,843.50-1,617.87], p = 0.005) and total power (nu) (yoga vs. control: 44.96 [21.94] vs. -19.55 [15.42], p = 0.01) with higher HF power and total power (nu) in the yoga group. It should be noted that these results cannot be generalized to high risk patients. Respiratory frequency control to check for influence of respiratory rate on RR interval was not evaluated. This short-term yoga-based cardiac rehabilitation program had additive effects in shifting sympathovagal balance toward parasympathetic predominance while increasing overall HRV in optimally medicated post-MI patients.

DOI: 10.17761/2019-00019
PMID: 30702948 [Indexed for MEDLINE]

24: Dadhwal R, Jain S, Seth A, Bal CS. Neuroendocrine tumour of urinary bladder: a rare case of aggressively behaving primary well-differentiated neuroendocrine tumour with review of literature. BMJ Case Rep. 2019 Nov 19;12(11). pii: e231061. doi: 10.1136/bcr-2019-231061. PubMed PMID: 31748356.

Neuroendocrine tumour (NET) of the urinary bladder (UB) is a rare entity and comprises of well-differentiated, small cell and large cell types. Small and large cell NET like that in lung and gastrointestinal tract have an aggressive nature and are considered high-grade disease. Well-differentiated NET has been thought to be localised and having a good prognosis. We report the first case of metastatic well-differentiated NET of the UB. Our case is a 44-year-old man with well-differentiated NET of UB presented with hepatic and peritoneal metastases on initial diagnosis. He was treated with metaiodobenzylguanidine (MIBG) therapy and had a modest survival of 16 months. The primary well-differentiated NETs can present as a metastatic disease with an aggressive nature. MIBG therapy can be considered as a useful option but overall prognosis is poor. Further research is needed for better understanding and better treatment protocol.



DOI: 10.1136/bcr-2019-231061
PMID: 31748356

25: Das CJ, Razik A, Sharma S, Verma S. Prostate biopsy: when and how to perform. Clin Radiol. 2019 Nov;74(11):853-864. doi: 10.1016/j.crad.2019.03.016. Epub 2019 May 9. Review. PubMed PMID: 31079953.

Prostate cancer, unlike other cancers, has been sampled in a non-targeted, systematic manner in the past three decades. On account of the low volume of

prostate sampled despite the multiple cores acquired, systematic transrectal (TRUS) biopsy suffered from low sensitivity in picking up clinically significant prostate cancer. In addition, a significant number of cancers of the anterior, lateral peripheral zone, and the apex were missed as these areas were undersampled or missed during this biopsy protocol. Subsequently, the number of cores acquired was increased with special focus given to targeting the previously undersampled areas. These procedures led to an increase in the complication rates as well as detection of more clinically insignificant cancers. The advent of multiparametric magnetic resonance imaging (MRI) and its high intrinsic tissue contrast enabled better detection of prostate cancer. This led to the introduction of MRI-targeted biopsies with either MRI-TRUS fusion or under direct (in-gantry) guidance. MRI-targeted biopsies increased the percentage of positive cores and detection of clinically significant prostate cancers; however, these are expensive, time-intensive, require significant capital investment and operator expertise. This article describes the indications, workflow, complications, advantages, and disadvantages of TRUS-guided biopsy followed by MRI-guided biopsies.



DOI: 10.1016/j.crad.2019.03.016
PMID: 31079953

26: Das R, Singh N. Exploring electrochemistry of carbon nanodots and its application in noninvasive bacterial growth monitoring. Biosens Bioelectron. 2019 Nov 1;144:111640. doi: 10.1016/j.bios.2019.111640. Epub 2019 Aug 29. PubMed PMID: 31494506.

Cost effective and miniaturized methods aiming for high throughput monitoring of bacterial growth are of great significance, especially for tracking disease progression in early stage as well as in screening antibiotic resistant species. Here, we demonstrate an electrochemical platform for noninvasive monitoring of bacterial growth by encapsulating bacterial cells and carbon nanodots in alginate microspheres. The synthesized carbon nanodots have been explored for electrochemical properties, and its redox properties have been utilized for developing bacterial growth monitoring platform. These synthesized CDs are sensitive to pH change and respond as change in redox potential over time as pH of the medium changes due to growth and metabolic activities of bacteria. We determined the bacterial growth kinetics by measuring the redox potential changes of the carbon nanodots over time. The developed platform has been demonstrated to detect the presence of bacteria, the difference in growth rates of bacteria and its susceptibility to the antibiotic with low bacterial counts (103 CFU) in 20 min; thus, redox properties of CDs has the potential to provide a sensitive detection platform.



DOI: 10.1016/j.bios.2019.111640
PMID: 31494506

27: Dey S, Pradhan D, Saikia P, Bhattacharyya P, Khandelwal H, Adarsha KN. Intubation in the Intensive Care Unit: C-MAC video laryngoscope versus Macintosh laryngoscope. Med Intensiva. 2019 Nov 25. pii: S0210-5691(19)30246-3. doi: 10.1016/j.medin.2019.10.004. [Epub ahead of print] English, Spanish. PubMed PMID: 31780257.

PURPOSE: Various modifications of the Macintosh blade and direct laryngoscopy have been incorporated into practice to improve the intubation success rate and

avoid complications while ensuring patient safety. This study evaluates the usefulness of two different direct laryngoscopy methods used by operators with various level of experience in the Intensive Care Unit.
MATERIAL AND METHODS: In a single centre prospective study, C-MAC and Macintosh laryngoscopes were compared in terms of laryngoscopy and intubation outcomes such as glottic visualization, number of intubation attempts, intubation success and satisfaction score.
RESULTS: During the one-year study period, 263 patients were evaluated and data of 218 patients were analyzed. The rate of successful first attempt intubation was higher in the video laryngoscope group (VL) (84% vs 57%; P<0.001). A significantly greater number of patients in the Macintosh laryngoscopy group had difficult visualization of the glottis in terms of the modified Cormack and Lehane classification and Percentage of Glottic Opening scale.
CONCLUSION: The use of video laryngoscope for intubation in ICU settings results in better visualization of the glottis and a higher incidence of successful intubation attempts.



DOI: 10.1016/j.medin.2019.10.004
PMID: 31780257

28: Dhagudu NK, Erravalli A, Sarkar S, Chadda RK. Tramadol-Related Adverse Drug Reactions at an Addiction Psychiatry Setting: A Cross-Sectional Analysis. Indian J Psychol Med. 2019 Nov 11;41(6):593-595. doi: 10.4103/IJPSYM.IJPSYM_330_18. eCollection 2019 Nov-Dec. PubMed PMID: 31772451; PubMed Central PMCID: PMC6875833.

29: Dhochak N, Jat KR, Lodha R, Kabra SK. Lentil aspiration leading to likely hypersensitivity pneumonitis. Pediatr Pulmonol. 2019 Nov;54(11):1781-1786. doi: 10.1002/ppul.24463. Epub 2019 Jul 25. PubMed PMID: 31347305.

RATIONALE: A variety of inhaled antigens have been implicated to cause hypersensitivity pneumonitis (HP). We observed that children force-fed with lentil-based weaning food had persistent respiratory symptoms and radiology similar to HP.
OBJECTIVES: To describe the clinical features of lentil HP.
METHODS: We conducted a retrospective review of records of children with lentil HP attending Pediatric Chest Clinic at a tertiary care hospital in North India from 2008-2018. We included case records with elevated immunoglobulin G (IgG) specific for lentil antigen.
MEASUREMENTS AND MAIN RESULTS: Nine children (seven boys) were identified with median (IQR) age of onset of symptoms and diagnosis at 9 (6, 12) and 11 (10, 16) months, respectively. Chronic cough (100%), shortness of breath (89%), fever (78%), vomiting (56%), and wheezing (33%) were common symptoms. Fine crackles were heard in 33% of children, none had clubbing. CT scans showed nodular opacities and consolidation in 78% and 67% children, respectively. Bronchoalveolar lavage showed increased neutrophils and lymphocytes (67% and 33%, respectively). All children showed rapid remission with systemic steroids (prednisolone), starting at a median dose of 1 (1, 1.1) mg kg-1 day-1 . One child had a clinical relapse which was treated with oral steroids again. IgG specific to lentil antigens was elevated in children with lentil HP (21->200 mgA/L) compared with children with other chronic respiratory illnesses (n = 7, <2-11.4 mgA/L).
CONCLUSIONS: Lentil aspiration is an important cause of HP in infants of weaning age with force-feeding practices. Further studies are needed to identify aspirated antigens which cause HP in aspiration prone children.

DOI: 10.1002/ppul.24463
PMID: 31347305

30: Diwan K, Singh AN, Madhusudhan KS. Missed gallstones or gallbladder! Clin Gastroenterol Hepatol. 2019 Nov 28. pii: S1542-3565(19)31378-3. doi: 10.1016/j.cgh.2019.11.038. [Epub ahead of print] PubMed PMID: 31786328.

31: Farooqui FA, Deepti S. Myxomatous Mitral-Valve Prolapse. N Engl J Med. 2019 Nov 21;381(21):e37. doi: 10.1056/NEJMicm1904609. PubMed PMID: 31747730.

32: Gamanagatti S. Necessity of Image Guidance for Subclavian Catheterization to Improve Patient Safety. Indian J Pediatr. 2019 Nov;86(11):985-986. doi: 10.1007/s12098-019-03039-7. Epub 2019 Jul 26. PubMed PMID: 31346970.

33: Ganie MA, Rashid A, Sood M, Sofi NY, Wani IA, Nisar S, Butt TP, Gupta N, Bhat D, Choh N, Masoodi SR. Coadministration of metformin or spironolactone enhances efficacy of rosiglitazone in management of PCOS. Gynecol Endocrinol. 2019 Nov 8:1-5. doi: 10.1080/09513590.2019.1675044. [Epub ahead of print] PubMed PMID: 31701799.

The aim of this study was to compare the efficacy and safety of adding metformin or spironolactone to rosiglitazone in women with polycystic ovary syndrome (PCOS). This is a prospective non-randomized study in a tertiary care with at in a tertiary care endocrine clinic. Women (n=138) diagnosed with PCOS on the basis of Rotterdam criteria 2003 were categorized into three groups on the basis of drug intake as - rosiglitazone (R), rosiglitazone with spironolactone (R+S), and rosiglitazone with metformin (R+M). Clinical, biochemical, hormonal, and insulin sensitivity parameters were assessed at baseline and after six months of follow up. There was a significant improvement in number of menstrual cycles per year and Ferriman Gallwey (FG) score in all three groups after 6 months. Plasma insulin (0, 2 h), HOMA-IR and serum total testosterone levels decreased after six months in all the three groups. The inter group comparison showed higher efficacy of R+S in improving hyperandrogenism whereas R+M was most effective in decreasing body weight and plasma insulin levels compared to R and R+S ($p<.05$). Treatment of women with PCOS using rosiglitazone alone and in combination with spironolactone or metformin is safe and efficacious with limited adverse events however randomized trials with longer duration of follow up are warranted.

DOI: 10.1080/09513590.2019.1675044
PMID: 31701799

34: Ganie MA, Sahar T, Rashid A, Wani IA, Nisar S, Sathyapalan T, Vishnubhatla S, Ramakrishnan L, Parvez T, Geer I. Comparative Evaluation of Biomarkers of Inflammation Among Indian Women With Polycystic Ovary Syndrome (PCOS) Consuming Vegetarian vs. Non-vegetarian Diet. Front Endocrinol (Lausanne). 2019 Nov 8;10:699. doi: 10.3389/fendo.2019.00699. eCollection 2019. PubMed PMID: 31781027; PubMed Central PMCID: PMC6857098.

Background: Sub-inflammation and insulin resistance characterize women with PCOS. Data on dietary modulation of inflammation among PCOS women is scant, particularly from Indian subcontinent. The present study aimed to assess the effect of plant based vs. animal origin diets on serum markers of inflammation

(primary outcome measure). Methods: This observational case-control study compared age and BMI matched PCOS and apparently healthy women from two populations following different dietary practices. The vegetarian women from New-Delhi (n = 82 PCOS and n = 179 healthy) and non-vegetarian women from Srinagar (n = 62 PCOS and n = 141 healthy) formed the groups. Using a uniform methodology, detailed clinical, biochemical, hormonal, and inflammatory marker assessment was undertaken. Results: The mean age of the overall cohort was 26.23 ± 4.59 years with a mean BMI of 24.39 ± 3.72 kg/m2. Overall pro-inflammatory markers (TNF-α, IL-6, IL-1β, hs-CRP and serum resistin) were significantly higher ($p \leq 0.05$) and anti-inflammatory markers (IL-10 and adiponectin) were lower among women with PCOS than healthy subjects. On comparing vegetarian women with non-vegetarians, higher daily calorie intake (1895.46 ± 258.19 vs. 1860.13 ± 323.96 Kcal) with a higher protein and fat and lower carbohydrate intake was recorded in the latter, although the percent energy derived from carbohydrates was higher among vegetarians. Clinical and biochemical parameters were comparable among the groups except mFG score, total serum testosterone and serum lipid levels which were higher among non-vegetarian women as compared to their vegetarian counterparts from both categories (PCOS and healthy). Interestingly, vegetarian women with PCOS and healthy women had higher serum pro-inflammatory and lower anti-inflammatory markers compared to their non-vegetarian counterparts. Conclusion: Women with PCOS consuming Indian vegetarian diet have higher pro-inflammatory and lower anti-inflammatory marker levels than their age and BMI matched healthy non-vegetarian counterparts. This interesting observation can be attributed to the dietary composition, among other factors and needs confirmation from well-designed randomized studies on a larger cohort. Clinical Trial Registration: The study was registered with CTRI database under registration number CTRI/2013/09/003996.



DOI: 10.3389/fendo.2019.00699
PMCID: PMC6857098
PMID: 31781027

35: Gautam D, Malhotra R. Total Hip Arthroplasty with Modular Stem for Dysplastic Hips in South Asian Population. Arch Bone Jt Surg. 2019 Nov;7(6):506-513. PubMed PMID: 31970255; PubMed Central PMCID: PMC6935517.

Background: Optimum component positioning and orientation is required to optimize the functional result during total hip arthroplasty for dysplastic hips. Methods: Sixty-two patients (66 hips) including 33 males and 29 females underwent total hip arthroplasty using modular stem prosthesis at an average age of 40.6 years (range 17 to 49 years). Nineteen hips were classified as Type I, 24 hips as Type II, 13 hips as Type III and 10 hips as Type IV dysplastic hips according to Crowe's classification. Eighteen hips (27.2%) underwent sub trochanteric osteotomy and 23 hips (34.8%) required adductor tenotomy at the time of surgery. Results: Sixty-one patients (65 hips) were available for the latest follow up. The median follow-up was 57.4 months (range12 to 100 months). The mean Harris Hip Score was 90.6 (range 72 to 96), which was significant improvement from the preoperative Score of 44.8 (range 38 to 62). The clinical outcome was graded as excellent in 39, good in 13, fair in 7 patients and poor in 2 patients respectively. Only one hip (1.5%) had underwent revision surgery for the stem at 18 months following the index surgery. Postoperative dislocation following a fall was seen in one hip of a female patient who was operated on both sides. The radiographs revealed that all the remaining 65 hips had stable femoral component and the osteotomy sites were healed. The Kaplan-Meier survivorship with revision as endpoint (including open reduction for dislocation) was found to be 96.4% at

100 months (95% Confidence Interval; 86.3-99.1).
Conclusion: This study in South-Asian patients using the modular stem strengthened the premise that cementless modular total hip arthroplasty provides a satisfactory outcome in treating secondary osteoarthritis due to dysplastic hips.



PMCID: PMC6935517
PMID: 31970255

36: Ge N, Brugge WR, Saxena P, Sahai A, Adler DG, Giovannini M, Pausawasdi N, Santo E, Mishra G, Tam W, Kida M, de la Mora-Levy JG, Sharma M, Umar M, Katanuma A, Lee L, Garg PK, Eloubeidi MA, Yu HK, Raijman I, Arturo Arias BL, Bhutani M, Carrara S, Rai P, Mukai S, Palazzo L, Dietrich CF, Nguyen NQ, El-Nady M, Poley JW, Guaraldi S, Kalaitzakis E, Sabbagh LC, LariÃ±o-Noia J, Gress FG, Lee YT, Rana SS, Fusaroli P, Hocke M, Dhir V, Lakhtakia S, Ratanachu-Ek T, Chalapathi Rao AS, Vilmann P, Okasha HH, Irisawa A, Ponnudurai R, Leong AT, Artifon E, Iglesias-Garcia J, Saftoiu A, Larghi A, Robles-Medranda C, Sun S. An international, multi-institution survey of the use of EUS in the diagnosis of pancreatic cystic lesions. Endosc Ultrasound. 2019 Nov-Dec;8(6):418-427. doi: 10.4103/eus.eus_61_19. PubMed PMID: 31552915; PubMed Central PMCID: PMC6927137.

Background and Objectives: Currently, pancreatic cystic lesions (PCLs) are recognized with increasing frequency and have become a more common finding in clinical practice. EUS is challenging in the diagnosis of PCLs and evidence-based decisions are lacking in its application. This study aimed to develop strong recommendations for the use of EUS in the diagnosis of PCLs, based on the experience of experts in the field.
Methods: A survey regarding the practice of EUS in the evaluation of PCLs was drafted by the committee member of the International Society of EUS Task Force (ISEUS-TF). It was disseminated to experts of EUS who were also members of the ISEUS-TF. In some cases, percentage agreement with some statements was calculated; in others, the options with the greatest numbers of responses were summarized.
Results: Fifteen questions were extracted and disseminated among 60 experts for the survey. Fifty-three experts completed the survey within the specified time frame. The average volume of EUS cases at the experts' institutions is 988.5 cases per year.
Conclusion: Despite the limitations of EUS alone in the morphologic diagnosis of PCLs, the results of the survey indicate that EUS-guided fine-needle aspiration is widely expected to become a more valuable method.

DOI: 10.4103/eus.eus_61_19
PMCID: PMC6927137
PMID: 31552915

37: Giridhar P, Gupta P, Mallick S, Upadhyay AD, Rath GK. Impact of adjuvant therapy on survival in patients with myoepithelial carcinoma: A systematic review and individual patient data analysis of 691 patients. Radiother Oncol. 2019 Nov;140:125-130. doi: 10.1016/j.radonc.2019.06.017. Epub 2019 Jul 2. Review. PubMed PMID: 31276988.

INTRODUCTION: Myoepithelial carcinoma (MEC) is an extremely rare low grade salivary gland neoplasm [1-4]. A surgical resection is considered as corner stone of therapy. Role of adjuvant therapy is not clear.
METHODOLOGY: We performed systematic review and individual patient data analysis

of 691 patients to look into the impact of adjuvant therapy and different prognostic variable for MEC.
RESULTS: Data of 691 individual patients were retrieved from 340 publications. Median age of presentation was 56 years (Range: 0-103 years) with a trend of increasing incidence for increase in age. Major salivary glands (36.4%) were the commonest sub-site followed by minor salivary glands, skin and soft tissue, and breast. Median PFS and OS of entire cohort was 48 months (95% CI: 30-65 months) and 167 months (95% CI: 82-251 months). In univariate analysis A R0 resection was associated with significantly better PFS and OS. Median PFS and OS were significantly worse for patients with tumour size >5 cm compared to smaller tumours and for patients with a mitotic index >10/10 high power field (hpf) compared to lower mitotic index. Adjuvant radiation was found to reduce loco-regional recurrence. Adjuvant radiation and chemotherapy both were associated with negative impact on survival in univariate analysis. This negative impact on survival was lost in multivariate analysis.
CONCLUSION: MEC appears to be a low grade malignancy with good survival outcome. A R0 resection should be the standard of care. Adjuvant radiation should be considered for patients with adverse risk features to improve loco-regional disease control.



DOI: 10.1016/j.radonc.2019.06.017
PMID: 31276988

38: Girishan S, Tripathi M, Garg A, Doddamani R, Bajaj J, Ramanujam B, Chandra PS. Enhancing outcomes of endoscopic vertical approach hemispherotomy: understanding the role of "temporal stem" residual connections causing recurrence of seizures. J Neurosurg Pediatr. 2019 Nov 8:1-9. doi: 10.3171/2019.8.PEDS19148. [Epub ahead of print] PubMed PMID: 31703206.

Objective: The authors sought to analyze the residual connections formed by the temporal stem as a cause for seizure recurrence following endoscopic vertical interhemispheric hemispherotomy and to review and compare lateral approach (perisylvian) with vertical approach surgical techniques to highlight the anatomical factors responsible for residual connections.
METHODS: This study was a retrospective analysis of patients who underwent endoscopic hemispherotomy for drug-resistant epilepsy. Postoperative MR images were analyzed. Specific attention was given to anatomical 3D-acquired thin-section T1 images to assess the extent of disconnection, which was confirmed with a diffusion tensor imaging sequence. Cadaver brain dissection was done to analyze the anatomical factors responsible for persistent connections.
RESULTS: Of 39 patients who underwent surgery, 80% (31/39) were seizure free (follow-up of 23.61 ± 8.25 months) following the first surgery. Thirty patients underwent postoperative MRI studies, which revealed persistent connections in 14 patients (11 temporal stem only; 3 temporal stem + amygdala + splenium). Eight of these 14 patients had persistent seizures. In 4 of these 8 patients, investigations revealed good concordance with the affected hemisphere, and repeat endoscopic disconnection of the residual connection was performed. Two of the 8 patients were lost to follow-up, and 2 had bihemispheric seizure onset. The 4 patients who underwent repeat endoscopic disconnection had seizure-free outcomes following the second surgery, increasing the good outcome total among all patients to 90% (35/39). Cadaveric brain dissection analysis revealed the anatomical factors responsible for the persistence of residual connections.
CONCLUSIONS: In endoscopic vertical approach interhemispheric hemispherotomy (and also vertical approach parasagittal hemispherotomy) the temporal stem, which lies deep and parallel to the plane of disconnection, is prone to be missed, which might lead to persistent or recurrent seizures. The recognition of this

limitation can lead to improved seizure outcome. The amygdala and splenium are areas less commonly prone to be missed during surgery.

DOI: 10.3171/2019.8.PEDS19148
PMID: 31703206

39: Goel AD, Gosain M, Amarchand R, Sharma H, Rai S, Kapoor SK, Krishnan A. Effectiveness of a Quality Improvement Program Using Difference-in-Difference Analysis for Home Based Newborn Care - Results of a Community Intervention Trial. Indian J Pediatr. 2019 Nov;86(11):1028-1035. doi: 10.1007/s12098-019-03012-4. Epub 2019 Jul 19. PubMed PMID: 31325100.

OBJECTIVE: To present evaluation of a quality improvement program for Accredited Social Health Activists (ASHAs).
METHODS: This community intervention trial was conducted in Ballabgarh, India during 2012-2014 with two Primary Health Center (PHC) areas being the intervention areas and two PHC areas being non-intervention areas receiving standard care. Interventions included two-day training in technical and communication skills of ASHAs followed by supportive supervision in the field. Intervention was evaluated by comparing pre and post training scores, feedback from postnatal mothers and a difference-in-difference (DID) analysis on baseline and endline knowledge-practice survey of recently delivered mothers with 95% confidence intervals.
RESULTS: Only 11.1% ASHAs addressed specific barriers for adopting healthy behaviors. Sixty eight (91.8%) ASHAs attended the training after which knowledge improved by 33.3% ($p<0.001$). ASHAs in intervention areas were rated by mothers ($n=69$) to have better communication skills (81.2% vs. 59.7%, $p=0.005$), make more postnatal visits (52.2% vs. 22.2%; $p<0.001$), give advice on newborn care (64% vs. 50.5%; $p<0.001$) as compared to standard care area ASHAs. Endline survey ($n=1360$) showed a significant improvement in frequency of antenatal visits (0.26;0.19-0.33), knowledge about free transport (0.12;0.05-0.18), better cord-care practices (0.15;0.07-0.22), kangaroo mother care (0.19;0.13-0.25), delayed first bath (0.13;0.06-0.20), restrictive handling (0.11;0.06-0.15) and hand-washing (0.19;0.13-0.25).
CONCLUSIONS: Quality improvement program can help improve ASHA's performance which in turn can address higher neonatal mortality in India.

DOI: 10.1007/s12098-019-03012-4
PMID: 31325100

40: Goswami R, Nair A. Diabetes mellitus, vitamin D & osteoporosis: Insights. Indian J Med Res. 2019 Nov;150(5):425-428. doi: 10.4103/ijmr.IJMR_1920_19. PubMed PMID: 31939384.

41: Guleria P, Agarwal S, Iyer VK, Jain D, Mathur SR, Yadav D. Subcategorisation of AUS/FLUS thyroid lesions as per the 2017 Bethesda System for Reporting Thyroid Cytopathology: a retrospective study from a tertiary care centre analysing risk of malignancy (ROM) of the different subcategories. J Clin Pathol. 2019 Nov;72(11):771-777. doi: 10.1136/jclinpath-2019-205985. Epub 2019 Aug 2. PubMed PMID: 31375535.

AIMS: The 2017 Bethesda System for Reporting Thyroid Cytopathology (TBSRTC) recommends subclassification of atypia of undetermined significance (AUS)/follicular lesion of undetermined significance (FLUS) into six subcategories. The present study evaluates the risk of malignancy (ROM) and risk of neoplasm (RON) among these.
METHODS: All thyroid aspirates reported as AUS/FLUS over a 4.5-year period, with

available histology, were reviewed and subclassified as per TBSRTC. ROM and RON were calculated and compared.
RESULTS: Of 2554 thyroid aspirates, 281 (11.0%) were AUS/FLUS. Eighty-one with available histology were evaluated. ROM was 51.8%. Cytologic and architectural atypia (AUS-C&A) was the most prevalent (62.9%), followed by Hürthle cell type (19.6%), AUS-A (11.1%), AUS-not otherwise specified (NOS) (7.4%), cytologic atypia (AUS-C) (4.9%) and atypical lymphoid cells (1.2%). Papillary thyroid carcinoma (PTC) and adenomatous goitre (AG) were the most common histological diagnoses (27% each). On histology, AUS-C had 2/4 PTC and 2/4 AG on histology. AUS-A had 4/9 follicular neoplasm (FN) and 2/9 non-invasive follicular thyroid neoplasm with papillary-like nuclear features (NIFTP) while AUS C&A had 18/51 PTC, 13/51 AG, 11/51 NIFTP and 5/51 FN. ROM and RON were similar across subcategories, ROM was the highest for AUS-C&A (58.8%), AUS-C (50%) and AUS-NOS (50%). NIFTP reclassification as non-malignant reduced ROM to 35.8% (absolute reduction of 16% and a relative decrease of 31%) with the greatest relative decrease seen in AUS-A (50%), followed by AUS-C&A (37%), and none in others.
CONCLUSIONS: AUS/FLUS subcategorisation helped to indicate risk for the more likely neoplasm, whether PTC or FN. ROM was the highest for cases with cytological atypia but did not differ significantly across different subcategories. NIFTP changed the ROM of AUS-A and AUS-C&A, since both NIFTP and FN have microfollicles.



DOI: 10.1136/jclinpath-2019-205985
PMID: 31375535 [Indexed for MEDLINE]

42: Gupta A, Bhatnagar V, Dhua AK, Jana M, Singh A, Malik R. Correlation of Hepatic Artery Resistive Index with Portal Pressure and Serum Nitric Oxide Levels in Patients with Extrahepatic Portal Vein Obstruction. J Indian Assoc Pediatr Surg. 2020 Jan-Feb;25(1):38-42. doi: 10.4103/jiaps.JIAPS_244_18. Epub 2019 Nov 27. PubMed PMID: 31896898; PubMed Central PMCID: PMC6910058.

Aim: The aim was to study the correlation of hepatic artery resistive index (HARI) with the portal pressure (PP) and its surrogate marker serum nitric oxide (NO) levels and to determine the validity of HARI as noninvasive indirect marker of PP in extrahepatic portal venous obstruction (EHPVO) pre- and postoperatively.
Methods: A prospective study was conducted on 19 patients with EHPVO undergoing proximal lienorenal (LR) shunt or devascularization from February 2016 to January 2018. HARI, calculated from Doppler sonography, and NO were measured preoperatively and 14, 30 and 90 days postoperatively. Intraoperatively, PP was measured before splenectomy, and both PP and NO were measured postshunt.
Results: Mean age was 10.58 ± 2.85 years, and male:female ratio was 15:4. LR shunt was done in 16 while three patients required devascularization. There was a significant fall in the HARI (0.06 ± 0.02, P = 0.02), NO (14.31 ± 2.66 μmol/l, P < 0.001), and PP (11.81 ± 1.03 mmHg, P < 0.001) following shunt surgery. However, fall in HARI did not correlate with fall in PP. Preoperative HARI also did not correlate with preshunt/devascularization PP nor with preoperative NO. Postoperatively, HARI did not correlate with NO at 14-, 30-, and 90-day follow-up.
Conclusion: HARI bears no correlation with PP or NO. Hence, it cannot be used as an indirect marker of PP.



DOI: 10.4103/jiaps.JIAPS_244_18
PMCID: PMC6910058

PMID: 31896898

43: Gupta AK, Meena JP. Neutropenia in Pediatric Infections. Indian J Pediatr. 2019 Nov;86(11):983-984. doi: 10.1007/s12098-019-03026-y. Epub 2019 Jul 11. PubMed PMID: 31297677.

44: Gupta B, Sahay P, Kumawat D. Comment on: "Interferon Alpha-2b Eye Drops Prevent Recurrence of Pterygium After the Bare Sclera Technique: A Single-Center, Sequential, and Controlled Study". Cornea. 2019 Nov 27. doi: 10.1097/ICO.0000000000002222. [Epub ahead of print] PubMed PMID: 31789921.

45: Gupta M, Yadav R, Mahey R, Agrawal A, Upadhyay A, Malhotra N, Bhatla N. Correlation of body mass index (BMI), anti-mullerian hormone (AMH), and insulin resistance among different polycystic ovary syndrome (PCOS) phenotypes - a cross-sectional study. Gynecol Endocrinol. 2019 Nov;35(11):970-973. doi: 10.1080/09513590.2019.1613640. Epub 2019 May 12. PubMed PMID: 31081410.

One hundred and fifty infertile polycystic ovary syndrome (PCOS) women were classified into four phenotypes on the basis of Rotterdam criteria. Homeostatic model assessment of insulin resistance (HOMA-IR) with a cutoff ≥2.5 was considered as a measure of insulin resistance (IR). Maximum number of patients, 57 (38%) in our cohort belonged to phenotype A or the classical phenotype with all 3 features of Rotterdam criteria. Mean body mass index (BMI) in all phenotypes was more than 25 kg/m2 and the highest was seen in phenotype B. According to BMI categories in the four phenotypes, more number of women was in the obese category in phenotype A (24.5%) and B (56.5%) in comparison to phenotype C (18.2%) and D (10.8%) (p<.001). There was no difference in median HOMA-IR among different phenotype categories (p=.718). The median value of anti-mullerian hormone (AMH) was highest in phenotype A (11.68 ng/ml [7.94-16.46]) and significantly more in comparison to B phenotype (Kruskal-Wallis, p=.018). Thus there is heterogeneity in AMH levels and BMI in different PCOS phenotypes with higher levels in the most severe phenotypes. There is, however, no correlation of IR among the different phenotype groups and further investigation is needed to characterize its role in phenotypic classification.

DOI: 10.1080/09513590.2019.1613640
PMID: 31081410

46: Gupta N, Vinod KS, Singh G, Nischal N. Bilateral greater auricular nerve thickening in leprosy. QJM. 2019 Nov 4. pii: hcz287. doi: 10.1093/qjmed/hcz287. [Epub ahead of print] PubMed PMID: 31681949.

47: Gupta P, Singh J, Kumar N. Lurasidone-Associated Manic Switch in a Patient With Depression: A Case Report. J Clin Psychopharmacol. 2019 Nov/Dec;39(6):687-689. doi: 10.1097/JCP.0000000000001110. PubMed PMID: 31688393.

48: Gupta S, Mukherjee A, Lodha R, Kabra M, Deepak KK, Khadgawat R, Talwar A, Kabra SK. Effects of Exercise Intervention Program on Bone Mineral Accretion in Children and Adolescents with Cystic Fibrosis: A Randomized Controlled Trial. Indian J Pediatr. 2019 Nov;86(11):987-994. doi: 10.1007/s12098-019-03019-x. Epub 2019 Jul 8. PubMed PMID: 31281938.

OBJECTIVE: To evaluate effect of one year exercise intervention program on bone

mineral accrual in children and adolescent with cystic fibrosis (CF).
METHODS: Fifty-two CF children (mean age 149.79 mo) were randomized into experimental (15 boys and 10 girls) and control groups (15 boys and 12 girls). Experimental group performed prescribed exercises three times/week, while control group continued with routine physical activities for one year. Following were assessed at baseline and at one year: Bone mineral density (BMD) of whole body and lumbar spine, pulmonary function, exercise capacity, quality of life and habitual activity.
RESULTS: Change in whole body and lumbar spine BMD over 12 mo in experimental group was lower by 0.006 g/cm2 (95% CI -0.02 to 0.02) and higher by 0.001 g/cm2 (95% CI -0.04 to 0.03) than controls, respectively. However, difference between groups was non-significant for both parameters. Experimental group had a significant improvement in their exercise capacity (p=0.006), quality of life, and serum vitamin D (p=0.007) levels. Differences between groups for changes in pulmonary function and habitual activity were non-significant.
CONCLUSIONS: Exercise regime was not associated with significant improvement in BMD of CF patients, but it had a positive impact on both physical and psychological health of these patients.

DOI: 10.1007/s12098-019-03019-x
PMID: 31281938

49: Gupta SK, Ramadass S. Vitamin D in chronic obstructive pulmonary disease and asthma in Indian population. Lung India. 2019 Nov-Dec;36(6):473-475. doi: 10.4103/lungindia.lungindia_458_19. PubMed PMID: 31670293; PubMed Central PMCID: PMC6852222.

50: Gupta V, Mehta N, Singh G, Xess I, Khanna N. Mystifying brown, pear-shaped multiseptate structures in the potassium hydroxide mounts of patients with suspected dermatophytosis. Int J Dermatol. 2019 Nov 13. doi: 10.1111/ijd.14704. [Epub ahead of print] PubMed PMID: 31721170.

51: Haque S, Sengupta S, Gupta D, Bhan MK, Kumar R, Khan A, Jailkhani B. S.Typhi derived OmpC peptide conjugated with Vi-polysaccharide evokes better immune response than free Vi-polysaccharide in mice. Biologicals. 2019 Nov;62:50-56. doi: 10.1016/j.biologicals.2019.10.001. Epub 2019 Oct 9. PubMed PMID: 31606267.

Salmonella typhi is a causative organism for typhoid fever. Free Vi capsular polysaccharide (Vi) is licensed for use as vaccine for typhoid fever in individuals 2 years of age and older, which has limited memory response. There is dire need of protein or peptide as conjugate partner with Vi polysaccharide to improve shortcomings of Vi vaccine. Prediction of immunogenic peptide was deduced by program T sites. Carbodiimide mediated conjugation of Vi polysaccharide with OmpCp was performed utilizing ADH as linker. Immune response of Vi-conjugates along with control group was tested in mice. Ig and IgG antibodies against Vi polysaccharide was measured by ELISA. Two immunodominant regions (loop number 3a and 7) with high content of T-cell epitopes from OmpC was selected and synthesized. Vi poly/OmpCp ratios in Vi-conjugates were ~0.43-0.65. Vi polysaccharide alone elicited very low levels of Vi antibody without any booster effect. Vi-conjugate evoked 20-fold higher immune response compared to free Vi. Further, adequate levels of IgG antibodies were induced only by the Vi-conjugate suggesting that T-helper cells had been induced. Our data suggest that selected short peptide (OmpCp)as a carrier with Vi polysaccharide is assumed to be a promising molecule for candidate vaccine for typhoid fever.

DOI: 10.1016/j.biologicals.2019.10.001
PMID: 31606267

52: Iovene MR, Pota V, Galdiero M, Corvino G, Di Lella FM, Stelitano D, Passavanti MB, Pace MC, Alfieri A, Di Franco S, Aurilio C, Sansone P, Niyas VKM, Fiore M. First Italian outbreak of VIM-producing Serratia marcescens in an adult polyvalent intensive care unit, August-October 2018: A case report and literature review. World J Clin Cases. 2019 Nov 6;7(21):3535-3548. doi: 10.12998/wjcc.v7.i21.3535. PubMed PMID: 31750335; PubMed Central PMCID: PMC6854422.

BACKGROUND: Carbapenem-resistant Enterobacteriaceae has become a significant public health concern as hospital outbreaks are now being frequently reported and these organisms are becoming difficult to treat with the available antibiotics.
CASE SUMMARY: An outbreak of VIM-producing Serratia marcescens occurred over a period of 11 wk (August, 1 to October, 18) in patients admitted to the adult polyvalent intensive care unit of the University of Campania "Luigi Vanvitelli" located in Naples. Four episodes occurred in three patients (two patients infected, and one patient colonized). All the strains revealed the production of VIM.
CONCLUSION: After three decades of carbapenem antibiotics use, the emergence of carbapenem-resistance in Enterobacteriaceae has become a significant concern and a stricter control to preserve its clinical application is mandatory. This is, to our knowledge, the first outbreak of VIM-producing Serratia marcescens in Europe. Surveillance policies must be implemented to avoid future outbreaks.



DOI: 10.12998/wjcc.v7.i21.3535
PMCID: PMC6854422
PMID: 31750335

53: Ismail J, Sankar J. Maintenance Intravenous Fluids in Children - The Verdict was Already Out? Indian J Pediatr. 2019 Nov;86(11):981-982. doi: 10.1007/s12098-019-03049-5. Epub 2019 Aug 22. PubMed PMID: 31440965.

54: Izzuddeen Y, Gupta S, Haresh KP, Sharma D, Giridhar P, Rath GK. Hypofractionated radiotherapy with temozolomide in diffuse intrinsic pontine gliomas: a randomized controlled trial. J Neurooncol. 2020 Jan;146(1):91-95. doi: 10.1007/s11060-019-03340-7. Epub 2019 Nov 14. PubMed PMID: 31728883.

INTRODUCTION: Diffuse intrinsic pontine glioma (DIPG) is the most common form of brainstem glioma. The present study was performed to assess if hypofractionated radiotherapy completed in < 3 weeks with temozolomide improves survival in DIPG.
MATERIAL AND METHODS: The present study is a phase II open label randomized trial. The study included newly diagnosed patients with DIPG. Patients in arm A received conventional fractionated RT of 60 Gy in 30 fractions over 6 weeks while patients in arm B received hypo-fractionated radiotherapy of 39 Gy in 13 fractions over 2.6 weeks along with concurrent Temozolomide (TMZ) 75 mg/m2 from day 1 to day 17 followed by adjuvant TMZ for six cycles. The survival analysis was performed with modified intention to treat analysis.
RESULTS: A total of 35 patients were randomized. 33 patients were evaluable. 93% (n = 14) of patients in the conventional arm completed treatment while only 17% (n = 3) of the children could complete planned course of treatment in the

experimental arm. The median overall survival (OS) was 11 months (95% CI - 7.5 to 14.5 months) in the conventional arm and 12 months (95% CI - 10.5 to 13.5 months) in the experimental arm (p=0.208). 28% (n=5) patients in the experimental arm developed grade 3 or 4 hematological toxicity.
CONCLUSION: The above study shows that hypofractionated radiotherapy with concurrent and adjuvant temozolomide does not improve OS and has higher hematological toxicity. Conventional radiotherapy remains the standard of care.

DOI: 10.1007/s11060-019-03340-7
PMID: 31728883

55: Jain P, Ojha SK, Kumar V, Bakhshi S, Singh S, Yadav S. Differential seminal plasma proteome signatures of acute lymphoblastic leukemia survivors. Reprod Biol. 2019 Dec;19(4):322-328. doi: 10.1016/j.repbio.2019.11.002. Epub 2019 Nov 8. PubMed PMID: 31711845.

With advances in therapeutic methods, there is a high survival rate among leukemia patients, of an extent more than 80%. However, chemotherapeutic drugs used to treat these patients have adverse effects on their overall health profile including fertility. The primary aim of this study was to identify differentially expressed proteins in seminal plasma of acute lymphoblastic leukemia (ALL) survivors compared to age-matched healthy controls, which can provide molecular basis of idiopathic infertility in such survivors. Differential proteome profiling was performed by 2D-differential in-gel electrophoresis, protein spots were identified by mass spectrometry and selective differentially expressed proteins (DEPs) were validated by western blotting and ELISA method. Out of eight DEPs identified, five proteins (isocitrate dehydrogenase 1, semenogelin 1, lactoferrin, prolactin-inducible protein, and human serum albumin) were upregulated and three (pepsinogen, prostate specific antigen and prostatic acid phosphatase) were downregulated. Expression profiles of these proteins are suggestive of reduction in semen quality in ALL survivors and can further be explored to determine their fertility status.



DOI: 10.1016/j.repbio.2019.11.002
PMID: 31711845

56: Jat KR, Lodha R. Do Inhaled Corticosteroids Alter Nasopharyngeal Flora in Children with Asthma? Indian Pediatr. 2019 Nov 15;56(11):911-912. PubMed PMID: 31729319.

57: Jha J, Singh MK, Singh L, Pushker N, Bajaj MS, Sen S, Kashyap S. Expression of BAP1 and ATM proteins: Association with AJCC tumor category in uveal melanoma. Ann Diagn Pathol. 2019 Nov 22;44:151432. doi: 10.1016/j.anndiagpath.2019.151432. [Epub ahead of print] PubMed PMID: 31864162.

BACKGROUND: Our aim is to detect the association of BAP1 with ATM protein with AJCC tumor category and its prognostic significance.
METHODS: Based on AJCC tumor category, 69 patients samples were categorized into group A (LBD > 15 mm & tumor thickness ≥ 8 mm) and group B (LBD ≤ 15 mm & tumor thickness < 8 mm) subjected to immunohistochemistry to assess the nuclear expression of ATM and BAP1 proteins. Mutational analysis of BAP1 was performed on five samples from each group.
RESULTS: Group A tumors showed insertion mutation of BAP1 gene while there was no

mutation seen in group B tumor. At translational level loss of ATM and BAP1 was found in 65% and 66% of cases respectively. Loss of ATM with BAP1 was seen in 55% of cases which was more frequent in group A which was statically significant with metastasis (p = 0.006), advanced tumor staging (p = 0.021) and reduced metastasis-free survival (p = 0.048). On multivariate analysis loss of ATM along with BAP1 came out to be an independent prognostic marker (p = 0.035). CONCLUSION: Our data suggest that loss of BAP1 along with ATM might serve as a potential prognostic indicator in patients with an advanced AJCC tumor category, which leads to an increased risk of metastasis.



DOI: 10.1016/j.anndiagpath.2019.151432
PMID: 31864162

58: Kakkar A, Zubair A, Sharma N, Monga R, Sharma SC. Synchronous Oncocytic Papillary Cystadenoma and Warthin Tumor of the Parotid Gland. Int J Surg Pathol. 2019 Nov 7:1066896919886370. doi: 10.1177/1066896919886370. [Epub ahead of print] PubMed PMID: 31698976.

Warthin tumor (WT) is the second most common benign salivary gland neoplasm. It is also the most frequent salivary gland tumor to occur synchronously or metachronously with another salivary gland neoplasm, in the same gland or on the other side. Oncocytic papillary cystadenomas (OPCs) are rare neoplasms that are more common in minor salivary gland locations and in women. We describe in detail the case of a 73-year-old male smoker with synchronous OPC and WT of the parotid gland. On microscopy, both tumors resembled each other considerably, with the only difference being that the OPC lacked the tumor-associated lymphoid proliferation characteristic of WT. These findings highlight that OPC bears considerable similarity to WT. While this morphological similarity may lead to misdiagnosis on rare occasions, it does not affect patient management, as clinical behavior of both these tumors is similar.

DOI: 10.1177/1066896919886370
PMID: 31698976

59: Kakkar A, Jangra K, Kumar N, Sharma MC, Mathur SR, Deo SS. Epithelial-myoepithelial carcinoma of the breast: A rare type of malignant adenomyoepithelioma. Breast J. 2019 Nov;25(6):1273-1275. doi: 10.1111/tbj.13463. Epub 2019 Jul 16. PubMed PMID: 31310415.

60: Kakkar A, Bhardwaj N, Sakthivel P, Singh CA, Jain D, Mathur SR, Iyer VK. Fine needle aspiration cytology of cribriform adenocarcinoma of minor salivary gland, a recently defined entity. Cytopathology. 2019 Nov;30(6):662-666. doi: 10.1111/cyt.12750. Epub 2019 Jul 30. PubMed PMID: 31271678.

61: Kathiresan P, Ambekar A, Sarkar S. Opioid Substitution Treatment Using Buprenorphine for Management of Dependence on Natural Opioids: Case Series. Indian J Psychol Med. 2019 Nov 11;41(6):586-588. doi: 10.4103/IJPSYM.IJPSYM_62_19. eCollection 2019 Nov-Dec. PubMed PMID: 31772448; PubMed Central PMCID: PMC6875849.

62: Kaur A, Ruhela A, Sharma P, Khariwal H, Seth S, Kumar A, Kapil A, Elangovan R, Kalyanasundaram D. Simultaneous and high sensitive detection of Salmonella typhi and Salmonella paratyphi a in human clinical blood samples using an

affordable and portable device. Biomed Microdevices. 2019 Nov 9;21(4):95. doi: 10.1007/s10544-019-0441-6. PubMed PMID: 31707575.

Enteric fever is one of the leading causes of infection and subsequent fatality (greater than 1.8 million) (WHO 2018), especially in the developing countries due to contaminated water and food inter twinned with unhygienic practices. Clinical gold standard technique of culture-based method followed by biochemical tests demand 72+ hours for diagnosis while newly developed techniques (like PCR, RT-PCR, DNA microarray etc.) suffer from high limit of detection or involve high-cost infrastructure or both. In this work, a quick and highly specific method, SMOL was established for simultaneous detection of Salmonella paratyphi A and Salmonella typhi in clinical blood samples. SMOL consists of (i) pre-concentration of S. typhi and S. paratyphi A cells using magnetic nanoparticles followed by (ii) cell lysis and DNA extraction (iii) amplification of select nucleic acids by LAMP technique and (iv) detection of amplified nucleic acids using an affordable portable device (costs less than $70). To identify the viability of target cells at lower concentrations, the samples were processed at two different time periods of t = 0 and t = 4 h. Primers specific for the SPA2539 gene in S. paratyphi A and STY2879 gene in S. typhi were used for LAMP. Within 6 h SMOL was able to detect positive and negative samples from 55 human clinical blood culture samples and detect the viability of the cells. The results were concordant with culture and biochemical tests as well as by qPCR. Statistical power analysis yielded 100%. SMOL results were concordant with culture and biochemical tests as well as by qPCR. The sensitive and affordable system SMOL will be effective for poor resource settings.

DOI: 10.1007/s10544-019-0441-6
PMID: 31707575

63: Kaur M, Sahoo AK, Gupta S. Unusual presentation of erythema elevatum diutinum in an HIV-positive man with dramatic response to dapsone. Int J STD AIDS. 2019 Nov;30(13):1337-1339. doi: 10.1177/0956462419874985. Epub 2019 Nov 15. PubMed PMID: 31726928.

64: Kaur R, Kumar A, Hadda V, Kalaivani M, Nongkynrih B, Kant S, Gupta SK, Vignesh D. Quality of spirometry testing in a community setting: A study among elderly persons in a rural area of Haryana. J Family Med Prim Care. 2019 Nov 15;8(11):3718-3725. doi: 10.4103/jfmpc.jfmpc_719_19. eCollection 2019 Nov. PubMed PMID: 31803679; PubMed Central PMCID: PMC6881915.

Introduction: Chronic obstructive pulmonary disease (COPD) is a leading cause of morbidity and mortality worldwide. Early diagnosis and management of COPD require good quality spirometry testing, which is currently not available at primary care level in India. This study reports the quality of spirometry testing at the community level among elderly persons in a rural area.
Materials and Methods: A community-based cross-sectional study was conducted among 449 elderly persons in a rural area of Ballabgarh block of Haryana state by a trained investigator. A portable spirometer (MIR Spirolab®) was used. House-to-house visits were undertaken. A self-developed pretested semistructured interview schedule was administrated and spirometry was done according to the American Thoracic Society/European Respiratory Society (ATS/ERS) guidelines.
Results: Acceptable quality of spirometry tests was found among 87.3% (95% CI: 84.2%-90.4%) participants. Poor quality of spirometry was associated with low Body Mass Index (BMI) (aOR = 0.49, 95% CI = 0.26-0.93) and age ≥ 70 years (aOR = 0.45, 95% CI = 0.21-0.94) in multivariable analysis.
Conclusion: Acceptable quality of spirometry can be performed in community

settings by using a portable spirometer.



DOI: 10.4103/jfmpc.jfmpc_719_19
PMCID: PMC6881915
PMID: 31803679

65: Kaushik S, Shyam H, Agarwal S, Sharma R, Nag TC, Dwivedi AK, Balapure AK. Genistein potentiates Centchroman induced antineoplasticity in breast cancer via PI3K/Akt deactivation and ROS dependent induction of apoptosis. Life Sci. 2019 Dec 15;239:117073. doi: 10.1016/j.lfs.2019.117073. Epub 2019 Nov 19. PubMed PMID: 31751581.

AIMS: Recently, strategies of cancer treatment using combination of agents with distinct molecular mechanism(s) of action are considered more promising due to its high efficacy and reduced systemic toxicity. The study is aimed to improve the efficacy of selective estrogen receptor modulator, Centchroman (CC) by combination with the phytoestrogen Genistein (GN).
METHODS: Cytotoxicity was evaluated by Sulforhodamine B assay. Cell cycle analysis was done through flow cytometry. Further, Apoptosis was analyzed using Annexin V/PI staining, tunel assay and electron microscopic examination and verified using western blot analysis. In order to validate the in vitro results, in vivo analysis was performed using 4T1-syngeneic mouse model.
KEY FINDINGS: In this study, we report that the dietary isoflavone genistein (GN) synergistically improved antineoplasticity of CC in breast cancer by arresting cells at G2/M phase culminating in ROS dependent apoptosis. The combination of CC plus GN caused dysregulation of Bax and Bcl-2 ratio inducing mitochondrial dysfunction, activation of Caspase-3/7, -9 and PARP cleavage. Further, combination significantly suppresses phosphorylation of PI3K/Akt/NF-κB, enhancing apoptosis. Additionally, combination markedly reduced tumor growth compared to CC and GN alone in mouse 4T1 breast tumor model.
SIGNIFICANCE: Together, these studies suggest that GN represents a potential adjunct molecule whose role in CC induced apoptosis deserves attention.



DOI: 10.1016/j.lfs.2019.117073
PMID: 31751581

66: Keppen C, Therie D, Keppen J, Khamo V, Kanga U. Description of the novel null allele, HLA-DPA1*01:29N in a Lotha individual from Nagaland, North-East India. HLA. 2020 Jan;95(1):82-83. doi: 10.1111/tan.13734. Epub 2019 Nov 6. PubMed PMID: 31628780.

A single nucleotide change in HLA-DPA1*01:03:01:01 results in the novel null allele, HLA-DPA1*01:29N.



DOI: 10.1111/tan.13734
PMID: 31628780

67: Keppen C, Savino Z, Kapfo W, Khamo V, Kanga U. HLA-C*04:01:01:78, a novel variant of HLA-C*04, detected in a Sumi individual from Nagaland, North-East India. HLA. 2020 Jan;95(1):58-59. doi: 10.1111/tan.13733. Epub 2019 Nov 6. PubMed PMID: 31628763.

One nucleotide substitution (C>G) in 3'-UTR of HLA-C*04:01:01:01 results in the novel allele, HLA-C*04:01:01:78.



DOI: 10.1111/tan.13733
PMID: 31628763

68: Keppen C, Sharma A, Abid M, Khamo V, Kanga U. Discovery of the novel allele, HLA-C*03:04:01:38 in two individuals from the Ao tribe of Nagaland, North-East India. HLA. 2020 Jan;95(1):53-54. doi: 10.1111/tan.13732. Epub 2019 Nov 6. PubMed PMID: 31622048.

One nucleotide substitution (C>T) in intron 1 of HLA-C*03:04:01:02 results in the novel allele, HLA-C*03:04:01:38.



DOI: 10.1111/tan.13732
PMID: 31622048

69: Keppen C, Sharma A, Gautam SK, Khamo V, Kanga U. HLA-C*07:06:01:06-A new HLA-C allele identified in an Ao tribal individual from Nagaland, North-East India. HLA. 2020 Jan;95(1):65-66. doi: 10.1111/tan.13719. Epub 2019 Nov 6. PubMed PMID: 31605430.

Two nucleotide changes in the 3'untranslated region of HLA-C*07:06:01:01 results in the novel allele, HLA-C*07:06:01:06.



DOI: 10.1111/tan.13719
PMID: 31605430

70: Khilnani GC, Dubey D, Hadda V, Sahu SR, Sood S, Madan K, Tiwari P, Mittal S, Mohan A, Pandey RM, Guleria R. Predictors and microbiology of ventilator-associated pneumonia among patients with exacerbation of chronic obstructive pulmonary disease. Lung India. 2019 Nov-Dec;36(6):506-511. doi: 10.4103/lungindia.lungindia_13_19. PubMed PMID: 31670298; PubMed Central PMCID: PMC6852209.

Background: Understanding the risk factors and microbiology of ventilator-associated pneumonia (VAP) among patients with chronic obstructive pulmonary disease (COPD) is important for the application of preventive and therapeutic interventions. Therefore, this study was planned to assess the clinical predictors and microbiological features of VAP among COPD patients.
Materials and Methods: This prospective study involved patients with exacerbation of COPD who required mechanical ventilation and admitted in respiratory intensive care unit at a tertiary care teaching hospital. Various baseline demographic and clinical features were compared between patients with VAP and without VAP. Univariate and multivariable analyses were done to assess the impact of demographic and clinical features on the development of VAP.
Results: The study included 100 intubated patients with age (mean ± standard deviation [SD]) of 62.45 ± 8.32 years, duration (median) of COPD of 6 years, and Acute Physiology, Age, and Chronic Health Evaluation score (mean ± SD) of 18.60 ± 4.30. In this cohort, 17 patients developed VAP. Multivariable analysis showed that Sequential Organ Failure Assessment (SOFA) score at admission, re-intubation, and history of previous hospitalization were independent

predictors of VAP with odds ratio (95% confidence interval) of 2.70 (1.24, 5.63; P = 0.012), 66.96 (4.86, 922.72; P = 0.002), and 35.92 (2.84, 454.63; P = 0.006), respectively. Acinetobacter baumannii was the most frequent organism (n = 8; 47%), followed by Klebsiella pneumoniae (n = 5; 29%), Pseudomonas aeruginosa (n = 1; 6%), and Enterobacter spp. (n = 1; 6%). All organisms were multidrug resistant (MDR).
Conclusions: SOFA score at admission, re-intubation, and history of previous hospitalization were independent predictors of VAP. Antimicrobial therapy for VAP should cover MDR Gram-negative organisms.

DOI: 10.4103/lungindia.lungindia_13_19
PMCID: PMC6852209
PMID: 31670298

71: Khokhar SK, Tomar A, Pillay G, Agarwal E. Response to comments on: Biometric changes in Indian pediatric cataract and postoperative refractive status. Indian J Ophthalmol. 2019 Nov;67(11):1907. doi: 10.4103/ijo.IJO_1489_19. PubMed PMID: 31638075; PubMed Central PMCID: PMC6836617.

72: Kishore S, Gupta SK, Arava SK, Mridha AR, Jaiswal AK, Sikary AK, Bharti DR, Behera C. Biochemical findings in sudden unexpected death in epilepsy: Hospital based case-control study. J Forensic Leg Med. 2019 Nov 9;69:101884. doi: 10.1016/j.jflm.2019.101884. [Epub ahead of print] PubMed PMID: 31739178.

PURPOSE: A review study on the biochemistry of epilepsy showed that in epileptic patients, serum glucose and cholesterol concentrations are low, sodium is unaffected, potassium increases, glucose is high and mild hypocalcemia. We have conducted a biochemical study on sudden unexpected death in epilepsy (SUDEP) cases in an attempt to establish the characteristic biochemical values to diagnose these deaths.
METHODS: This was a hospital based case-control study done at All India Institute of Medical Sciences, New Delhi for one year. Twenty SUDEP cases and 20 age- and sex-matched controls were included in the study. Femoral blood, cerebrospinal fluid, vitreous humor, and pericardial fluid were biochemically analyzed for sodium, potassium, calcium, glucose, N-acetyl- cysteine activated creatine kinase (CK-NAC) and isoenzyme CK-MB.
RESULT: Serum sodium, CK-MB and CK-NAC level was found significantly increased and potassium level was found decreased in SUDEP cases in comparison to non-epileptic deaths. Likewise, in CSF, sodium and CK-NAC was found increased and potassium level was found decreased in SUDEP cases. In vitreous humor, sodium and CK-MB level was found increased and potassium level was found decreased in SUDEP cases in comparison to non-epileptic deaths. In pericardial fluid, sodium, CK-NAC and CK-MB level was found increased and potassium level was found decreased in SUDEP cases in comparison to non-epileptic deaths.
CONCLUSION: It concludes that high sodium level and low potassium level could be associated with SUDEP. However, this is a small size study, a larger study is needed to verify the findings. Furthermore, it is difficult to conclude whether these findings are exclusive to SUDEP.



DOI: 10.1016/j.jflm.2019.101884
PMID: 31739178

73: Kumar A, Misra S, Yadav AK, Sagar R, Verma B, Grover A, Prasad K. Role of glial fibrillary acidic protein as a biomarker in differentiating intracerebral

haemorrhage from ischaemic stroke and stroke mimics: a meta-analysis. Biomarkers. 2020 Feb;25(1):1-8. doi: 10.1080/1354750X.2019.1691657. Epub 2019 Nov 28. PubMed PMID: 31702405.

Background: Studies have suggested promising evidence that glial fibrillary acidic protein (GFAP) could be used as a blood biomarker to distinguish between ischaemic stroke (IS) and intracerebral haemorrhage (ICH) in acute stage.Objective: To determine the available evidence for GFAP as a blood biomarker for differentiating ICH from IS and stroke mimics using a meta-analysis approach.Methods: Search terms were used for literature search: ("STROKE" [Mesh] OR "BIOMARKER" [Title/Abstract] OR "GFAP" [Title/Abstract])] OR "SPECIFICITY" OR "SENSTIVITY" at various search engines like PubMed, Google scholar, Trip database, clinicaltrial.gov for articles from 1990 to April 2019 using filter 'human subjects'. Data were analysed using software STATA version 13.Results: A pooled analysis including 12 studies suggested that GFAP if used as a biomarker to differentiate between different types of strokes (ICH from IS and mimics) had a sensitivity of 78% (95% CI: 67-86%) and a specificity of 95% (95% CI: 88-98%). Positive likelihood ratio (LR) was 14.4 and negative LR was 0.23. SROC with prediction and confidence contours suggests promising area under the curve 0.93, 95% CI ranges from 0.90 to 0.95. Diagnostic odds ratio with 95% CI was observed 63 (31-125).Conclusion: Our meta-analysis suggests that GFAP has a promising diagnostic accuracy for the differentiation of ICH from IS and mimics. Further, phase II and phase III diagnostic test studies are required to validate the findings before using GFAP as a blood based biomarker for clinical use. Trial Registration: This study was registered in OSF registries 10.17605/OSF.IO/B9JP4.

DOI: 10.1080/1354750X.2019.1691657
PMID: 31702405

74: Kumar A, Agarwal D. Resident-to-resident bedside teaching: An innovative concept. Indian J Ophthalmol. 2019 Nov;67(11):1901-1902. doi: 10.4103/ijo.IJO_909_19. PubMed PMID: 31638069; PubMed Central PMCID: PMC6836586.

75: Kumar A, Agarwal D, Nayak S. Commentary: Improving training in retina in Indian residency programmes. Indian J Ophthalmol. 2019 Nov;67(11):1819-1820. doi: 10.4103/ijo.IJO_1441_19. PubMed PMID: 31638040; PubMed Central PMCID: PMC6836595.

76: Kumar BK, Lodha R. Can Vitamin D Supplementation Reduce Risk of Recurrence of Pneumonia in Under-Five Children? Indian J Pediatr. 2019 Dec;86(12):1083-1084. doi: 10.1007/s12098-019-03103-2. Epub 2019 Nov 8. PubMed PMID: 31705381.

77: Kumar P, Singh A, Hanumanthappa Chandrashekhara S. Kommerell's diverticulum: rare cause of unilateral vocal cord palsy. BMJ Case Rep. 2019 Nov 24;12(11). pii: e227682. doi: 10.1136/bcr-2018-227682. PubMed PMID: 31767601.

Kommerell's diverticulum is a relatively rare congenital aortic arch anomaly. A 56-year-old man presented with complaint of gradually progressive hoarseness of voice since 6 months. Clinical examination revealed no evidence of palpable neck mass or cervical lymphadenopathy. Indirect laryngoscopy showed right vocal cord in median position and was immobile during phonation with normal left vocal cord. This was followed by contrast-enhanced CT (CECT) of the neck and upper chest for further evaluation. CT scan showed features of right vocal cord palsy. CECT also showed right-sided aortic arch with aberrant origin of the left subclavian artery. Aneurysmal dilatation of the aortic arch was noted at the take off of aberrant left subclavian artery suggesting Kommerell's diverticulum. Therefore,

diagnosis of right vocal cord palsy due to compression of the right recurrent laryngeal nerve (RLN) by Kommerell's diverticulum was kept. Left RLN palsy did not occur in this case because the left RLN likely courses around the normal segment of the aortic arch just proximal to the origin of the left subclavian artery. As the patient was mildly symptomatic, he was kept on conservative treatment with close follow-up. The present case report highlights importance of the inclusionn of the superior mediastinum on CT scan in case of suspected vocal cord palsy to exclude vascular causes of RLN paralysis.



DOI: 10.1136/bcr-2018-227682
PMID: 31767601

78: Kumar P, Singh B, Thakur V, Thakur A, Thakur N, Pandey D, Chand D. Hyper-production of taxol from Aspergillus fumigatus, an endophytic fungus isolated from Taxus sp. of the Northern Himalayan region. Biotechnol Rep (Amst). 2019 Nov 15;24:e00395. doi: 10.1016/j.btre.2019.e00395. eCollection 2019 Dec. PubMed PMID: 31799144; PubMed Central PMCID: PMC6881681.

Taxol® (generic name Paclitaxel) is a chemotherapeutic drug, effective against head, neck, breast, lung, bladder, ovary, and cervix cancers. Rising demands in chemotherapy and limited supply of natural taxol have ultimately increased the cost of the drug. Semi synthesis using taxol precursors is not able to meet the global supply and has intensified the need to find alternative ways of taxol production. In the present study, 34 different endophytes were isolated from Taxus sp. collected from Shimla, Himachal Pradesh (India). Primary screening of taxol-producing fungi was carried out based on the presence of dbat gene, essential for the taxol biosynthetic pathway. A fungal isolate TPF-06 was screened to be a taxol-producing strain based on the PCR amplification results. It was characterized and identified as Aspergillus fumigatus by 18S rRNA (Accession No. KU-837249). Multiple sequence alignment (MSA) of nuclear ribosomal internal transcribed spacer (ITS) region and phylogenetic analysis confirmed that strain belonged to A. fumigatus clade (Accession No. MF-374798) and is endophytic in nature. Presence of taxol was detected and quantified by High-Performance Liquid Chromatography (HPLC) and characterized by using Thin Layer Chromatography (TLC), Ultraviolet (UV) spectroscopy, Mass spectrometry (MS), Fourier-Transform Infrared Spectroscopy (FTIR) and Nuclear Magnetic Resonance (NMR) spectroscopy. Microbial fermentation in the S7 medium yielded 1.60 g/L of taxol, which to the best of our knowledge is the highest taxol production from an endophytic fungus. Findings of the present study suggest that the A. fumigatus is an excellent alternate source for taxol supply, and it may become a highly potent strain on a commercial scale. The involvement of dbat gene in A. fumigatus KU-837249 strain further suggested a way of increasing taxol yield in fungi by medium engineering and recombinant DNA technology in the future.



DOI: 10.1016/j.btre.2019.e00395
PMCID: PMC6881681
PMID: 31799144

79: Kumar R, Shah TH, Hadda V, Tiwari P, Mittal S, Madan K, Khan MA, Mohan A. Assessment of quadriceps muscle thickness using bedside ultrasonography by nurses and physicians in the intensive care unit: Intra- and inter-operator agreement. World J Crit Care Med. 2019 Nov 19;8(7):127-134. doi: 10.5492/wjccm.v8.i7.127. eCollection 2019 Nov 19. PubMed PMID: 31853448; PubMed Central PMCID: PMC6918044.

BACKGROUND: Data regarding the agreement among multiple operators for measurement of quadriceps muscle thickness by bedside ultrasonography (USG) are sparse.
AIM: To statistically assess the agreement among 5 operators for measurement of quadriceps muscle thickness on bedside USG.
METHODS: This was a cross-sectional observational study. The 5 operators of varied experience (comprised of 1 critical care consultant, 2 fellows, and 2 nurses) independently measured quadriceps muscle thickness in triplicate for 45 critically ill patients each, using USG. Intra- and interrater agreement rates among the 5 operators were assessed using intraclass correlation coefficient (ICC) and expressed with 95% confidence interval (CI).
RESULTS: The 5 operators produced a total of 135 readings and 675 observations for ICC calculations to determine the intraoperator and interoperator variations respectively. For intraoperator agreement, the overall ICC (95%CI) was 0.998 (0.997, 0.999) for operator 1, 0.998 (0.997, 0.999) for operator 2, 0.997 (0.995, 0.999) for operator 3, 0.999 (0.998, 0.999) for operator 4, and 0.998 (0.997, 0.999) for operator 5. For interoperator agreement, the overall ICC (95%CI) was 0.977 (0.965, 0.986; P < 0.001) for reading 1, 0.974 (0.960, 0.984; P < 0.001) for reading 2, and 0.975 (0.961, 0.985; P < 0.001) for reading 3.
CONCLUSION: USG measurement of quadriceps muscle thickness was not dependent on clinical experience, supporting training for nurses in it.



DOI: 10.5492/wjccm.v8.i7.127
PMCID: PMC6918044
PMID: 31853448

80: Kumar S, Sarangi SC, Tripathi M, Ramanujam B, Gupta YK. Seizure recurrence risk in persons with epilepsy undergoing antiepileptic drug tapering. Acta Neurol Scand. 2020 Jan;141(1):65-76. doi: 10.1111/ane.13183. Epub 2019 Nov 14. PubMed PMID: 31618439.

OBJECTIVES: Antiepileptic drug (AED) tapering in persons with epilepsy (PWE) after 2-3 years of seizure freedom is still debatable because of the risk of seizure recurrence. Tapering patterns have wide variability and could impact seizure recurrence; this study aimed to find out the correlation between them.
MATERIAL AND METHODS: This prospective, observational independent assessor study enrolled PWE undergoing AED tapering in a tertiary care hospital. Data collected included demography, seizure history, AED treatment, and investigational findings. Tapering pattern was assessed based on seizure-free period and AED dose before onset of tapering, dose reduction percentage and frequency, duration of tapering, and follow-up. These variables were compared among the PWE with seizure recurrence and no seizure recurrence.
RESULTS: Among 408 enrolled PWE, 181 were on AED monotherapy: levetiracetam (73), valproate (45), carbamazepine (44), phenytoin (16), and clobazam (3). With a minimum 19 (maximum 41 months) follow-up, seizure recurrence was reported in 119 (29.2%) PWE. The seizure recurrence was not significantly different in-between mono and polytherapy groups; however, among monotherapy groups seizure recurrence was significantly higher (P = .023) in valproate (35.5%) followed by levetiracetam (28.8%) group. Parameters having significant association with seizure recurrence were duration of epilepsy (P = .03), frequency of seizures before control (P = .002), history of previously failed tapering (P = .04), and history of smoking/alcoholic/tobacco intake (P = .003).
CONCLUSIONS: There is a wide variation in AEDs tapering pattern and seizure recurrence risk can be minimized by considering the risk factors like history of smoking/alcoholic/tobacco, longer duration of epilepsy, frequency of seizures

before control, and previously failed tapering.



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PMID: 31618439

81: Kumar S, Singh S, Singh K, Rajkumar S, Balhara YPS. Prevalence and pattern of problematic internet use among engineering students from different colleges in India. Indian J Psychiatry. 2019 Nov-Dec;61(6):578-583. doi: 10.4103/psychiatry.IndianJPsychiatry_85_19. PubMed PMID: 31896863; PubMed Central PMCID: PMC6862987.

Introduction: The college students are prone to use internet in a manner that could negatively affect several aspects of their life. The present study is one of the largest studies to be undertaken in India, aimed at understanding the existing pattern of internet use and estimating the prevalence of problematic internet use (PIU) among college students.
Materials and Methods: The Generalized Problematic Internet Use Scale 2 (GPIUS-2) was used to assess the PIU. Multiple linear regression analysis was conducted to ascertain the relationship between GPIUS-2 total score and demographic and internet use-related variables.
Results: Of 3973 respondents from 23 engineering colleges located in the different parts of the country, about one-fourth (25.4%) had GPIUS-2 scores suggestive of PIU. Among the variables studied, older age, greater time spent online per day, and use of internet mainly for social networking were associated with greater GPIUS-2 scores, indicating higher risk for PIU. Students who used internet mainly for academic activities and during evening hours of the day were less likely to have PIU.
Conclusion: This study suggests PIU among engineering college students in India is an important public health concern. There is a need to create awareness among students, emerging adults, parents, and concerned authorities about the harms associated with PIU. Furthermore, there is a need to implement preventive strategies for inculcating pattern of safe and healthy internet usage among them. In addition, there is a need to develop public health policies for prevention and treatment of PIU and conduct further research to enhance our understanding about the same.



DOI: 10.4103/psychiatry.IndianJPsychiatry_85_19
PMCID: PMC6862987
PMID: 31896863

82: Kumar S, M S NK, Soneja M, Ray A. Acquired inter-bronchial fistula: uncommon complication of a common disease. Postgrad Med J. 2019 Nov 25. pii: postgradmedj-2019-137157. doi: 10.1136/postgradmedj-2019-137157. [Epub ahead of print] PubMed PMID: 31767671.

83: Kumawat D, Sachan A. Re: Hillier etÂ al.: The pneumatic retinopexy versus vitrectomy for the management of primary rhegmatogenous retinal detachment outcomes randomized trial (PIVOT) (Ophthalmology. 2019;126:531-539). Ophthalmology. 2019 Nov;126(11):e84. doi: 10.1016/j.ophtha.2019.05.003. PubMed PMID: 31635707.

84: Kusuma YS, Babu BV. The costs of seeking healthcare: Illness, treatment

seeking and out of pocket expenditures among the urban poor in Delhi, India. Health Soc Care Community. 2019 Nov;27(6):1401-1420. doi: 10.1111/hsc.12792. Epub 2019 Jun 25. PubMed PMID: 31237386.

The poor often experience illness and the treatment costs are high and even catastrophic for the poor. This paper reports the extent of illness, treatment-seeking behaviour and out of pocket healthcare expenditures and the determinants of treatment-seeking behaviour and healthcare expenditures among the urban poor living in Delhi. A total of 2,998 households participated in the study. Socio-demographic details, illness experiences (episodic illness in the past 3 months, hospitalisation in the past 1 year and any chronic illness), treatment seeking and healthcare expenditures were collected for all household members through a pretested, interviewer-administered questionnaire. Logistic regressions were carried out for factors associated with treatment-seeking choices. Multiple linear regressions were carried for factors associated with out of pocket expenditures (OOPE). Of the total 15,218 household members (of the 2,998 households), 4,052 (26.6%) experienced episodic illness (mainly fever, respiratory illnesses, food- and waterborne diseases and eye infections) in the past 3 months, 230 (1.5%) were hospitalised and 976 (6.4%) have chronic illness (mainly hypertension, diabetes, arthritis and respiratory problems). Of the 2,998 households, 2,225 (74.2%) households reported at least one event of illness. Unqualified practitioners were the main source of care for episodic illnesses. Perceived seriousness of the illness, having Employees State Insurance Scheme (ESIS) benefit, higher educational status of the head of the household, higher monthly household incomes, belonging other backward castes and settled-migrant status led to seeking formal care. Dengue was the main reason for hospitalisation. Government including ESIS hospitals were mainly utilised for hospitalisation. Healthcare expenditures were higher for private healthcare. Possession of mandatory health insurance was protective against OOPEs. OOPEs were more for the men/boys and for the young. Improving access to government healthcare services is important. Extending the ESIS to the unorganised workers including urban poor migrants should be considered so as to bring them under mandatory social protection.



DOI: 10.1111/hsc.12792
PMID: 31237386

85: Lejding T, Engfeldt M, Bruze M, Isaksson M, Svedman C, Zimerson E, Verma K, Mowitz M. Skin application of glutathione and iron sulfate can inhibit elicitation of allergic contact dermatitis from hexavalent chromium. Contact Dermatitis. 2020 Jan;82(1):45-53. doi: 10.1111/cod.13409. Epub 2019 Nov 14. PubMed PMID: 31584201.

BACKGROUND: Allergic contact dermatitis (ACD) caused by hexavalent chromium, Cr(VI), is often severe and difficult to treat. The most common source of exposure to Cr(VI) in Sweden used to be cement, and more recently leather. The contact allergy can be diminished or inhibited if the exposure is decreased or ceases. Barrier creams against different kinds of allergens have been investigated for their protective properties which may offer protection against Cr(VI) exposure.
OBJECTIVES: To investigate the capacity of formulas containing glutathione (GSH) and iron sulfate to inhibit elicitation of ACD in Cr(VI)-allergic individuals when exposed to Cr(VI).
METHODS: In 18 Cr(VI)-allergic volunteers the back was divided into eight patch test areas which were treated with preparations of possible barrier creams, prior to patch testing with a dilution series of potassium dichromate and a buffered

extract of cement.
RESULTS: A significant reduction in reactivity to Cr(VI) and cement extract on skin treated with formulas containing GSH or iron sulfate was noticed, compared with untreated skin.
CONCLUSION: Formulas containing GSH or iron sulfate in barrier creams inhibit ACD in individuals allergic to Cr(VI) when applied before exposure to Cr(VI) and cement extract.



DOI: 10.1111/cod.13409
PMID: 31584201

86: Magoon R, Karanjkar A, Kaushal B, Sharan S. Extravascular Lung Water Estimation for Prediction of Reperfusion Injury After Pulmonary Endarterectomy: A Closer Look. J Cardiothorac Vasc Anesth. 2019 Nov 16. pii: S1053-0770(19)31154-1. doi: 10.1053/j.jvca.2019.11.007. [Epub ahead of print] PubMed PMID: 31812564.

87: Magoon R, Kaushal B, Das D, Jangid SK. Norepinephrine in Sepsis: Looking beyond Vasoconstriction! Indian J Crit Care Med. 2019 Nov;23(11):544. doi: 10.5005/jp-journals-10071-23280. PubMed PMID: 31911752; PubMed Central PMCID: PMC6900891.

88: Makhija N, Magoon R, Sarkar S. Transesophageal echocardiographic imaging of an aortic intramural hematoma: characterizing the crescent. Can J Anaesth. 2019 Nov;66(11):1415-1416. doi: 10.1007/s12630-019-01456-y. Epub 2019 Jul 31. PubMed PMID: 31367902.

89: Makkar JK, Gourav KKP, Jain K, Singh PM, Dhatt SS, Sachdeva N, Bhadada S. Transforaminal Versus Lateral Parasagittal Versus Midline Interlaminar Lumbar Epidural Steroid Injection for Management of Unilateral Radicular Lumbar Pain: A Randomized Double-Blind Trial. Pain Physician. 2019 Nov;22(6):561-573. PubMed PMID: 31775403.

BACKGROUND: Epidural steroid injections (ESIs) are commonly used for management of lumbosacral radicular pain. Midline interlaminar (MIL) or transforaminal (TF) routes are commonly used. The TF route, although associated with higher delivery of drug to the ventral epidural space, has serious complications including spinal cord injury and permanent paralysis reported in literature. Therefore, there is a search for a technically better route with fewer complications and greater drug delivery into the ventral epidural space. Recently, a parasagittal interlaminar (PIL) approach has been defined.
OBJECTIVES: We conducted this study to compare therapeutic effectiveness of 3 techniques of ESIs in patients having unilateral lumbar radiculopathy. Further, effect of ESI on bone mineral density (BMD) and serum osteocalcin levels were studied.
STUDY DESIGN: Randomized double-blind trial.
SETTING: Pain clinic of a tertiary care hospital.
METHODS: Sixty-five patients were randomly allocated into group MIL, group PIL, and group TF to receive epidural injection with 80 mg of methylprednisolone and 2 mL of 2% lidocaine. Effective pain relief and improvement in disability were assessed using Visual Analog Scale (VAS) and Modified Oswestry Disability Questionnaire (MODQ) scores at 2 weeks, 4 weeks, 3 months, and 6 months, respectively. Patients with < 50% relief received additional injection. Primary outcome of study was effective pain relief at 6 months. Mean change in VAS and

MODQ scores, BMD, and serum osteocalcin levels were secondary outcome assessed.
RESULTS: Patients having effective pain relief were significantly higher in group PIL (16 of 20 [80%]) and group TF (15 of 20 [75%]) compared with group MIL. Patients receiving ESI in group PIL and group TF showed significantly lower VAS scores than group MIL (P = 0.02, P = 0.50 at 3 months and P = 0.00, P = 0.02 at 6 months, respectively). Mean MODQ scores in group PIL and group TF were significantly lower than group MIL. However, group PIL and group TF did not significantly differ in MODQ scores. There was no significant change in serum osteocalcin and BMD, as assessed by dual energy x-ray absorptiometry scan at 3 months.
LIMITATIONS: The absence of a placebo control group, small sample size, and relatively short follow-up of 6 months were limitations.
CONCLUSIONS: PIL approach is equivalent to TF and superior to MIL approach in terms of effective pain relief and decrease in disability in patients with unilateral lumbar radiculopathy. This study showed no deleterious effect on BMD.
KEY WORDS: Epidural steroid, technique, efficacy, bone marrow density, serum osteocalcin.

PMID: 31775403

90: Makkar JK, Jain K, Kuberan A, Balasubramanian M, Bhatia N, Singh PM. Pre-emptive multimodal analgesic regimen reduces post-operative epidural demand boluses in traumatic shaft of femur fracture - A randomised controlled trial. Indian J Anaesth. 2019 Nov;63(11):895-899. doi: 10.4103/ija.IJA_363_19. Epub 2019 Nov 8. PubMed PMID: 31772397; PubMed Central PMCID: PMC6868665.

Background and Aims: The efficacy of preemptive multimodal analgesia in post-traumatic patients has not been elucidated. Our aim was to evaluate the efficacy of preemptive MMA regimen in reducing the epidural demand boluses in the first 48 hours following the traumatic shaft of femur fractures.
Methods: Patients scheduled for traumatic femur fracture surgery were randomised (n = 135) into two groups in this double blind, placebo controlled trial. Patients received either (Preemptive multimodal group) intravenous acetaminophen 1 gm, diclofenac 75 mg, morphine 3 mg, 75 mg Pregabalin (per oral) or a placebo 30 minutes pre-operatively. Intra-operatively, all patients were managed with spinal and epidural anaesthesia. Post-operatively, patients received patient-controlled epidural analgesia (PCEA) programmed to deliver a bolus of 5 ml of 0.2% Ropivacaine with 2 µg/ml of Fentanyl with lockout interval time of 15 min. Primary outcome was number of PCEA boluses received post-operatively over 48 h. Secondary outcomes measures were time to receive first epidural bolus, postoperative VAS scores and episodes of post-operative nausea, vomiting and sedation. Total number of PCEA bolus doses over 48 hours and VAS scores were analysed using Mann-Whitney test.
Results: Significant reduction in median number of demand boluses were observed in preemptive multimodal group (3 [2-4]) compared to placebo group (5 [4-7]); P = 0.00. Time to first rescue epidural bolus was significantly greater in preemptive multimodal group than placebo group.
Conclusion: The use of preemptive MMA regimen reduced the requirement of demand epidural bolus doses.



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PMCID: PMC6868665
PMID: 31772397

91: Malgulwar PB, Kakkar A, Sharma MC, Ghosh R, Pathak P, Sarkar C, Suri V, Singh

M, Kale SS, Faruq M. Loss of SMARCB1/INI1 Immunoexpression in Chordoid Meningiomas. Neurol India. 2019 Nov-Dec;67(6):1492-1497. doi: 10.4103/0028-3886.273647. PubMed PMID: 31857543.

Background: Chordoid meningiomas have an aggressive clinical course characterized by frequent recurrences. Recent whole-genome sequencing studies demonstrated Chr22 loss in chordoid meningiomas not accounted for by NF2 mutations. SMARCB1/INI1 is a candidate gene on Chr22, which has not been analyzed extensively in meningiomas. AKT1 mutation has been recently identified to be a driver of meningiomagenesis.
Materials and Methods: Cases of chordoid meningioma were retrieved along with meningiomas of other subtypes for comparison. INI1 immunohistochemistry was performed. SMARCB1 and AKT1 were analyzed by sequencing.
Results: Sixteen chordoid meningiomas were identified (1.1% of all meningiomas). Six cases (37.5%) showed loss of INI1 immunoexpression. All other meningioma subtypes (n = 16) retained INI1 immunoexpression. AKT1 E17K mutation was identified in one case (16.7%). Notably, SMARCB1 mutations were not identified in any of the chordoid meningiomas analyzed, including those showing INI1 loss immunohistochemically.
Conclusion: This is the first study to demonstrate loss of SMARCB1/INI1 immunoexpression in chordoid meningiomas, adding to the tumors with INI1 loss. However, in absence of INI1 mutation, mechanisms for INI1 loss require further evaluation. Identification of AKT1 mutation opens up new avenues for targeted therapy in patients with such aggressive tumors.

DOI: 10.4103/0028-3886.273647
PMID: 31857543

92: Mathew R, Agrawal N, Aggarwal P, Jamshed N. Atrial Myxoma Presenting as Acute Bilateral Limb Ischemia. J Emerg Med. 2019 Nov;57(5):710-712. doi: 10.1016/j.jemermed.2019.06.006. Epub 2019 Sep 3. PubMed PMID: 31492590.

BACKGROUND: Cardiac myxoma is the most common primary benign tumor of the heart and it has diverse clinical presentations. It is known to embolize into systemic circulation. However, presentation with complete occlusion of the aorta is uncommon.
CASE REPORT: We report an 18-year-old female who presented to the emergency department with features of acute bilateral limb ischemia. Arterial Doppler ultrasonography showed infrarenal aortic occlusion. A bedside cardiac ultrasound was done in the emergency department which clinched the diagnosis of atrial myxoma. Complete surgical excision of the tumor and subsequent histopathologic examination confirmed the diagnosis of atrial myxoma. WHY SHOULD AN EMERGENCY PHYSICIAN BE AWARE OF THIS?: This report puts emphasis on the fact that atrial myxoma, though rare, may be considered as a source of embolism in patients presenting with acute limb ischemia. The importance of bedside ultrasonography for early diagnosis in such presentations is also highlighted.



DOI: 10.1016/j.jemermed.2019.06.006
PMID: 31492590

93: Mehra S, Panwar R, Thakur B, Yadav R, Kumar M, Singh R, Dash NR, Sahni P, Chauhan SS. Expression and Clinical Implications of Cysteine Cathepsins in Gallbladder Carcinoma. Front Oncol. 2019 Nov 22;9:1239. doi: 10.3389/fonc.2019.01239. eCollection 2019. PubMed PMID: 31824841; PubMed Central PMCID: PMC6883407.

Background: Gallbladder carcinoma (GBC) exhibits poor prognosis due to its detection at an advanced stage. Upregulation of lysosomal cysteine proteases cathepsin L (CTSL) and cathepsin B (CTSB) has been implicated in several tumorigenic processes. However, no such information in GBC was available. Therefore, the present study was planned to investigate the expression and clinical significance of these cathepsins in GBC. Methods: Activities of CTSL and CTSB were assayed in the gallbladder (GB) tissues obtained from GBC patients (n = 43) and control subjects (n = 69). Protein and mRNA levels were quantified using immunohistochemistry and real-time PCR (qPCR), respectively. Finally, serum levels of CTSL and CTSB were estimated by ELISA. Receiver operating characteristic (ROC) curve analysis was used for the assessment of sensitivity, specificity, and diagnostic accuracy of these cysteine cathepsins in GBC. The association of combined CTSL and CTSB activity with overall survival was assessed using Kaplan Meier survival analysis. Results: The expression and activity of both CTSL and CTSB were significantly increased ($p < 0.050$) in tumors of GBC patients as compared to controls. Enzymatic activity of CTSL+B and CTSB exhibited a strong positive association with tumor stage and lymph node involvement in GBC ($p < 0.050$). Interestingly, the elevated activity of combined CTSL+B was also associated with increased mortality in these patients. Furthermore, significantly enhanced levels of serum CTSL and CTSB were also observed in GBC ($p < 0.050$) as compared to controls. ROC analysis revealed high diagnostic significance of serum CTSB and CTSL for distinguishing GBC patients from controls with an area under the curve (AUC) of 82 and 77%, respectively. Conclusion: This study, for the first time, demonstrates the clinical significance of CTSL and CTSB overexpression in GBC. Our findings may help improve the clinical management of this carcinoma.



DOI: 10.3389/fonc.2019.01239
PMCID: PMC6883407
PMID: 31824841

94: Mehta NH, Garg B, Ansari T, Srivastava DN, Kotwal PP. Comparison of Magnetic Resonance Arthrography and Wrist Arthroscopy in the Evaluation of Chronic Wrist Pain in Indian Population. Indian J Orthop. 2019 Nov-Dec;53(6):769-775. doi: 10.4103/ortho.IJOrtho_92_19. PubMed PMID: 31673180; PubMed Central PMCID: PMC6804379.

Background: The purpose of our study was to compare magnetic resonance arthrography (MRA) as a diagnostic modality against the gold standard of wrist arthroscopy in the evaluation of chronic wrist pain.
Materials and Methods: Thirty three patients with chronic wrist pain suspected to have ligament injuries of the wrist were prospectively recruited. They underwent MRA examinations followed by wrist arthroscopy. Arthroscopic findings were compared with radiological findings focusing on three important structures - triangular fibrocartilage complex (TFCC), scapholunate ligament (SLL), and lunotriquetral ligament (LTL).
Results: For the 17 patients with TFCC tears/perforations on arthroscopy, MRA gave a sensitivity (SEN) = 88%, specificity (SPE) = 87.5%, positive predictive value (PPV) = 88%, and negative predictive value (NPV) = 87.5%. For the 13 patients with SLL tears on arthroscopy, MRA gave SEN = 77%, SPE = 100%, PPV = 100%, and NPV = 87%. For the 7 patients with LTL tears on arthroscopy, MRA gave SEN = 29%, SPE = 100%, PPV = 100%, and NPV = 84%. A composite correlation between findings on MRA and wrist arthroscopy revealed an overall SEN = 73%, SPE = 96%, PPV = 93%, and NPV = 85% for MRA, with overall accuracy = 88%.
Conclusions: The presented diagnostic results of MRA are superior to those of

magnetic resonance imaging quoted in literature. MRA is a potent tool for evaluating chronic wrist pain but tends to miss lesions of intrinsic carpal ligaments (SLL and LTL) more than TFCC. Wrist arthroscopy may be recommended when the clinical suspicion is strong.



DOI: 10.4103/ortho.IJOrtho_92_19
PMCID: PMC6804379
PMID: 31673180

95: Mittal A, Gupta N, Soneja M. Touraine-Solente-Gole syndrome. BMJ Case Rep. 2019 Nov 19;12(11). pii: e232238. doi: 10.1136/bcr-2019-232238. PubMed PMID: 31748366.

96: Mittal K, Ningombam A, Chawla R, Shaikh N, Datta SK. Refractile Particles in the Anterior Chamber of an Eye: A Rare Case. J Appl Lab Med. 2019 Nov;4(3):464-467. doi: 10.1373/jalm.2018.028845. Epub 2019 Aug 2. PubMed PMID: 31659088.

97: Mittal S, Madan K, Mohan A, Hadda V. A young male with hemoptysis. Lung India. 2019 Nov-Dec;36(6):558-559. doi: 10.4103/lungindia.lungindia_165_19. PubMed PMID: 31670309; PubMed Central PMCID: PMC6852220.

98: Modak T, Singh S, Kumar S, Deep R. Substance Use Related Emergencies in a Tertiary Care General Hospital Setting: Observations and Discussion. Indian J Psychol Med. 2019 Nov 11;41(6):595-597. doi: 10.4103/IJPSYM.IJPSYM_410_18. eCollection 2019 Nov-Dec. PubMed PMID: 31772452; PubMed Central PMCID: PMC6875831.

99: Mohindra R, Mathew R, Yadav S, Aggarwal P. CISNE versus MASCC: Identifying low risk febrile neutropenic patients. Am J Emerg Med. 2019 Nov 30. pii: S0735-6757(19)30629-1. doi: 10.1016/j.ajem.2019.09.016. [Epub ahead of print] PubMed PMID: 31864874.

OBJECTIVE: Febrile neutropenia though a dreaded complication of chemotherapy, not all patients need inpatient treatment. Risk score indices like MASCC and CISNE have been developed to identify low risk patients eligible for outpatient management. We undertook this study to compare the performances of MASCC and CISNE.
METHODS: This was a prospective observational study conducted in a tertiary care centre from August 2017 to April 2019 where patients with chemotherapy induced febrile neutropenia were included. Basic demographic data and primary site of cancer were collected with characteristics required to calculate both MASCC and CISNE scores. The primary outcome measure was 30-day mortality. Apart from the 3 group risk stratification of CISNE, apriori it was decided that two-tier CISNE score will be calculated with 0 or 1 score as low risk and ≥2 as high risk. Descriptive statistics are reported and predictive performance of each score was analysed.
RESULTS: Total of 129 patients were recruited. The performance of three-tier CISNE score was more specific (90.6%, 95% CI 76.9-96.9) but sensitivity (25.1%, 95% CI 17.0-36.3) was low compared to that of MASCC score (sensitivity 58.1%, 95% CI 47.0-68.5; specificity 65.1, 95% CI 49.0-78.5%). However, analysis with two-tier CISNE score demonstrated a better sensitivity (56.9%, 95%CI 45.8-67.4).

Kappa for agreement between the two scores was 0.520 (95% CI 0.373-0.667, p < 0.001).
CONCLUSION: CISNE and MASCC have fair discriminatory power in identifying low risk febrile neutropenia cases. Two group stratification on CISNE scoring will help in better decision making in emergency department.



DOI: 10.1016/j.ajem.2019.09.016
PMID: 31864874

100: Mukherjee SB, Devamare S, Seth A, Sapra S. Development, Cognition, Adaptive Function and Maladaptive Behavior in HIV-infected and HIV-exposed Uninfected Children Aged 2-9 Years. Indian Pediatr. 2019 Nov 15;56(11):933-937. Epub 2019 Aug 10. PubMed PMID: 31441434.

OBJECTIVE: To compare development/cognition, adaptive function and maladaptive behavior of HIV-infected and HIV-exposed uninfected children between 2 to 9 years with HIV-uninfected controls.
METHODS: This hospital-based cross-sectional study was conducted from November, 2013 to March, 2015. 50 seropositive HIV-infected, 25 HIV-exposed uninfected and 25 HIV-uninfected children between 2 to 9 years were administered Developmental Profile 3, Vineland Adaptive Behavior Scale 2, and Child Behavior Checklist for assessing development, adaptive function and maladaptive behaviour, respectively. Additional data were obtained by history, examination and review of records.
RESULTS: Significant developmental/cognitive impairment was observed in 38 (76%), 16 (64%) and 6 (24%) HIV-infected, HIV-exposed uninfected, and HIV-uninfected children, respectively. Significant impairment in adaptive function was found in 12 (24%) and 2 (8%) HIV-infected and HIV-exposed uninfected children, respectively. Maladaptive behavior was not seen in any group.
CONCLUSIONS: High magnitude of impaired development/cognition and adaptive function in HIV-exposed and HIV-infected children warrants assessment of these domains during follow-up of these children, and incorporation of interventions for these deficits in standard care for this group.

PMID: 31441434

101: Nag TC, Maurya M, Roy TS. Age-related changes of the human retinal vessels: Possible involvement of lipid peroxidation. Ann Anat. 2019 Nov;226:35-47. doi: 10.1016/j.aanat.2019.06.007. Epub 2019 Jul 19. PubMed PMID: 31330304.

BACKGROUND: Aging of the human retina is accompanied by oxidative stress that exerts profound changes in the retinal neurons. It is unknown if oxidative stress influences the cellular components of the retinal vessels in some ways.
METHODS: We examined changes in retinal vessels in human donor eyes (age: 35-94 years; N=18) by light and transmission electron microscopy, TUNEL and immunohistochemistry for biomarkers of vascular smooth muscle cells (SMC; actin), oxidative stress (4-hydroxy 2-nonenal [HNE] and nitrotyrosine), microglia (Iba-1) and vessels (isolectin B4).
RESULTS: The earliest changes in the endothelium and pericytes of capillaries are apparent from the seventh decade. With aging, there is clear loss of organelles and cytoplasmic filaments, and a progressive thickening of the endothelial and pericyte basal lamina. Loss of filaments, accumulation of lipofuscin and autophagic vacuoles are significant events in aging pericytes and SMC. Actin immunolabelling reveals discontinuity in arterial SMC layers during eighth decade, indicating partial degeneration of SMC. This is followed by hyalinization, with degeneration of the endothelium and SMC in arteries and

arterioles of the nerve fibre layer (NFL) and ganglion cell layer in ninth decade. Iba-1 positive microglia were in close contact with the damaged vessels in inner retina, and their cytoplasm was rich in lysosomes. HNE immunoreactivity, but not of nitrotyrosine, was detected in aged vessels from seventh decade onwards, suggesting that lipid peroxidation is a major problem of aged vessels. However, TUNEL positivity seen during this period was limited to few arteries and venules of NFL.
CONCLUSION: This study shows prominent age-related alterations of the pericytes and SMC of retinal vessels. These changes may limit the energy supply to the neurons and be responsible for age-related loss of neurons of the inner retina.



DOI: 10.1016/j.aanat.2019.06.007
PMID: 31330304

102: Nambirajan A, Singh V, Irugu DVK, Agarwal S, Jain D. Spindle epithelial tumour with thymus-like elements presenting with lymph node metastasis: An illustrative case report with review of literature. Cytopathology. 2019 Nov;30(6):657-661. doi: 10.1111/cyt.12742. Epub 2019 Jul 15. PubMed PMID: 31209931.

103: Nandi M, Sikri K, Chaudhary N, Mande SC, Sharma RD, Tyagi JS. Multiple transcription factors co-regulate the Mycobacterium tuberculosis adaptation response to vitamin C. BMC Genomics. 2019 Nov 21;20(1):887. doi: 10.1186/s12864-019-6190-3. PubMed PMID: 31752669; PubMed Central PMCID: PMC6868718.

BACKGROUND: Latent tuberculosis infection is attributed in part to the existence of Mycobacterium tuberculosis in a persistent non-replicating dormant state that is associated with tolerance to host defence mechanisms and antibiotics. We have recently reported that vitamin C treatment of M. tuberculosis triggers the rapid development of bacterial dormancy. Temporal genome-wide transcriptome analysis has revealed that vitamin C-induced dormancy is associated with a large-scale modulation of gene expression in M. tuberculosis.
RESULTS: An updated transcriptional regulatory network of M.tuberculosis (Mtb-TRN) consisting of 178 regulators and 3432 target genes was constructed. The temporal transcriptome data generated in response to vitamin C was overlaid on the Mtb-TRN (vitamin C Mtb-TRN) to derive insights into the transcriptional regulatory features in vitamin C-adapted bacteria. Statistical analysis using Fisher's exact test predicted that 56 regulators play a central role in modulating genes which are involved in growth, respiration, metabolism and repair functions. Rv0348, DevR, MprA and RegX3 participate in a core temporal regulatory response during 0.25 h to 8 h of vitamin C treatment. Temporal network analysis further revealed Rv0348 to be the most prominent hub regulator with maximum interactions in the vitamin C Mtb-TRN. Experimental analysis revealed that Rv0348 and DevR proteins interact with each other, and this interaction results in an enhanced binding of DevR to its target promoter. These findings, together with the enhanced expression of devR and Rv0348 transcriptional regulators, indicate a second-level regulation of target genes through transcription factor-transcription factor interactions.
CONCLUSIONS: Temporal regulatory analysis of the vitamin C Mtb-TRN revealed that there is involvement of multiple regulators during bacterial adaptation to dormancy. Our findings suggest that Rv0348 is a prominent hub regulator in the vitamin C model and large-scale modulation of gene expression is achieved through interactions of Rv0348 with other transcriptional regulators.

DOI: 10.1186/s12864-019-6190-3
PMCID: PMC6868718
PMID: 31752669

104: Nayak S, Coshic P, Pandey RM, Chatterjee K. Frequent plateletpheresis donations & its effect on haematological parameters: An observational study. Indian J Med Res. 2019 Nov;150(5):468-476. doi: 10.4103/ijmr.IJMR_512_18. PubMed PMID: 31939390.

Background & objectives: The well-being of donors undergoing frequent plateletpheresis has been a matter of concern. The aim of this study was to analyze the effect of frequent plateletpheresis on the haematological parameters (HP) of repeat donors.
Methods: The study was conducted during February 2016 to March 2017 on all the repeat plateletpheresis donors undergoing the 2nd plateletpheresis within a month of the first in a tertiary care centre. Donors repeating plateletpheresis 3rd and 4th times were also studied. The values of the HP observed on follow up after plateletpheresis done on three different separators were compared.
Results: HPs of the 98 donors were similar at follow up except mean platelet volume (P <0.05). Of the 98 donors, 35 were followed up within a week and 63 were followed up within 8-30 days. No significant alteration was found in the HPs except a significant difference in the variation of platelet counts of the two groups (P=0.025). In 34 donors who presented 3rd time for plateletpheresis (mean gap between 1st and 3rd plateletpheresis=31 days), no significant differences in the HPs were found except the platelet distribution width (P <0.05). Minimal difference in the HP was found in the baseline and the follow up of 3rd plateletpheresis i.e., at 4th plateletpheresis donation. Plateletpheresis through all the three cell separators used had similar effects on the follow up HPs.
Interpretation & conclusions: Repeated plateletpheresis can be done without any detrimental effects on the cell counts of the plateletpheresis donors. The three cell separators yielded similar post-donation follow up haematological parameters.

DOI: 10.4103/ijmr.IJMR_512_18
PMID: 31939390

105: Ojha V, Sharma A, Gulati G, Ramakrishnan S. True Right Ventricular Diverticulum in Tetralogy of Fallot: A Rare Association. Ann Thorac Surg. 2019 Nov;108(5):e345. doi: 10.1016/j.athoracsur.2019.04.056. Epub 2019 Jun 8. PubMed PMID: 31653298.

106: Pandey D, Patel SKS, Singh R, Kumar P, Thakur V, Chand D. Solvent-Tolerant Acyltransferase from Bacillus sp. APB-6: Purification and Characterization. Indian J Microbiol. 2019 Dec;59(4):500-507. doi: 10.1007/s12088-019-00836-8. Epub 2019 Nov 4. PubMed PMID: 31762514; PubMed Central PMCID: PMC6842382.

Amidase from Bacillus sp. APB-6 with very good acyltransferase activity was purified to homogeneity with a purification fold of 3.68 and 53.20% enzyme yield. The purified protein's subunit molecular mass was determined approximately 42 kDa. Hyperactivity of the enzyme was observed at pH 7.5 (150 mM, potassium-phosphate buffer) and 50 °C of incubation. An enhancement in activity up to 42% was recorded with ethylenediaminetetraacetic acid and dithiothreitol. The kinetic parameter K m values for substrates: acetamide and hydroxylamine-hydrochloride were 73.0 and 153 mM, respectively. Further, the V max for acyltransferase activity was 1667 U/mg of protein and the K i for acetamide was calculated as 37.0 mM. The enzyme showed tolerance to various organic solvents (10%, v/v) and worked well in the biphasic reaction medium. The

acyltransferase activity in presence of solvents i.e. biphasic medium may prove highly favorable for the transformation of hydrophobic amides, which otherwise is not possible in simple aqueous phase.



DOI: 10.1007/s12088-019-00836-8
PMCID: PMC6842382 [Available on 2020-12-01]
PMID: 31762514

107: Pandey NN, Sinha M, Shaw M, Sharma A. Spontaneous isolated left ventricular intramyocardial dissection. Ann Thorac Surg. 2019 Nov 14. pii: S0003-4975(19)31692-3. doi: 10.1016/j.athoracsur.2019.09.066. [Epub ahead of print] PubMed PMID: 31734248.

108: Pandey NN, Sharma A, Sinha M. Isolated infundibuloarterial inversion with crisscross pulmonary arteries. Asian Cardiovasc Thorac Ann. 2019 Nov 14:218492319888045. doi: 10.1177/0218492319888045. [Epub ahead of print] PubMed PMID: 31726852.

109: Pandey NN, Sharma A, Kumar S. Rare configuration of a five-vessel aortic arch causing stridor. Asian Cardiovasc Thorac Ann. 2019 Nov;27(9):788-789. doi: 10.1177/0218492319888049. Epub 2019 Nov 4. PubMed PMID: 31684737.

110: Patil S, Singh N. Silk fibroin-alginate based beads for human mesenchymal stem cell differentiation in 3D. Biomater Sci. 2019 Nov 1;7(11):4687-4697. doi: 10.1039/c9bm01000a. Epub 2019 Sep 5. PubMed PMID: 31486468.

Lately silk fibroin has gained a lot of popularity as a tissue engineering scaffold due to its exceptional mechanical properties, negligible inflammatory reactions, remarkable biocompatibility, and tunable biodegradability. Nonetheless, 3 dimensional (3D) silk fibroin based scaffolds, which allow simultaneous formation of scaffolds and cell encapsulation with minimal damage to the cells, are unavailable, as most of the methods involve the use of some cell destructive techniques. Thus, cells have to be loaded after the scaffold formation and the study has to rely upon the ability of the cells to penetrate the scaffold to obtain a 3D microenvironment. Hence, these platforms do not allow for a true 3D system replicating the in vivo environment. Here silk fibroin-alginate based beads have been developed, and retain silk fibroin for a longer period of time and allow for simultaneous cell encapsulation as the crosslinking method is cell-compatible. It is demonstrated for the first time that these silk fibroin-alginate beads can be used to encapsulate the cells at varying cell densities depending on the desired application. These beads were further used to study the effect of functional groups on human mesenchymal stem cell (hMSC) differentiation in 3D, by utilizing carboxylic groups naturally present in alginate as well as introducing phosphate groups. The results showed that these beads were able to support the growth and proliferation of hMSCs and induced differentiation solely due to functional groups within 14 days. These beads were better in directing hMSC differentiation into osteogenic and chondrogenic lineages compared to 2D surfaces and differentiation media.

DOI: 10.1039/c9bm01000a
PMID: 31486468

111: Patra S, Bhari N, Mohta P, Singh S, Ramam M, Agarwal S. Adult-onset Still's

disease presenting as blotchy and flagellate pigmentation. Indian J Dermatol Venereol Leprol. 2019 Nov-Dec;85(6):626-628. doi: 10.4103/ijdvl.IJDVL_513_18. PubMed PMID: 31571611.

112: Picetti E, Rossi S, Abu-Zidan FM, Ansaloni L, Armonda R, Baiocchi GL, Bala M, Balogh ZJ, Berardino M, Biffl WL, Bouzat P, Buki A, Ceresoli M, Chesnut RM, Chiara O, Citerio G, Coccolini F, Coimbra R, Di Saverio S, Fraga GP, Gupta D, Helbok R, Hutchinson PJ, Kirkpatrick AW, Kinoshita T, Kluger Y, Leppaniemi A, Maas AIR, Maier RV, Minardi F, Moore EE, Myburgh JA, Okonkwo DO, Otomo Y, Rizoli S, Rubiano AM, Sahuquillo J, Sartelli M, Scalea TM, Servadei F, Stahel PF, Stocchetti N, Taccone FS, Tonetti T, Velmahos G, Weber D, Catena F. WSES consensus conference guidelines: monitoring and management of severe adult traumatic brain injury patients with polytrauma in the first 24â€‰hours. World J Emerg Surg. 2019 Nov 29;14:53. doi: 10.1186/s13017-019-0270-1. eCollection 2019. Review. PubMed PMID: 31798673; PubMed Central PMCID: PMC6884766.

The acute phase management of patients with severe traumatic brain injury (TBI) and polytrauma represents a major challenge. Guidelines for the care of these complex patients are lacking, and worldwide variability in clinical practice has been documented in recent studies. Consequently, the World Society of Emergency Surgery (WSES) decided to organize an international consensus conference regarding the monitoring and management of severe adult TBI polytrauma patients during the first 24 hours after injury. A modified Delphi approach was adopted, with an agreement cut-off of 70%. Forty experts in this field (emergency surgeons, neurosurgeons, and intensivists) participated in the online consensus process. Sixteen recommendations were generated, with the aim of promoting rational care in this difficult setting.



DOI: 10.1186/s13017-019-0270-1
PMCID: PMC6884766
PMID: 31798673

113: Pradhan P, Lal P, Sen K. Long Term Outcomes of Intratympanic Dexamethasone in Intractable Unilateral Meniere's Disease. Indian J Otolaryngol Head Neck Surg. 2019 Nov;71(Suppl 2):1369-1373. doi: 10.1007/s12070-018-1431-3. Epub 2018 Jun 24. PubMed PMID: 31750179; PubMed Central PMCID: PMC6841822.

To evaluate the long term effect of Intratympanic dexamethasone in intractable Meniere's disease. 30 patients with refractory Meniere's disease which did not respond to the standard medical management, were treated with Intratympanic dexamethasone injections. Post treatment hearing outcome and dizziness scores were compared with the pretreatment values respectively. The mean dizziness handicap inventory (DHI) score was reduced from 91.58 (range 80-100) to be 31.00 ($p=0.00$) at 3 months of treatment. With the successive follow-up periods, the mean DHI scores were reduced to 51.50, 46.6, and 50.90 at the end of, 6, 12, and 24 months ($p=0.04$, 0.35, and 0.49 respectively). Again at the end of 24 months, 23.80% of patients were free of vertigo ($p=0.01$). No patient had improvement in the hearing (>10 dB) in any of the follow-up periods and 6.6% demonstrated deterioration in hearing. There were no major intraoperative or postoperative complications detected. Intratympanic injection of steroid is a safe and effective method for treating intractable Meniere's disease. Although short term improvement in the vertigo is well documented, still in 23% of the patients were found to be free of vertigo at even the end of 24 months. There was no significant improvement in hearing noticed, either in short term or in long term.

DOI: 10.1007/s12070-018-1431-3
PMCID: PMC6841822 [Available on 2020-11-01]
PMID: 31750179

114: Prasad K. Statistical Significance versus Clinical Importance. Neurol India. 2019 Nov-Dec;67(6):1513-1514. doi: 10.4103/0028-3886.273608. PubMed PMID: 31857548.

115: Punj J, Kaler P, Ankalagi B, Prasad A, Sinha R, Sagar P. Successful anaesthesia management of a child with hunter syndrome for adenotonsillectomy. Intractable Rare Dis Res. 2019 Nov;8(4):286-288. doi: 10.5582/irdr.2019.01072. PubMed PMID: 31890459; PubMed Central PMCID: PMC6929600.

Airway management in a child with hunter syndrome is a challenge to the anesthetists. Various methods to achieve this are reported in literature. Here we describe another method in a three year old male child posted for adenotonsillectomy and myringotomy. After check videolaryngoscopy with C Mac blade size 2, vocal cords were not visible even with various monoevres. Thus a larger blade size 3 was used to place it under the epiglottis after which posterior part of vocal cords became visible and bougie guided endotracheal intubation was successful. Thus we recommend that in a child with hunter syndrome if vocal cords are not visible, a larger blade can be utilized to place under the epiglottis to visualize the vocal cords for successful endotracheal intubation.



DOI: 10.5582/irdr.2019.01072
PMCID: PMC6929600
PMID: 31890459

116: Pushker N, Meel R, Kumar A, Kashyap S, Sen S, Bajaj MS. Orbital and periorbital dermoid/epidermoid cyst: a series of 280 cases and a brief review. Can J Ophthalmol. 2019 Nov 8. pii: S0008-4182(19)30650-7. doi: 10.1016/j.jcjo.2019.08.005. [Epub ahead of print] PubMed PMID: 31712044.

OBJECTIVE: To report one of the largest case series on periorbital and orbital dermoid/epidermoid cyst and to highlight some important and unusual findings.
METHODS: Retrospective analysis of 280 cases with orbital or periorbital dermoid/epidermoid cyst that presented over a period of 14 years.
RESULTS: Periorbital cyst was more than twice as common as orbital cyst. Majority of patients had bony changes with some unusual findings seen in cases with orbital cysts, that is, presence of fluid-fluid level, calcification in the wall, and coexistent double cysts in 19 (6.8%), 5 (1.8%), and 4 (1.5%) cases, respectively. Dumbbell dermoid cyst with connection in temporal fossa was seen in 16 (5.7%) cases. Subperiosteal location of orbital dermoid cyst was most destructive because of extensive bony invasion. Most of the periorbital cysts were removed in toto, whereas orbital cysts required decompression before removal. The histopathological diagnosis was dermoid cyst in 250 (89%) cases and epidermoid cyst in 30 (11%) cases. In 69 (25%) cases, there was a chronic inflammatory response.
CONCLUSIONS: We recommend imaging in all patients with orbital dermoid to rule out dumbbell or subperiosteal extension. Also, we advocate early removal of all dermoid cysts in view of bone changes seen in majority of our cases and presence

of inflammatory cells in 25% of cases.



DOI: 10.1016/j.jcjo.2019.08.005
PMID: 31712044

117: Quraishi R, Varshney M, Singh A, Singh D, Kumar M, Rao R, Jain R, Ambekar A. Use of Filter Paper to Measure Alcohol Biomarkers among Opioid-Dependent Patients on Agonist Maintenance Treatment: A Community-Based Study. Indian J Psychol Med. 2019 Nov 11;41(6):529-534. doi: 10.4103/IJPSYM.IJPSYM_304_19. eCollection 2019 Nov-Dec. PubMed PMID: 31772439; PubMed Central PMCID: PMC6875832.

Background: Harmful Alcohol use is frequent among opioid dependents patients undergoing agonist maintenance treatment. The objective assessment of harmful alcohol use can be done using laboratory measures of serum biomarkers. For community-based patients, there is often a requirement of an alternative method due to lack of onsite laboratory services. The aim of the study was to examine filter paper as a matrix to measure serum biomarkers of harmful alcohol use.
Methods: The initial phase involved standardization of the filter-paper-based assay. Conditions were optimised for extraction and estimation of alcohol biomarkers (Aspartate Aminotransferase; AST, Alanine Aminotransferase; ALT, Gamma Glutamyl transferase; GGT and Carbohydrate Deficient Transferrin; CDT) from the filter paper. For clinical validation, serum samples were collected from community clinics. Biomarker levels obtained from both the methods were correlated using linear regression analysis. Limits of agreement between the two methods was estimated using the Intraclass Correlation Coefficient (ICC).
Results: The extraction of enzymes (AST, ALT and GGT) from filter paper was carried out using the substrate buffer available with the reagent kit (Randox, UK). CDT was readily extracted from filter paper using deionised water. Serum biomarker levels measured from samples collected from community clinics correlated well with filter paper extracted levels (ICC 0.97-0.99). More than 90% of alcohol biomarker levels were recovered from the filter paper matrix using this method.
Conclusion: Filter paper has the potential to be used as a matrix to objectively measure alcohol biomarkers among opioid-dependent patients from community settings lacking onsite laboratory facilities.



DOI: 10.4103/IJPSYM.IJPSYM_304_19
PMCID: PMC6875832
PMID: 31772439

118: Raina R, Grewal MK, Blackford M, Symons JM, Somers MJG, Licht C, Basu RK, Sethi SK, Chand D, Kapur G, McCulloch M, Bagga A, Krishnappa V, Yap HK, de Sousa Tavares M, Bunchman TE, Bestic M, Warady BA, de Ferris MD. Renal replacement therapy in the management of intoxications in children: recommendations from the Pediatric Continuous Renal Replacement Therapy (PCRRT) workgroup. Pediatr Nephrol. 2019 Nov;34(11):2427-2448. doi: 10.1007/s00467-019-04319-2. Epub 2019 Aug 24. PubMed PMID: 31446483.

BACKGROUND: Intentional or unintentional ingestions among children and adolescents are common. There are a number of ingestions amenable to renal replacement therapy (RRT).
METHODS: We systematically searched PubMed/Medline, Embase, and Cochrane databases for literature regarding drugs/intoxicants and treatment with RRT in

pediatric populations. Two experts from the PCRRT (Pediatric Continuous Renal Replacement Therapy) workgroup assessed titles, abstracts, and full-text articles for extraction of data. The data from the literature search was shared with the PCRRT workgroup and two expert toxicologists, and expert panel recommendations were developed.
RESULTS AND CONCLUSIONS: We have presented the recommendations concerning the use of RRTs for treatment of intoxications with toxic alcohols, lithium, vancomycin, theophylline, barbiturates, metformin, carbamazepine, methotrexate, phenytoin, acetaminophen, salicylates, valproic acid, and aminoglycosides.

DOI: 10.1007/s00467-019-04319-2
PMID: 31446483

119: Rajan S, Theard MA, Easdown J, Goyal K, Pasternak JJ. Perceived Benefits and Barriers to a Career in Neuroanesthesiology: A Pilot Survey of Anesthesiology Clinicians. J Neurosurg Anesthesiol. 2019 Nov 6. doi: 10.1097/ANA.0000000000000655. [Epub ahead of print] PubMed PMID: 31702586.

BACKGROUND: Despite advances in perioperative neuroscience, there is low interest among anesthesiology trainees to pursue subspecialty training in neuroanesthesiology. We conducted a pilot survey to assess attitudes about neuroanesthesiology fellowship training.
MATERIALS AND METHODS: A confidential survey was distributed to an international cohort of anesthesiology attendings and trainees between January 15, 2017 and February 26, 2017.
RESULTS: A total of 463 responses were received. Overall, 309 (67%), 30 (6%), 116 (25%), and 8 (2%) of respondents identified themselves as attendings, fellows, residents, and "other," respectively. In total, 390 (84%) of respondents were from the United States. Individuals typically pursue anesthesiology fellowship training because of interest in the subspecialty, acquisition of a special skill set, and the role of fellowship training in career planning and advancement. Overall, 64% of attendings, 56% of fellows, and 55% of residents favored accreditation of neuroanesthesiology fellowships, although opinion was divided regarding the role of accreditation in increasing interest in the specialty. Respondents believe that increased opportunities for research and greater exposure to neurocritical care and neurological monitoring methods would increase interest in neuroanesthesiology fellowship training. Perceived barriers to neuroanesthesiology fellowship training were perceptions that residency provides adequate training in neuroanesthesiology, that a unique skill set is not acquired, and that there are limited job opportunities available to those with neuroanesthesiology fellowship training.
CONCLUSIONS: In this pilot survey, we identified several factors that trainees consider when deciding to undertake subspecialty training and barriers that might limit interest in pursuing neuroanesthesiology subspecialty training. Our findings may be used to guide curricular development and identify factors that might increase interest among trainees in pursuing neuroanesthesiology fellowship training.

DOI: 10.1097/ANA.0000000000000655
PMID: 31702586

120: Ramprasad A, Rastogi N, Xess I, Singh G, Ray A, Vikram N. Disseminated Phaeohyphomycosis by Exophiala jeanselmei. QJM. 2019 Nov 11. pii: hcz298. doi: 10.1093/qjmed/hcz298. [Epub ahead of print] PubMed PMID: 31711223.

121: Ranjan R, Sud A, Adhikary D, Sinha A, Chand S. Incidence and risk factors for iatrogenic distal tibia/fibula fracture during Ponseti technique of clubfoot

treatment. J Pediatr Orthop B. 2019 Nov;28(6):572-578. doi: 10.1097/BPB.0000000000000595. PubMed PMID: 30741748.

The incidence and risk factors of distal tibia/fibula fracture, an uncommon complication during Ponseti manipulation, are unknown. We evaluated 222 virgin clubfeet of patients aged less than 3 years for fractures of distal tibia/fibula. Incidence rate was found to be 1.3% per year. Associated risk factors were identified as neglected, syndromic clubfeet, feet requiring greater than 10 casts, post-tenotomy dorsiflexion less than 10° and casting by physician with less than 3 years of casting experience, with odds ratios of 14, 28, 4.9, 3.7 and 3.4, respectively. Most of these fractures healed without consequences; however, it is still advisable not to forcefully dorsiflex while casting, which may result in the fracture of distal tibia/fibula.

DOI: 10.1097/BPB.0000000000000595
PMID: 30741748

122: Ravi PK, Purkait S, Agrawal U, Patra S, Patnaik M, Singh SR, Mishra PR. Regional variation of human pancreatic islets dimension and its impact on beta cells in Indian population. Islets. 2019;11(6):141-151. doi: 10.1080/19382014.2019.1686323. Epub 2019 Nov 19. PubMed PMID: 31743072; PubMed Central PMCID: PMC6930023.

Background & objectives: Islet of Langerhans, the endocrine pancreas plays a significant role in glucose metabolism. Obesity and insulin resistance are the major factors responsible for beta cell dysfunction. Asian Indian population has increased susceptibility to diabetes in spite of having lower BMI. The morphology of islets plays a significant role in beta cell function. The present study was designed for better understanding the morphology, composition and distribution of islets in different parts of the pancreas and its impact on beta cell proportion. Methods: We observed islet morphology and beta cell area proportion by Large-scale computer-assisted analysis in 20 adult human pancreases in non-diabetic Indian population. Immunohistochemical staining with anti-synaptophysin and anti-insulin antibody was used to detect islet and beta cells respectively. Whole slide images were analyzed using ImageJ software. Results: Endocrine proportion were heterogeneously increasing from head to tail with maximum islet and beta cell distribution in the tail region. Larger islets were predominately confined to the tail region. The islets in Indian population were relatively smaller in size, but they have more beta cells (20%) when compared to American population. Interpretation & conclusions: The beta cells of larger islets are functionally more active than the smaller islets via paracrine effect. Thus, reduction in the number of larger islets may be one of the probable reasons for increased susceptibility of Indians to diabetes even at lower BMI. Knowledge about the regional distribution of islets will help the surgeons to preserve the islet rich regions during surgery.

DOI: 10.1080/19382014.2019.1686323
PMCID: PMC6930023 [Available on 2020-11-19]
PMID: 31743072

123: Rawat S, Gupta S, Bhat M, Dinda AK, Mohanty S. Efficient Labeling of Human Mesenchymal Stem Cells Using Iron Oxide Nanoparticles. Methods Mol Biol. 2019 Nov 10. doi: 10.1007/7651_2019_265. [Epub ahead of print] PubMed PMID: 31707646.

Stem cells have been used in multiple clinical trials. Tracking these transplanted cells in vivo will provide real-time information on the fate of these cells. Iron oxide labeling is one such uncomplicated noninvasive labeling method. These transformed nanocrystals can be used for varied applications

including stem-cell tracking, magnetic resonance imaging, and theranostics. Here we elucidate the protocol for iron oxide nanoparticles synthesis (IONPS) and labeling of mesenchymal stem cells which can be used for imaging and tracking cells to understand their fate in in vivo studies.

DOI: 10.1007/7651_2019_265
PMID: 31707646

124: Raza MS, Das BK, Goyal V, Lodha R, Chaudhry R, Sood S, Gautam H, Sreenivas V, Nair D, Mohapatra S, Kapil A. Emerging multidrug resistance isolates of hospital-acquired bacterial meningitis in a tertiary care centre in North India. J Med Microbiol. 2019 Nov;68(11):1585-1590. doi: 10.1099/jmm.0.001072. PubMed PMID: 31647400.

Purpose. Acute bacterial meningitis continues to be a potentially life threatening condition. Hospital-acquired meningitis is rapidly increasing and adding an immense burden to the health system due to the emergence of multidrug resistance isolates. The purpose of this study is to find the antibiotic susceptibility pattern of the bacteria detected from hospital- and community-acquired meningitis.Methodology. A total of 400 Cerebrospinal fluid (CSF) samples from the suspected meningitis cases were collected and processed for cell count, biochemical examination, Gram staining, latex agglutination and culture. Bacteria grown on blood, chocolate and Mac-conkey agar were identified by matrix-assisted laser desorption/ionization-time of flight. Antibiotic susceptibility tests were performed as per Clinical and Laboratory Standard Institute guidelines.Results. Of the isolates, most prevalent Gram negative organisms in hospital-acquired bacterial meningitis were Escherichia coli 13 (27.08%), Acinetobacter baumannii 12 (25%), Klebsiella pneumoniae 5 (10.42%), Pseudomonas aeruginosa 4 (8.33%) and Gram positive organisms were Staphylococcus aureus 4 (8.33%), Enterococcus faecium 3 (6.25%) and CONS 2 (4.16%). Streptococcus pneumoniae 3 (6.25%) was the predominant organism in community-acquired bacterial meningitis. All the Gram negative isolates were multidrug resistance. Only colistin and imipenem were effective antibiotics against them. Likewise Gram positive organisms were susceptible to most of the antibiotics tested. However, E. faecium was only susceptible to Vanco+Teicoplanin.Conclusion. In hospital-acquired bacterial meningitis, multidrug resistance Gram negative bacteria are a huge challenge for the treatment of patients. Hence, antimicrobial stewardship should be followed to counteract with the emerging multidrug resistance isolates.

DOI: 10.1099/jmm.0.001072
PMID: 31647400 [Indexed for MEDLINE]

125: Real SAS, Parveen F, Rehman AU, Shaik R, Deo SVS, Husain SA. Mutation, methylation and expression analysis of LIFR gene in Indian breast cancer patients. Mutat Res. 2019 Nov;816-818:111677. doi: 10.1016/j.mrfmmm.2019.111677. Epub 2019 Aug 12. PubMed PMID: 31557600.

LIFR functions as a tumor suppressor and metastatic suppressor of breast cancer. The present study investigates the status of LIFR gene in Indian breast cancer patients. A total of 137 breast cancer tissue and 137 adjacent normal tissue which served as controls were analyzed for mutation by automated DNA sequencing, methylation through methylation-specific polymerase chain reaction and its corresponding expression at mRNA and protein level using real-time quantitative polymerase chain reaction and immunohistochemistry respectively in Indian breast cancer patients. All the molecular findings were statistically correlated with clinopathological parameters of the patients to identify its association. LIFR mRNA expression was found to be 2.534 ± 3.52 fold downregulated with subsequent

absence of protein in 67.15% cases (92/137). The absence of LIFR protein coincided with 80.95% (85/105) methylated cases thereby showing a very strong correlation among the LIFR promoter methylation and LIFR protein expression ($p = 0.0001$). We also observed G2968C nucleotide change in 6/137 cases of exon 20 of LIFR gene resulting in Glu990Gln mutation. Correlation of LIFR promoter methylation with geographic location and age at menopause and LIFR mutation with age at menarche, age at first live birth, molecular subtypes of breast cancer, and lymph node status remained significant even after bonferroni correction ($p \leq 0.0027$). All these data suggests the relevance of these associations in relation to Indian breast cancer patients. The loss of LIFR protein was frequently found in Indian breast cancer patients, and aberrant promoter methylation showed a significant correlation with its downregulation.



DOI: 10.1016/j.mrfmmm.2019.111677
PMID: 31557600 [Indexed for MEDLINE]

126: Roy K, Satapathy AK, Houhton JAL, Flanagan SE, Radha V, Mohan V, Sharma R, Jain V. Congenital Hyperinsulinemic Hypoglycemia and Hyperammonemia due to Pathogenic Variants in GLUD1. Indian J Pediatr. 2019 Nov;86(11):1051-1053. doi: 10.1007/s12098-019-02980-x. Epub 2019 May 22. PubMed PMID: 31119523.

Congenital hyperinsulinism (CHI) is a clinically and genetically heterogeneous disorder, characterized by dysregulated insulin secretion. Pathogenic variants in at least twelve different genes (ABCC8, KCNJ11, GLUD1, GCK, HADH, SLC16A1, HNF4A, HNF1A, UCP2, TRMT10A HK1, and PGM1) are known to cause CHI. Pathogenic variants in the GLUD1 gene, which encodes the enzyme glutamate dehydrogenase (GDH), account for 5% of the cases of congenital hyperinsulinemic hypoglycemia. Pathogenic variants in GLUD1 typically present in late infancy, are diet and/or diazoxide-responsive and cause protein-induced hyperinsulinemic hypoglycemia as insulin secretion is triggered by allosteric activation of GDH by leucine. The authors are presenting three unrelated Indian children, who manifested with fasting as well as dietary protein induced hypoglycemia in late infancy, and were diagnosed to have hyperinsulinemic hyperammonemic hypoglycemia due to pathogenic variants in GLUD1. Although the hypoglycemia responded to diazoxide, delayed diagnosis and irregular treatment had resulted in neurological problems in two of the three children. Early identification, appropriate dietary modifications and regular treatment with diazoxide can prevent adverse neurological outcome.

DOI: 10.1007/s12098-019-02980-x
PMID: 31119523

127: Saha S, Madan K, Jain D, Goswami R. Pulmonary alveolar proteinosis (PAP) in idiopathic hypoparathyroidism. BMJ Case Rep. 2019 Nov 10;12(11). pii: e231053. doi: 10.1136/bcr-2019-231053. PubMed PMID: 31712233.

Idiopathic hypoparathyroidism (IH) and autoimmune pulmonary alveolar proteinosis (PAP) are rare disorders. A patient with IH and optimal calcaemic control on calcium and alfacalcidol was detected to have PAP after 8 years of follow-up. Patient had no respiratory complaints. Routine abdominal imaging for renal calcification showed patchy ground glass opacities in the lower lung fields leading to incidental diagnosis of PAP. Pulmonary function tests showed impaired diffusion capacity of the lung. Anti-granulocyte macrophage-colony stimulating factor autoantibodies were positive. Patient regularly attended the pulmonary clinic and showed progressive improvement in diffusion capacity of the lung during 2 years of follow-up. The calcaemic control in IH remained stable despite its presence with PAP. The autoimmune PAP in the presented case suggests a

possible autoimmune basis of IH.



DOI: 10.1136/bcr-2019-231053
PMID: 31712233

128: Sahay P, Maharana PK. Increasing Povidone-Iodine Exposure in Endothelial Keratoplasty Tissue Processing and Fungal Infection Impact. Cornea. 2019 Nov;38(11):e50. doi: 10.1097/ICO.0000000000002139. PubMed PMID: 31478949.

129: Sahu A, Patil V, Sagar R, Bhargava R. Psychiatric Comorbidities in Children with Specific Learning Disorder-Mixed Type: A Cross-sectional Study. J Neurosci Rural Pract. 2019 Oct;10(4):617-622. doi: 10.1055/s-0039-1697879. Epub 2019 Nov 11. PubMed PMID: 31844375; PubMed Central PMCID: PMC6908453.

Background Specific learning disorder (SLD) is a neurodevelopmental condition which frequently exhibits with comorbidities of other disorders, including attention deficit hyperactivity disorder (ADHD), conduct disorder, anxiety, and depression. SLD with any comorbidity may affect the expression and severity of the SLD and may make its management difficult. Thus, the present cross-sectional study was planned to examine the psychiatric comorbidities among children with SLD. Materials and Methods The sample consisted of 41 patients aged between 7 and 12 years with a diagnosis of SLD-mixed type. Clinical and psychological assessment included the following tests for behavioral, anxiety, mood, and interpersonal problems: child behavior checklist, Mini-international Neuropsychiatric Interview for Children and Adolescents (MINI-KID), and Conner's 3 Parent Short form-45. Results The mean age of the participants was 9.8 years (standard deviation [SD] = 1.5). About 75.6% of participants were male, and their mean years of education was 5 years (SD = 1.5). Twenty-four percent of children had a history of delayed developmental milestones. Among comorbidities of SLD, association with attention deficit disorder (ADD)/ADHD has been found to be significant along with difficulties in executive function, peer relation, and aggression. Conclusion Children with SLD are likely to exhibit signs of ADHD/ADD and dysfunction in executive function, peer relation, and aggression. The management of comorbid conditions is recommended along with remediation of learning problem to overall educational and behavioral achievements and development of child.

DOI: 10.1055/s-0039-1697879
PMCID: PMC6908453
PMID: 31844375

130: Saini R, Rao R, Parmar A, Mishra AK, Ambekar A, Agrawal A, Dhingra N. Rates, knowledge and risk factors of non-fatal opioid overdose among people who inject drugs in India: A community-based study. Drug Alcohol Rev. 2020 Jan;39(1):93-97. doi: 10.1111/dar.13016. Epub 2019 Nov 25. PubMed PMID: 31769134.

INTRODUCTION AND AIMS: Non-fatal opioid overdose (NFOO) predicts future fatal opioid overdose and is associated with significant morbidity. There is limited literature on the rates and risk factors for NFOO in people who inject drugs (PWID) from India. We aimed to study the rates of NFOO and documented risk factors for NFOO, as well as knowledge-level of NFOO among PWID from India. DESIGN AND METHODS: Community-based, cross-sectional and observational study. We interviewed 104 adult male participants receiving HIV prevention services. Drug use patterns, rates of NFOO and opioid overdose risk factors, knowledge about

opioid overdose and its management were assessed.
RESULTS: The mean age of the participants was 27.9 years. The most common opioid used for injecting was heroin followed by buprenorphine. About 45% (n = 47) participants had experienced an opioid overdose at least once in their lifetime. Around 25% (n = 26) participants had overdosed in the past year, while 21% (n = 22) participants had overdosed within the past 3 months. The majority had risk factors that could predispose them to NFOO. No participant was aware of the use of naloxone for opioid overdose.
DISCUSSION AND CONCLUSION: The rates of NFOO as well as risk factors for overdose among PWID from India are high, with poor knowledge on overdose management. There is urgent need for a program to prevent and manage opioid overdose among PWID in India.



DOI: 10.1111/dar.13016
PMID: 31769134

131: Sakthivel P, Kumar Irugu DV, Kakkar A, Kaur K, Jain S, Pramanik R, Biswas A. Squamous cell carcinoma as a somatic-type malignancy in an extragonadal immature teratoma of the sinonasal region. Int J Pediatr Otorhinolaryngol. 2019 Nov;126:109639. doi: 10.1016/j.ijporl.2019.109639. Epub 2019 Aug 12. PubMed PMID: 31442873.

Somatic-type malignancy arising in a teratoma of the sinonasal region is extremely unusual, creating a diagnostic dilemma. There are no definite guidelines for management of such cases. A 15-year-old male with a maxillary mass was misdiagnosed as angiomyolipoma, maxillary carcinoma, mucoepidermoid carcinoma, and teratocarcinosarcoma, followed by the final diagnosis of squamous cell carcinoma arising in an immature teratoma. He received neoadjuvant chemotherapy, followed by surgery and chemo-radiotherapy, and is disease-free at 21 months. This case highlights the difficulty faced when diagnosing neoplasms unusual to the head and neck region, particularly on small biopsies, and good outcome following appropriate multimodality management.



DOI: 10.1016/j.ijporl.2019.109639
PMID: 31442873

132: Sankar J, Singh M, Kumar K, Sankar MJ, Kabra SK, Lodha R. 'Intermittent' versus 'continuous' ScvO(2) monitoring in children with septic shock: a randomised, non-inferiority trial. Intensive Care Med. 2020 Jan;46(1):82-92. doi: 10.1007/s00134-019-05858-w. Epub 2019 Nov 28. PubMed PMID: 31781836.

PURPOSE: To compare the effect of 'intermittent' central venous oxygen saturation (ScvO2) monitoring with 'continuous' ScvO2 monitoring on shock resolution and mortality in children with septic shock.
METHODS: Primary outcome was the achievement of therapeutic goals or shock resolution in the first 6 h. We randomly assigned children < 17 years' age with septic shock to 'intermittent ScvO2' or 'continuous ScvO2' groups. All children were subjected to subclavian/internal jugular line insertion and managed as per Surviving Sepsis Campaign Guidelines. To guide resuscitation, we used ScvO2 estimated at other clinical and laboratory parameters were monitored similarly in both groups.
RESULTS: We enrolled 75 and 77 children [median (IQR) age: 6 (1.5-10) years] in the 'intermittent' and 'continuous' groups, respectively. Baseline characteristics were comparable between the groups. When compared to the

'continuous' group, fewer children in the 'intermittent' group achieved shock resolution within first 6 h [19% vs. 36%; relative risk (RR) 0.51; 95% CI 0.29-0.89; risk difference -18.0%; 95% CI -32.0 to -4.0]. The lower bound of confidence interval, however, crossed the pre-specified non-inferiority margin. There was no difference in the proportion of children attaining shock resolution within 24 h (63% vs. 69%; RR 0.86; 95% CI 0.68-1.08) or risk of mortality between the groups (47% vs. 43%; RR 1.06; 95% CI 0.74-1.51).
CONCLUSIONS: Given that a greater proportion of children attained therapeutic end points in the first 6 h, continuous monitoring of ScvO2 should preferably be used to titrate therapy in the first few hours in children with septic shock. In the absence of such facility, intermittent monitoring of ScvO2 can be used to titrate therapy in these children, given the lack of difference in the proportion of patients achieving shock resolution at 24 h or in risk of mortality between the intermittent and continuous groups.

DOI: 10.1007/s00134-019-05858-w
PMID: 31781836

133: Sankar J, Das RR, Singh A. Effect of Prehospital Transport Factors on Shock Index, Serum Lactate, and Mortality in Children with Septic Shock: A Prospective Observational Study. J Emerg Trauma Shock. 2019 Oct-Dec;12(4):274-279. doi: 10.4103/JETS.JETS_129_18. Epub 2019 Nov 18. PubMed PMID: 31798242; PubMed Central PMCID: PMC6883505.

Context: Many children with septic shock either present late or are recognized late due to various reasons. Shock index (SI) is a valuable screening tool in dentifying high-risk septic patients in emergency department. Whether prehospital transport factors affect SI and clinical outcomes has not been evaluated.
Aim: Our aim was to evaluate if prehospital transport-related factors such as mode of transport and referral from another hospital affect the admission SI and mortality in children with septic shock.
Settings and Design: Prospective observational study conducted over 1-year period in the Pediatric Emergency and Intensive Care Unit of a tertiary care teaching hospital.
Subjects and Methods: Children < 17 years of age were evaluated. Data collection included referral status, mode of transport, physiologic (SI and serum lactate), and clinical parameters.
Statistical Analysis Used: Student's t-test was used for analyzing continuous variables. Chi-square/Fischer's exact test was used for analysis of categorical variables. $P < 0.05$ was considered as statistically significant.
Results: Of 51 children, 21 (41%) were referred from other hospitals. Of these, less than half were transported by ambulance unaccompanied by any healthcare personnel. Twenty-six children (43%) died, of which 15 (71%) were referred. The median serum lactate, SI, and mortality were significantly higher in those referred. On multivariate analysis of factors associated with mortality, elevated SI and/or lactate >4 mmol/L and the "referral" status remained significant after adjusting for baseline variables and illness severity.
Conclusions: Children with septic shock referred from other hospitals had higher SI, serum lactate, and mortality rates. Our study highlights the need for improving prehospital care and transportation in children with septic shock.



DOI: 10.4103/JETS.JETS_129_18
PMCID: PMC6883505
PMID: 31798242

134: Sankaranarayanan R, Basu P, Kaur P, Bhaskar R, Singh GB, Denzongpa P, Grover

RK, Sebastian P, Saikia T, Oswal K, Kanodia R, Dsouza A, Mehrotra R, Rath GK, Jaggi V, Kashyap S, Kataria I, Hariprasad R, Sasieni P, Bhatla N, Rajaraman P, Trimble EL, Swaminathan S, Purushotham A. Current status of human papillomavirus vaccination in India's cervical cancer prevention efforts. Lancet Oncol. 2019 Nov;20(11):e637-e644. doi: 10.1016/S1470-2045(19)30531-5. Review. PubMed PMID: 31674322.

Efforts are being made to scale up human papillomavirus (HPV) vaccination for adolescent girls in India. Bivalent and quadrivalent HPV vaccines were licensed in the country in 2008, and a nonavalent vaccine was licensed in 2018. Demonstration projects initiated in Andhra Pradesh and Gujarat in 2009 introduced HPV vaccination in public health services in India. Following a few deaths in these projects, although subsequently deemed unrelated to vaccination, HPV vaccination in research projects was suspended. This suspension by default resulted in some participants in a trial evaluating two versus three doses receiving only one dose. Since 2016, the successful introduction of HPV vaccination in immunisation programmes in Punjab and Sikkim (with high coverage and safety), government-sponsored opportunistic vaccination in Delhi, prospects of a single dose providing protection, and future availability of an affordable Indian vaccine shows promise for future widespread implementation and evaluation of HPV vaccination in India.



DOI: 10.1016/S1470-2045(19)30531-5
PMID: 31674322

135: Sarangi SC, Pattnaik SS, Katyal J, Kaleekal T, Dinda AK. An interaction study of Ocimum sanctum L. and levetiracetam in pentylenetetrazole kindling model of epilepsy. J Ethnopharmacol. 2020 Mar 1;249:112389. doi: 10.1016/j.jep.2019.112389. Epub 2019 Nov 15. PubMed PMID: 31739106.

ETHNOPHARMACOLOGICAL RELEVANCE: Ocimum sanctum L. commonly known as tulsi (synonym of Ocimum tenuiflorum L.) is widely used in Ayurveda medicine and is having multitude neuromodulatory effect including the anticonvulsant effect in acute seizure models as per previous studies. In India, it is used for the treatment of epilepsy as traditional medicine. However, its role in chronic seizure model and interaction with newer antiepileptic drugs has not been investigated, which will enhance its translational value.
AIM OF THE STUDY: Current study investigated the effect of Ocimum on chronic seizure model and its interaction with levetiracetam (LEV), a newer antiepileptic drug.
MATERIALS AND METHODS: The adjuvant role of Ocimum sanctum hydroalcoholic extracts (OSHE) 1000 mg/kg along with LEV 300 mg/kg was studied in adult male Wistar rats with mean weight of 227.84 ± 21.68 g using pentylenetetrazole (30 mg/kg, i.p.) kindling (K) (with maximum 24 injections on alternate days and challenge on 7th-day). Along with seizure score, neurobehavioral, brain tissue oxidative stress and histopathology status were assessed. Pharmacokinetic interaction was assessed between LEV and OSHE after 14 days of drug treatment.
RESULTS: K-LEV + OSHE had least seizure score during kindling and on the pentylenetetrazole-challenge test (p=0.031) than other kindling groups. Seizure protection was more in K-LEV + OSHE (85.72%) than others (K-LEV-42.86%, K-OSHE-42.86%, and K-Control-28.58%). Ocimum treated groups had better memory retention potential as evident from Morris water maze (MWM), passive avoidance test but not in an elevated plus maze test. Oxidative-stress was lower in Ocimum treated groups than K-Control group. As per histopathology, K-LEV + OSHE group had the least neuronal degeneration among kindling groups. There was no

significant pharmacokinetic interaction between LEV and OSHE, except increased Tmax in LEV + OSHE group than LEV alone (p=0.009).
CONCLUSIONS: Ocimum per se and combination with levetiracetam treatment exerted better seizure control, memory retention, oxidative stress reduction, and neuronal structure preservation than kindling control group. There was a very minimal drug interaction between Ocimum and LEV. So, Ocimum as an adjuvant to LEV may be shelpful in enhancing the antiepileptic effect and also in minimizing the adverse effects.



DOI: 10.1016/j.jep.2019.112389
PMID: 31739106

136: Sarkar S, Kochhar KP, Khan NA. Fat Addiction: Psychological and Physiological Trajectory. Nutrients. 2019 Nov 15;11(11). pii: E2785. doi: 10.3390/nu11112785. PubMed PMID: 31731681; PubMed Central PMCID: PMC6893421.

Obesity has become a major public health concern worldwide due to its high social and economic burden, caused by its related comorbidities, impacting physical and mental health. Dietary fat is an important source of energy along with its rewarding and reinforcing properties. The nutritional recommendations for dietary fat vary from one country to another; however, the dietary reference intake (DRI) recommends not consuming more than 35% of total calories as fat. Food rich in fat is hyperpalatable, and is liable to be consumed in excess amounts. Food addiction as a concept has gained traction in recent years, as some aspects of addiction have been demonstrated for certain varieties of food. Fat addiction can be a diagnosable condition, which has similarities with the construct of addictive disorders, and is distinct from eating disorders or normal eating behaviors. Psychological vulnerabilities like attentional biases have been identified in individuals described to be having such addiction. Animal models have provided an opportunity to explore this concept in an experimental setting. This discussion sheds light on fat addiction, and explores its physiological and psychological implications. The discussion attempts to collate the emerging literature on addiction to fat rich diets as a prominent subset of food addiction. It aims at addressing the clinical relevance at the community level, the psychological correlates of such fat addiction, and the current physiological research directions.

DOI: 10.3390/nu11112785
PMCID: PMC6893421
PMID: 31731681

137: Selvan H, Bhakthaganesh K, Angmo D, Gupta V. Is this iris or an implant? Clin Exp Optom. 2019 Nov 19. doi: 10.1111/cxo.13014. [Epub ahead of print] PubMed PMID: 31746002.

138: Sen S, Dhiman R, Saxena R, Phuljhele S, Sharma P. Vertical rectus transposition procedures for lateral rectus palsy: A systematic review. Indian J Ophthalmol. 2019 Nov;67(11):1793-1799. doi: 10.4103/ijo.IJO_1841_18. Review. PubMed PMID: 31638036; PubMed Central PMCID: PMC6836582.

Multiple transposition procedures have been described for management of lateral rectus palsy. However, relative effect and indications of each procedure are unclear. This systematic review was planned to evaluate functional and anatomical outcomes of vertical rectus transposition (VRT) surgery in patients with lateral rectus palsy. We searched databases in English language, namely, MEDLINE, PubMed

Central, EMBASE, Google Scholar, Scopus, and Index Copernicus without any date restrictions in electronic searches, using the search words 'vertical rectus transposition for lateral rectus palsy," "vertical rectus transposition for abducens palsy," "superior rectus transposition," "inferior rectus transposition," and "Hummelsheim procedure." References of the selected publications were also searched to find any relevant studies. We searched for studies that provided data on single VRT and double VRT surgeries for lateral rectus palsies. Three authors independently assessed the related studies gathered from electronic and manual searches. We found 27 studies which were relevant to the review question. As there were no randomized control trials (RCTs) available related to our study question, nonrandomized studies were used to arrive at summarization of outcomes of different transposition procedures. There is a need for prospective RCTs to investigate the different types of transposition procedures for lateral rectus palsy.

DOI: 10.4103/ijo.IJO_1841_18
PMCID: PMC6836582
PMID: 31638036

139: Sethi A, Sankar MJ, Kulkarni S, Thukral A, Chandra P, Agarwal R. Low dose fentanyl infusion versus 24% oral sucrose for pain management during laser treatment for retinopathy of prematurity-an open label randomized clinical trial. Eur J Pediatr. 2020 Feb;179(2):285-292. doi: 10.1007/s00431-019-03514-5. Epub 2019 Nov 15. PubMed PMID: 31729550.

To compare the efficacy of low dose fentanyl infusion and 24% oral sucrose in providing optimal pain relief during laser for retinopathy of prematurity (ROP), we enrolled fifty-eight spontaneously breathing preterm infants undergoing laser. The preterm infants were randomized to either fentanyl infusion (1 mcg/kg/hr) or 24% oral sucrose (2 ml). We evaluated and compared the proportion of time spent crying during the procedure, salivary cortisol before and after the procedure, premature infant pain profile- revised (PIPP-R) scores during the procedure, apnoea during and after the procedure, need for mechanical ventilation, and feed intolerance and urinary retention 24 h after the procedure between the two groups. We found that the proportion of time spent crying during the procedure was significantly less in the fentanyl group [62.5% (50.7-74.2) vs 73.8% (55.6-83.4); P = 0.02]. Average PIPP-R score during the procedure was significantly less in the fentanyl group [7.2 vs 9.0; (mean difference of - 1.8; P = 0.01)]. There was no difference in other outcomes between the two groups.Conclusion: During laser for ROP, low dose fentanyl infusion was found to be efficacious in reducing pain as compared with 24% sucrose.What is Known:• Preterm infants undergoing laser photocoagulation for ROP suffer significant amount of pain.• Standard of care for pain relief in infants undergoing laser therapy in developed countries is general anesthesia (GA) or combination of sedation, analgesia, and paralysis (SAP).What is New:• During laser photocoagulation for ROP, fentanyl infusion at low dose (1 mcg/kg/hr) is efficacious in reducing pain as compared to 24% oral sucrose.

DOI: 10.1007/s00431-019-03514-5
PMID: 31729550

140: Sethi V, Bhanot A, Bhattacharjee S, Gope R, Sarangi D, Nath V, Nair N, Singh U, Daniel A, Parhi RN, Sinha S, Loomba A, S S, Purty A, Ali N, Mohapatra B, Agarwal N, Bhatia V, Ruikar M, Sahu B, R S R, Pedgaonkar S, Dwivedi LK, Saiyed F, Prajapati M, Mishra P, Prost A, Kejrewal N, De Wagt A, Sachdev H, Unisa S. Integrated multisectoral strategy to improve girls' and women's nutrition before conception, during pregnancy and after birth in India (Swabhimaan): protocol for a prospective, non-randomised controlled evaluation. BMJ Open. 2019 Nov

18;9(11):e031632. doi: 10.1136/bmjopen-2019-031632. PubMed PMID: 31740469; PubMed Central PMCID: PMC6886981.

INTRODUCTION: Swabhimaan is a community-based programme to improve adolescent girls' and women's nutrition in the rural areas of three Indian states-Bihar, Chhattisgarh and Odisha with high prevalence of undernutrition.
METHODS AND ANALYSIS: Swabhimaan has a nested prospective, non-randomised controlled evaluation. Since 2017, five intervention sites receive community-led interventions through national government's livelihood mission supported women's self-help group federations and five control sites will initiate these activities 36 months later, in 2020. Community-led activities aim to improve coverage of 18 interventions including adequacy of food consumed, prevention of micronutrient deficiencies, access to basic health services and special care of nutritionally 'at risk' girls and women, improving hygiene and access to water and sanitation services and access to family planning services. The evaluation includes baseline (2016-2017), midline (2018-2019) and endline (2020-2021) surveys covering 6638 adolescent girls, 2992 pregnant women and 8755 mothers of children under 2. The final impact analysis will be by intention to treat, comparing primary and secondary outcomes in five intervention areas and five control areas. The primary outcomes are: (1) a 15% reduction in the proportion of adolescent girls with a body mass index (BMI) <18.5 kg/m2; (2) a 15% reduction in the proportion of mothers of children under two with a BMI <18.5 kg/m2 and (3) and a 0.4 cm improvement in mean mid-upper arm circumference among pregnant women.
ETHICS AND DISSEMINATION: All procedures involving human subjects were approved by the Institutional Ethics Committee of the All India Institute of Medical Sciences, Bihar, Chhattisgarh and Odisha and in compliance with guidelines laid down in the Declaration of Helsinki. Evidence will inform maternal and preconception nutrition policy at national and state level.
TRIAL REGISTRATION NUMBER: 58261b2f46876 and CTRI/2016/11/007482; Pre-results.



DOI: 10.1136/bmjopen-2019-031632
PMCID: PMC6886981
PMID: 31740469

141: Shaheer Ahmed A, Arava SK, Ramakrishnan S. Mass protruding out from pulmonary vein to left atrium. Postgrad Med J. 2019 Nov 15. pii: postgradmedj-2019-137176. doi: 10.1136/postgradmedj-2019-137176. [Epub ahead of print] PubMed PMID: 31732512.

142: Sharma G, Rahul, Guleria R, Mathur V. Differences in plant metabolites and microbes associated with Azadirachta indica with variation in air pollution. Environ Pollut. 2020 Feb;257:113595. doi: 10.1016/j.envpol.2019.113595. Epub 2019 Nov 19. PubMed PMID: 31801671.

Mitigation of air pollution by plants is a well-established phenomenon. Trees planted on the roadside are known to reduce particulate matter pollution by about 25%. In an urban ecosystem, especially in a metropolitan city such as Delhi, roadside trees are constantly exposed to air pollution. We, therefore, evaluated the effect of air pollution on a common Indian roadside tree, Neem (Azadirachta indica), and its associated microbes in areas with high and low levels of particulate matter (PM) pollution in Delhi. We hypothesized that alteration in the air quality index not only influences plant physiology but also its microbiome. A 100-fold increase in the number of epiphytic and 10-100 fold increase in endophytic colonies were found with 1.7 times increase in the level

of pollutants. Trees in the polluted areas had an abundance of Salmonella, Proteus and Citrobacter, and showed increased secondary metabolites such as phenols and tannins as well as decreased chlorophyll and carotenoid. The number of unique microbes was positively correlated with increased primary metabolites. Our study thus indicates that, alteration in air quality affects the natural micro-environment of plants. These results may be utilized as sustainable tools for studying plant adaptations to the urban ecosystem.



DOI: 10.1016/j.envpol.2019.113595
PMID: 31801671

143: Sharma P, Saxena R, Bhaskaran K, Dhiman R, Sethi A, Obedulla H. Augmented medial transposition of split lateral rectus in the management of synergistic divergence. J AAPOS. 2019 Nov 24. pii: S1091-8531(19)30545-2. doi: 10.1016/j.jaapos.2019.10.004. [Epub ahead of print] PubMed PMID: 31775057.

Synergistic divergence is a congenital disorder with abnormal ocular motility. Various management options have been described but with few satisfactory outcomes. We describe 3 cases of synergistic divergence a technique of medial transposition of split lateral rectus augmented with equatorial fixation sutures in 3 children. Postoperatively the synergistic divergence disappeared, and eyes were aligned in the straight-ahead gaze with improved adduction and convergence in all 3 cases.



DOI: 10.1016/j.jaapos.2019.10.004
PMID: 31775057

144: Sharma R. Use of Smartphone Applications in Children with Type 1 Diabetes Mellitus. Indian J Pediatr. 2019 Dec;86(12):1087-1088. doi: 10.1007/s12098-019-03108-x. Epub 2019 Nov 11. PubMed PMID: 31713208.

145: Sharma S, Anwar MF, Dinda A, Singhal M, Malik A. In Vitro and in Vivo Studies of pH-Sensitive GHK-Cu-Incorporated Polyaspartic and Polyacrylic Acid Superabsorbent Polymer. ACS Omega. 2019 Nov 19;4(23):20118-20128. doi: 10.1021/acsomega.9b00655. eCollection 2019 Dec 3. PubMed PMID: 31815212; PubMed Central PMCID: PMC6893953.

The main aim of this study was to evaluate the in vitro and in vivo efficiency of the polyaspartic acid- and acrylic acid-based superabsorbent polymer. The synthesized polymer was first investigated to check the blood compatibility by protein adsorption and blood clotting tests. Further, the GHK-Cu peptide was incorporated within the polymer and release studies were performed to evaluate the drug-delivery efficiency of the superabsorbent polymer. The polymer with best peptide release results were further used for in vivo analysis for wound healing. The healing efficiency of polymer with and without peptide was analyzed using wound closure, biochemical assay, histopathological, and toxicity studies.



DOI: 10.1021/acsomega.9b00655
PMCID: PMC6893953
PMID: 31815212

146: Sharma SC, Panda S, Thakar A, Devaraja K. Petrous Bone Cholesteatoma: Radical Excision with an Endeavour for Hearing Preservation. Indian J Otolaryngol Head Neck Surg. 2019 Nov;71(Suppl 2):1572-1579. doi: 10.1007/s12070-019-01662-6. Epub 2019 Apr 25. PubMed PMID: 31750219; PubMed Central PMCID: PMC6841801.

To describe surgical outcomes following resection of giant petrous bone cholesteatoma. Retrospective cohort study was undertaken at a tertiary care centre on patients who had undergone surgery for petrous bone cholesteatoma (PBC) from August 2014 to September 2017. For patients with serviceable hearing preoperatively, labyrinth preserving techniques, namely, modified transmastoid translabyrinthine approach (massive PBC-1) and supralabyrinthine approach (supralabyrinthine PBC-1) were considered. In the former, bony labyrinth which had been destroyed due to the disease process, membranous labyrinth remained anatomically and functionally intact following meticulous dissection to remove cholesteatoma matrix. In the latter, supralabyrinthine cell tracts were exenterated without disturbing the cochlea and labyrinth with a canal wall down mastoidectomy. For the remaining patients, labyrinth ablative approach was undertaken (translabyrinthine/transotic). Facial nerve function was evaluated using House-Brackman grading system. Hearing was evaluated using pure tone audiometry. 7 patients were identified (massive-2, supralabyrinthine-3, supralabyrinthine apical-1, infralabyrinthine apical 1). None of the patients experienced deterioration of postoperative bone conduction or facial nerve function (preop-grade 5-4, grade 6-3; postop-grade 2-1, grade 3-2, grade 4-4). Facial nerve was decompressed and anatomically intact in 3 cases. In the remaining, facial hypoglossal anastomosis was done in 3 and facial masseteric anastomosis was done in 1 patient. With a median follow-up of 26 months, recurrence in the form of keratin pearl was seen in 1 patient. Modified translabyrinthine approach preserving membranous labyrinth is a promising hearing preservation strategy.



DOI: 10.1007/s12070-019-01662-6
PMCID: PMC6841801 [Available on 2020-11-01]
PMID: 31750219

147: Sharma SK, Sharma R, Singh BK, Upadhyay V, Mani I, Tripathi M, Kumar P. A prospective study of non-tuberculous mycobacterial disease among tuberculosis suspects at a tertiary care centre in north India. Indian J Med Res. 2019 Nov;150(5):458-467. doi: 10.4103/ijmr.IJMR_194_19. PubMed PMID: 31939389.

Background & objectives: The burden of non-tuberculous mycobacterial (NTM) disease is increasing worldwide. The disease shares clinicoradiological features with tuberculosis (TB), Nocardia and several fungal diseases, and its diagnosis is frequently delayed. The present study was performed to determine the frequency of NTM disease among TB suspects in a tertiary care centre in north India.
Methods: In this prospective study, mycobacterial culture isolates from pulmonary and extrapulmonary specimens among TB suspects were tested with immunochromatographic assay (ICA). All ICA-negative isolates were considered as NTM suspects and further subjected to 16S-23S rRNA internal transcribed spacer gene sequencing for confirmation and species identification. Patients with active disease were treated with drug regimen as per the identified NTM species. Follow up of patients was done to determine clinical, radiological and microbiological outcomes.
Results: Of the 5409 TB suspects, 42 (0.77%) were diagnosed with NTM disease. Patients with active disease consenting for treatment were treated and followed up. Thirty four patients had NTM pulmonary disease (NTM-PD) and the remaining

eight had extrapulmonary NTM (EP-NTM) disease. Mycobacterium intracellulare and M. abscessus, respectively, were most frequently isolated from NTM-PD and EP-NTM patients. Fifteen NTM-PD and seven EP-NTM patients successfully completed the treatment. Ten patients died due to unrelated causes, five were lost to follow up and another four declined the treatment.
Interpretation & conclusions: Our study showed that the frequency of NTM disease was low among TB suspects at a large tertiary care centre in north India and this finding was similar to other Indian studies. More studies need to be done in other parts of the country to know the geographical variation in NTM disease, if any.

DOI: 10.4103/ijmr.IJMR_194_19
PMID: 31939389

148: Sharma V, Srinivasan A, Roychoudhury A, Rani K, Tyagi M, Dev K, Nikolajeff F, Kumar S. Publisher Correction: Characterization of protein extracts from different types of human teeth and insight in biomineralization. Sci Rep. 2019 Nov 21;9(1):17517. doi: 10.1038/s41598-019-53780-4. PubMed PMID: 31754162; PubMed Central PMCID: PMC6872560.

149: Shaw M, Chandrashekhara SH, Sharma A, Kumar S. Inadvertent arterial placement of central venous catheter: salvage using endovascular treatment. BMJ Case Rep. 2019 Nov 7;12(11). pii: e231751. doi: 10.1136/bcr-2019-231751. PubMed PMID: 31704801.

The frequency of placing a central venous catheter (CVC) has increased and it is often performed in emergency situation for venous access. During such an emergency and placing without imaging guidance, sometimes inadvertent placement of CVC in subclavian artery (SCA) can occur. We hereby describe an unusual case of successful endovascular management of inadvertently inserted CVC in SCA by covered stent graft placement along with proper clinical context to manage a case of misplaced venous catheter in left SCA.



DOI: 10.1136/bcr-2019-231751
PMID: 31704801

150: Sihota R, Selvan H, Sidhu T, Kamble N, Angmo D, Yadav S, Dada T, Upadhyay A. Clinical and ASOCT evaluations of 'bleb-sparing epithelial exchange' in paediatric and adult dysfunctional blebs over 5 years. Graefes Arch Clin Exp Ophthalmol. 2020 Feb;258(2):367-377. doi: 10.1007/s00417-019-04527-4. Epub 2019 Nov 25. PubMed PMID: 31768681.

PURPOSE: To evaluate the long-term outcome of 'bleb-sparing epithelial exchange' surgery for dysfunctional filtering blebs in paediatric and adult eyes.
METHODS: Patients who had undergone bleb revision ≥ 5 years back and were on regular follow-up were included. Age, ocular diagnosis, details of primary filtering surgery including mitomycin-C (MMC) usage, indication and year of bleb revision were recorded. After bleb revision, the mean intraocular pressure (IOP), glaucoma medications and best corrected visual acuity (BCVA) up to 5 years were noted. On last review, clinical details, bleb characteristics and swept source anterior segment tomographic (SSOCT) assessment of bleb were recorded. Comparative analysis of paediatric and adult eyes was performed.
MAIN OUTCOME MEASURES: Change in IOP and BCVA. 'Complete success' was defined as IOP ≥ 6 to ≤ 18mmHg without use of any topical glaucoma medications and

'Qualified success' when ≥ 1 topical glaucoma medication(s) was required.
RESULTS: A total of 51 eyes of 51 consecutive patients were studied, among which 22 were children. The mean duration between filtering surgery and bleb revision was 4.54 ± 1.53 years in paediatric and 6.48 ± 3.5 years in the adult group, p = 0.04. Children underwent trabeculotomy + trabeculectomy with 0.04% MMC, while adults underwent trabeculectomy with 0.02% MMC. The mean pre-revision IOP was 6.38 ± 2.80 and 6.51 ± 2.78 mmHg in the paediatric and adult group respectively, p = 0.86. At 3 months post-revision, it increased to 11.81 ± 3.48 and 12.75 ± 3.52 mmHg respectively (p < 0.001). At final review, mean IOP of paediatric group was 10.90 ± 2.59 and adult group was 11.86 ± 2.66 mmHg, p = 0.20. At 5 years, complete success was 68.18% and 72.41%, and qualified success was 31.87% and 27.59% in the former and latter group respectively, p = 0.49. No failures were seen. Kaplan-Meier probability at 5 years for IOP target ≤ 18, ≤ 15 and ≤ 12 in children was 95.45%, 63.64% and 50% and in adults 93.10%, 65.52% and 41.38% respectively. BCVA improved up to 1 year in paediatric group, with continued improvement in adults up to 3 years. SSOCT measured bleb height was 0.88 ± 0.37 and 1.32 ± 0.49mm in children versus adults (p = 0.006) and wall thickness, 0.35 ± 0.22 and 0.58 ± 0.24mm respectively, p = 0.008.
CONCLUSION: Bleb-sparing epithelial exchange is an equally safe and effective technique with good long-term success in both paediatric and adult dysfunctional blebs.

DOI: 10.1007/s00417-019-04527-4
PMID: 31768681

151: Singh G, Pradeep I, Agarwal S, Barwad A, Dinda A. Paraffin Immunofluorescence: A Role Beyond Kidney Biopsies. Appl Immunohistochem Mol Morphol. 2019 Nov/Dec;27(10):773-775. doi: 10.1097/PAI.0000000000000685. PubMed PMID: 30095462.

Paraffin immunofluorescence is a well established "salvage" technique in renal pathology when representative glomeruli are not found in the fresh frozen tissue sent for routine direct immunofluorescence studies. A step of enzymatic digestion of the formalin-fixed paraffin-embedded biopsy exposes the antigenic immune complexes and allows staining with fluorochrome-tagged antibodies. We explored the utility of the technique of paraffin immunofluorescence outside the kidney in certain specific scenarios including extra renal amyloid and duodenal macroglobulinemia.

DOI: 10.1097/PAI.0000000000000685
PMID: 30095462

152: Singh K, Khattar M, Kumar C. Disagreement: Should the duration of primary hyperparathyroidism impact guidelines for evaluation and treatment? Surgery. 2019 Nov;166(5):949-950. doi: 10.1016/j.surg.2018.10.007. Epub 2018 Nov 10. PubMed PMID: 30424923.

153: Singh M, Sankar J, Kumar A, Kumar UV, Lodha R, Kabra SK. Predictors of Mortality in Children Admitted to the Pediatric Intensive Care Unit with Acute Gastroenteritis with Severe Dehydration. Indian J Pediatr. 2019 Dec;86(12):1142-1145. doi: 10.1007/s12098-019-03094-0. Epub 2019 Nov 7. PubMed PMID: 31701427.

153: Singh M, Sankar J, Kumar A, Kumar UV, Lodha R, Kabra SK. Predictors of Mortality in Children Admitted to the Pediatric Intensive Care Unit with Acute Gastroenteritis with Severe Dehydration. Indian J Pediatr. 2019

Dec;86(12):1142-1145. doi: 10.1007/s12098-019-03094-0. Epub 2019 Nov 7. PubMed PMID: 31701427.
The objective of the present study was to identify risk factors for mortality at admission in children admitted to the Pediatric Intensive Care Unit (PICU) with acute gastroenteritis (AGE) with severe dehydration and shock. This was a retrospective chart review of all cases of AGE with severe dehydration and shock admitted to the PICU from 2012 to 2017. Children who died during hospital stay were compared with those who survived. A total of 62 children were admitted with AGE to the PICU during this period. Twenty-four children (39%) died. The following variables were found to be significantly associated with death on univariate analysis: clinical pallor (p = 0.01), thrombocytopenia (p = 0.018), elevated leucocyte count (p = 0.02), hypoalbuminemia (p = 0.02) and severe acute malnutrition (SAM) (p = 0.04). On multivariate analysis, only hypoalbuminemia {RR [95% CI: 2.6 (1.27 to 9.21)]; 0.039} and SAM {RR [95% CI: 4.9 (1.12 to 10)]; 0.045} remained statistically significant. Children admitted with severe dehydration and shock had high mortality rates. These children were a sicker subset with probable sepsis. Severe acute malnutrition and hypoalbuminemia were associated with increased risk of death in these patients.

DOI: 10.1007/s12098-019-03094-0
PMID: 31701427

154: Singh MK, Singh L, Pushker N, Chosdol K, Bakhshi S, Meel R, Sen S, Kashyap S. Constitutive expression of c-REL in uveal melanoma patients: correlation with clinicopathological parameters and patient outcome. Clin Transl Oncol. 2019 Nov 25. doi: 10.1007/s12094-019-02247-z. [Epub ahead of print] PubMed PMID: 31768922.

PURPOSE: Uveal melanoma (UM) is the most common intraocular cancer with a high mortality rate that requires new research in the field of prevention and treatment. c-REL is a member of the nuclear factor κB (NF-κB) transcription factor family and an emerging regulator of tumorigenesis. Therefore, the objective of the study is to evaluate the constitutive expression of c-REL in uveal melanoma patients and its prognostic significance.
METHODS: Detection of c-REL expression was carried out by immunohistochemistry in all 75 patients, and qRT-PCR performed on 58 fresh cases of uveal melanoma along with IL-6 status. Immunoblot was performed to validate immunohistochemistry results. Expression of c-REL protein correlated with clinicopathological parameters and overall survival of patients.
RESULTS: Immunohistochemistry results revealed nuclear expression of the c-REL protein (56%) in our cases. Out of 75 cases, 31 cases showed nuclear expression, and 11 cases had cytoplasmic expression. qRT-PCR showed upregulation of the REL gene in 56.89% cases at the transcriptional level. There was a statistically significant difference in the overall survival of patients with c-REL nuclear immunopositivity (p = 0.0048). On multivariate analysis, scleral invasion and c-REL nuclear expression found to be an independent prognostic factor (p < 0.05)
CONCLUSIONS: To the best of our knowledge, this was the first study reporting the expression of the c-REL protein in uveal melanoma. Strong nuclear immunoexpression of c-Rel suggests NFκB pathway activation which might be involved in the progression of the disease. Differential expression of c-REL protein may be used as an attractive target for the development of anticancer strategies.

DOI: 10.1007/s12094-019-02247-z
PMID: 31768922

155: Singh RP, Pandey PM, Mridha AR, Joshi T. Experimental investigations and statistical modeling of cutting force and torque in rotary ultrasonic bone drilling of human cadaver bone. Proc Inst Mech Eng H. 2020 Feb;234(2):148-162.

doi: 10.1177/0954411919889913. Epub 2019 Nov 21. PubMed PMID: 31749398.

Cutting force and torque are important factors in the success of the bone drilling process. In the recent past, many attempts have been made to reduce the cutting force and torque in the bone drilling process. In this work, drilling on human cadaver bones has been performed using rotary ultrasonic bone drilling process to investigate the effect of drilling parameters on cutting force and torque. The experimental work was carried on a recently developed rotary ultrasonic bone drilling machine for surgical operations. The experimental work was performed in two phases. The first phase includes a comparative study between rotary ultrasonic bone drilling and conventional surgical bone drilling, to study the influence of various drilling parameters (rotational speed, drill diameter, and drilling tool feed rate) on the cutting force and torque. The results revealed that the cutting force and torque produced during drilling operations in rotary ultrasonic bone drilling were lesser (30%-40%) than conventional surgical bone drilling. In the second phase, response surface methodology was used to perform the statistical modeling of cutting force and torque in rotary ultrasonic bone drilling process. Analysis of variance was performed at a confidence interval of 95% to analyze the significant contribution ($p < 0.05$) of process parameters (drilling speed, feed rate, drill diameter, and abrasive particle size) on the responses (cutting force and torque). The confirmatory experiments were performed to validate the developed statistical models. It was found that both cutting force and torque decrease with increase in drilling speed and increases with the increasing drill diameter, feed rate, and abrasive particle size.

DOI: 10.1177/0954411919889913
PMID: 31749398

156: Singh S, Singh A, Mallick S, Arava S, Ramam M. Lichenoid pseudovesicular papular eruption on nose: A papular facial dermatosis probably related to actinic lichen nitidus or micropapular polymorphous light eruption. Indian J Dermatol Venereol Leprol. 2019 Nov-Dec;85(6):597-604. doi: 10.4103/ijdvl.IJDVL_347_18. PubMed PMID: 31293275.

Background: Facial papules are a feature of several clinical conditions and may present both diagnostic and therapeutic challenges.
Aim: To describe a grouped papular eruption on the nose and adjoining cheeks that has not been well characterized previously.
Materials and Methods: A series of consecutive patients with a papular eruption predominantly involving nose and cheeks were evaluated, treated and followed up prospectively at tertiary care centers. Demographic details, clinical features, histopathology and response to treatment were recorded.
Results: There were five men and six women (mean age 29.9 ± 6.9 years) who had disease for a mean duration of 17.3 ± 11.1 months. All patients presented with a predominantly asymptomatic eruption of monomorphic, pseudovesicular, grouped, skin colored to slightly erythematous papules prominently involving the tip of nose, nasal alae, philtrum and the adjoining cheeks. A total of 15 biopsies from 11 patients were analyzed and the predominant finding was a dense, focal lymphoid infiltrate restricted to the upper dermis with basal cell damage and atrophy of the overlying epidermis. The eruption ran a chronic course from several months to years.
Limitations: Direct immunofluorescence could not be performed except in one case. Immunohistochemical stains for CD4 and CD8 could not be done owing to nonavailability. Phototesting was undertaken in one patient only.
Conclusion: Small grouped papules on the nose and adjoining skin with a lichenoid histopathology appear to represent a distinct clinicopathological entity. It may be related to actinic lichen nitidus/micropapular variant of polymorphous light

eruption.

DOI: 10.4103/ijdvl.IJDVL_347_18
PMID: 31293275

157: Singh S, Kumar S, Deep R. Patients with deliberate self-harm attended in emergency setting at a tertiary care hospital: A 13-month analysis of clinical-psychiatric profile. Int J Psychiatry Med. 2019 Nov;54(6):363-376. doi: 10.1177/0091217419837052. Epub 2019 Mar 25. PubMed PMID: 30909765.

158: Singhal D, Sahay P, Maharana PK. Re: Narayana etÂ al.: Mycotic antimicrobial localized injection: a randomized clinical trial evaluating intrastromal injection of voriconazole (Ophthalmology. 2019;126:1084-1089). Ophthalmology. 2019 Nov;126(11):e85-e86. doi: 10.1016/j.ophtha.2019.07.002. PubMed PMID: 31635708.

159: Singhal D, Maharana PK. RE: "Three-Year Outcome Comparison Between Femtosecond Laser-Assisted and Manual Descemet Membrane Endothelial Keratoplasty". Cornea. 2019 Nov;38(11):e51. doi: 10.1097/ICO.0000000000002103. PubMed PMID: 31414998.

160: Sinha M, Chandrashekhara SH, Pandey NN, Sharma A. Isolated left superior vena cava in tricuspid atresia with a rare reverse venous garland. J Cardiovasc Comput Tomogr. 2019 Nov 26. pii: S1934-5925(19)30492-7. doi: 10.1016/j.jcct.2019.11.013. [Epub ahead of print] PubMed PMID: 31864839.

161: Sokhal S, Goyal K, Sokhal N, Kumar N, Kedia S. Intraoperative Management of a Patient for Deep Brain Stimulation with Severe Dyskinesia and Tremors: Ketamine to the Rescue! Asian J Neurosurg. 2019 Nov 25;14(4):1275-1276. doi: 10.4103/ajns.AJNS_47_18. eCollection 2019 Oct-Dec. PubMed PMID: 31903377; PubMed Central PMCID: PMC6896633.

The loss of dopaminergic neurons from the substantia nigra pars compacta characterizes the classical pathology of Parkinson's disease (PD). Deep brain stimulation (DBS) has become an increasingly common treatment for PD. Sometimes excessive tremors due to exacerbated PD hinder the surgery and may almost make it impossible. This is a case report highlights use of IV ketamine for intraoperative sedation of a patient with PD, with severe dyskinesia & tremors, posted for DBS. IV ketamine resulted in prompt abolition of tremors and dyskinesia, which were unresponsive to previous traditional sedative drugs.



DOI: 10.4103/ajns.AJNS_47_18
PMCID: PMC6896633
PMID: 31903377

162: Soni S, Agarwal A, Singh A, Gupta V, Khadgawat R, Chaturvedi PK, Ahuja V, Makharia GK. Prevalence of thyroid autoimmunity in first-degree relatives of patients with celiac disease. Indian J Gastroenterol. 2019 Oct;38(5):450-455. doi: 10.1007/s12664-019-00990-3. Epub 2019 Nov 8. PubMed PMID: 31705459.

AIM: Patients with celiac disease (CeD) are prone to develop other autoimmune diseases such as autoimmune thyroid disease and type 1 diabetes. While 7.5% of

first-degree relatives (FDRs) of patients with CeD develop CeD, it is not clear whether FDRs of patients with CeD are at higher risk of developing autoimmune thyroid disease.
METHODS: In this prospective case-control study, we recruited 194 FDRs (males 53.1%) of 91 patients with CeD and 140 age-matched healthy controls (males 76.4%). They were screened for CeD using anti-tissue transglutaminase antibodies (anti-tTG Ab) and thyroid disease using a symptom questionnaire, anti-thyroid peroxidase antibodies (anti-TPO) and serum thyroid-stimulating hormone (TSH). Subjects having positive anti-TPO but a normal TSH were classified as having thyroid autoimmunity and those with elevated TSH with or without positive anti-TPO Ab were classified as having autoimmune thyroid dysfunction.
RESULTS: The prevalence of thyroid autoimmunity and autoimmune thyroid dysfunction in FDRs was significantly higher than that in healthy controls (17.5% vs. 5.0%, $p<0.01$; 11.8% vs. 3.5%, $p<0.01$), respectively. A significantly higher number of FDRs had a positive anti-tTG Ab in comparison with controls (13.9% vs. 2.2%, $p<0.001$). Amongst FDRs having thyroid autoimmunity, 44.1%, 47.0% and 8.8% were siblings, parents and children of patients with CeD, respectively. Familial clustering was seen only in 1 family.
CONCLUSION: FDRs of patients with CeD have 3-fold higher risk of developing autoimmune thyroid disorders and associated thyroid dysfunction. Therefore, it is advisable for early screening of FDRs for CeD and associated thyroid autoimmune through screening measures.

DOI: 10.1007/s12664-019-00990-3
PMID: 31705459

163: Srivastava M, Punj J. Management of cyclical pelvic pain by multiple ultrasound-guided superior hypogastric plexus blocks in a rare case of Mayer-Rokitansky-KÃ¼ster-Hauser syndrome - A case series of three blocks in a patient. Intractable Rare Dis Res. 2019 Nov;8(4):271-274. doi: 10.5582/irdr.2019.01098. PubMed PMID: 31890455; PubMed Central PMCID: PMC6929597.

Mayer-Rokitansky-Küster-Hauser syndrome is an uncommon disorder of mullerian agenesis where patients face multiple challenges like difficulty or inability to conceive and have sexual intercourse and chronic abdominal pain. This is a case report of a patient with Mayer-Rokitansky-Küster-Hauser syndrome who presented to the pain clinic with severe cyclical pelvic pain unresponsive to conservative treatment. This case was successfully managed with three ultrasound-guided superior hypogastric plexus blocks. This case illustrates that acute pelvic pain in MKRS patients can be effectively treated with bedside ultrasound-guided superior hypogastric plexus blocks. However, a GnRh analogue or hysterectomy is recommended for definitive treatment.

2019, International Research and Cooperation Association for Bio & Socio - Sciences Advancement.

DOI: 10.5582/irdr.2019.01098
PMCID: PMC6929597
PMID: 31890455

164: Subhadarshani S, Kumar T, Arava S, Gupta S. Rosai-Dorfman disease with cutaneous plaques and autoimmune haemolytic anemia. BMJ Case Rep. 2019 Nov 24;12(11). pii: e231927. doi: 10.1136/bcr-2019-231927. PubMed PMID: 31767610.

Sinus histiocytosis with massive lymphadenopathy (Rosai-Dorfman disease) is a non-Langerhan cell histiocytosis which primarily involves lymph nodes. Extranodal involvement in the form of cutaneous plaques can occur and can pose a diagnostic challenge because of pleomorphic presentation and histopathological mimics.

Rarely, systemic autoimmune involvement may complicate the disease process. We present a 28-year-old woman with slowly evolving scaly erythematous cutaneous plaques and fluctuating lymphadenopathy, associated with autoimmune haemolytic anaemia. The patient responded favourably to oral corticosteroids and acitretin with significant flattening of cutaneous plaques, reduction in size of neck nodes and improvement of anaemia.



DOI: 10.1136/bcr-2019-231927
PMID: 31767610

165: Sugandhi N, Saha M, Bhatnagar V, Dhua AK. Repair of Ruptured Omphalocele Sac in the Neonatal Period and Beyond. J Indian Assoc Pediatr Surg. 2020 Jan-Feb;25(1):46-48. doi: 10.4103/jiaps.JIAPS_195_18. Epub 2019 Nov 27. PubMed PMID: 31896900; PubMed Central PMCID: PMC6910046.

Conservative management of giant omphalocele in the neonate period is a known strategy to allow tissue growth aiding in anatomical closure. However, rupture of the covering sac is considered an absolute contraindication for continuing conservative management. We report a case where a ruptured sac of giant omphalocele was ingeniously sutured to restore its integrity, and conservative management continued. The giant omphalocele later became a huge ventral hernia and was gradually reduced and primary closure was achieved with multiple surgeries over a period of 4 years.



DOI: 10.4103/jiaps.JIAPS_195_18
PMCID: PMC6910046
PMID: 31896900

166: Sundar MD, Ayyadurai N, Chawla R, Hasan N. Ultra-widefield imaging of golden vitreous membranes requiring pars plana vitrectomy in a case of chronic ocular chalcosis. Indian J Ophthalmol. 2019 Nov;67(11):1878-1879. doi: 10.4103/ijo.IJO_433_19. PubMed PMID: 31638056; PubMed Central PMCID: PMC6836618.

167: Talwar S, Chigurupati BS, Sengupta S, Rajashekar P, Sharma S, Magoon R, Choudhary SK. An alternative technique for intracardiac exposure during transatrial repair of tetralogy of fallot. J Card Surg. 2019 Nov;34(11):1347-1349. doi: 10.1111/jocs.14259. Epub 2019 Sep 19. PubMed PMID: 31536139.

The commonly used technique to facilitate intracardiac exposure during transatrial repair of tetralogy of fallot involves considerable retraction of the tricuspid valve using retractors. We describe an alternative surgical technique in which it is possible to dispense away with the retractors. The advantages of such a technique are discussed.



DOI: 10.1111/jocs.14259
PMID: 31536139

168: Tamuli D, Kaur M, Boligarla A, Jaryal AK, Srivastava AK, Deepak KK. Depressed baroreflex sensitivity from spontaneous oscillations of heart rate and

blood pressure in SCA1 and SCA2. Acta Neurol Scand. 2019 Nov;140(5):350-358. doi: 10.1111/ane.13151. Epub 2019 Sep 1. PubMed PMID: 31343735.

OBJECTIVES: To assess the time and frequency domain measures of cardiac autonomic activity/tone in patients of genetically defined spinocerebellar ataxia (SCA) types 1 and 2, as well as to decipher the probable associations among the cardiovascular autonomic parameters and genetic and clinical characteristics.
MATERIALS AND METHODS: Simultaneous 5-min recording of RR interval (RRI) and blood pressure (BP) for the calculation of heart rate variability (HRV), blood pressure variability (BPV) and baroreflex sensitivity (BRS) were performed in genotypically confirmed SCA1 (n = 31) and SCA2 (n = 40) patients and healthy controls (n = 40). Additionally, the International Cooperative Ataxia Rating Scale (ICARS) was used for scoring of clinical severity in SCA patients.
RESULTS: Time and frequency domain parameters of HRV, BPV and BRS were depressed in SCA1 and SCA2 subtypes as compared to controls, although there was no statistically significant difference in autonomic tone between the two SCA subtypes. On correlation analysis, autonomic tone parameters were found to be associated with the clinical and genetic features of the SCA subtypes. Also, ICARS was associated with the genotype (CAG repeat length) in SCA2 patents.
CONCLUSIONS: Cardiac autonomic tone is depressed in both SCA1 and 2 as compared to healthy controls while the two SCA subtypes do not differ in terms of autonomic tone. Also, a typical association exists between disease characteristics and autonomic indices.



DOI: 10.1111/ane.13151
PMID: 31343735 [Indexed for MEDLINE]

169: Taneja N, Sreenivas V, Sahni K, Gupta V, Ramam M. A cross-sectional study of spontaneous repigmentation in vitiligo. Indian J Dermatol Venereol Leprol. 2019 Nov 25. doi: 10.4103/ijdvl.IJDVL_409_18. [Epub ahead of print] PubMed PMID: 31793491.

Background: Spontaneous regression is well documented in several chronic skin diseases such as psoriasis, alopecia areata, and atopic dermatitis. However, information on vitiligo is scarce.
Aims: We studied the frequency, extent, and factors affecting spontaneous repigmentation in vitiligo.
Methods: A cross-sectional descriptive study was undertaken in 167 patients with vitiligo with an emphasis on history of spontaneous repigmentation. Where available, photographs documenting spontaneous repigmentation were also obtained. Repigmentation was defined as spontaneous if it occurred when the patient was off treatment for at least 3 consecutive months.
Results: Spontaneous repigmentation occurred in 36 (21.5%) patients with complete repigmentation in 6 (3.6%) patients. The extent varied from 0.5% to 100% (mean, 35.4 ± 37.9%) of vitiliginous skin. It occurred after 3 months to 47 years (mean, 8.7 ± 9.5 years) of onset of vitiligo and persisted for 2 months to 27 years (mean, 4.4 ± 6.2 years). Diffuse repigmentation was the most common pattern observed in 20 (55.6%) patients and there was a good color match in 26 (72.2%) patients. Likelihood of spontaneous repigmentation was 3.5 times greater in patients with more than 3 years of stable disease (P = 0.001).
Limitations: The chief limitation was the dependence on patient recall for the data, except when documented by images.
Conclusion: Spontaneous repigmentation occurs in one-fifth of patients with vitiligo. In some patients, the repigmentation is clinically significant and long-lasting. Considering its frequency and extent, spontaneous repigmentation should be taken into account both when evaluating novel interventions and

counselling patients about the course of the disease.

DOI: 10.4103/ijdvl.IJDVL_409_18
PMID: 31793491

170: Tewari N, Mathur VP. Smartphones: The new risk factor for traumatic dental and facial injuries in children. Dent Traumatol. 2020 Feb;36(1):76-78. doi: 10.1111/edt.12507. Epub 2019 Nov 20. PubMed PMID: 31390477.

Traumatic dental injuries (TDI) have emerged as a significant global public health concern. One major problem which is developing and yet unreported is the incidence of traumatic dental injuries and soft tissue facial trauma due to the inadvertent falling of smartphones on to the face during their use in rest time. This is related to the weight of the smartphones and their excessive use in all parts of the world. This paper aims to highlight this phenomenon as an emerging aetiological factor for dental and facial injuries in children.



DOI: 10.1111/edt.12507
PMID: 31390477

171: Tewari N, Bansal K, Mathur VP. Dental Trauma in Children: A Quick Overview on Management. Indian J Pediatr. 2019 Nov;86(11):1043-1047. doi: 10.1007/s12098-019-02984-7. Epub 2019 Jun 13. PubMed PMID: 31197645.

Traumatic dental injuries (TDI) or tooth trauma have a global prevalence of 10-15%. These are often the cause of first visit to emergency room. Prognosis of teeth after injury is dependent on type of TDI, emergency treatment and time elapsed till definitive care. The low level of awareness among general public and medical practitioners often leads to delay in seeking treatment which often leads to pain, severe symptoms and poor prognosis. Pediatricians can play a significant role in identification of TDI, health advise, emergency care and referral to dentists. This paper highlights the important features to be noted in children with history of TDI and the key steps which needs to be taken in these situations.

DOI: 10.1007/s12098-019-02984-7
PMID: 31197645

172: Tripathi A, Kumar M, Kaur P, Kumar B, Sagi SSK. Efficacy of Quercetin as a potent sensitizer of Î²2-AR in combating the impairment of fluid clearance in lungs of rats under hypoxia. Respir Physiol Neurobiol. 2020 Feb;273:103334. doi: 10.1016/j.resp.2019.103334. Epub 2019 Nov 2. PubMed PMID: 31689533.

BACKGROUND: Hypoxia reportedly increases free radical generation in the body, causing oxidative stress and inhibiting β2-AR signaling. The present study correlates the prophylactic potential of quercetin and salbutamol in ameliorating fluid clearing capacity of lungs by re-sensitizing β2-AR signaling under hypoxia.
METHODS: Male SD rats supplemented orally with quercetin (50 mg/Kg BW), and salbutamol (2 mg/Kg BW) were exposed to hypobaric hypoxia at 7620 m for 6 h. Western blotting and ELISA quantitated NFκB and related genes and GPCR pathway proteins. The binding affinities of drugs with receptor were determined by SPR spectroscopy and further confirmed insilico.
RESULTS: Quercetin and salbutamol pre-treatment significantly up-regulated the expressions of β2-AR, GPR-1, GPR-10, GCSα, cAMP content, and down-regulated GRK-2, β-arrestin, ROS, NFκB ($p < 0.001$), thus, enhancing alveolar fluid clearance (AFC). SPR and insilico findings revealed a higher binding affinity of

β2-AR with quercetin over salbutamol.
CONCLUSION: Results indicated quercetin to be a better prophylactic that augmented AFC in rats exposed to hypoxia by attenuating inflammation and stimulating β2-AR.



DOI: 10.1016/j.resp.2019.103334
PMID: 31689533

173: Ung L, Acharya NR, Agarwal T, Alfonso EC, Bagga B, Bispo PJ, Burton MJ, Dart JK, Doan T, Fleiszig SM, Garg P, Gilmore MS, Gritz DC, Hazlett LD, Iovieno A, Jhanji V, Kempen JH, Lee CS, Lietman TM, Margolis TP, McLeod SD, Mehta JS, Miller D, Pearlman E, Prajna L, Prajna NV, Seitzman GD, Shanbhag SS, Sharma N, Sharma S, Srinivasan M, Stapleton F, Tan DT, Tandon R, Taylor HR, Tu EY, Tuli SS, Vajpayee RB, Van Gelder RN, Watson SL, Zegans ME, Chodosh J. Infectious corneal ulceration: a proposal for neglected tropical disease status. Bull World Health Organ. 2019 Dec 1;97(12):854-856. doi: 10.2471/BLT.19.232660. Epub 2019 Nov 1. PubMed PMID: 31819296; PubMed Central PMCID: PMC6883276.

174: Verma D, Gupta S, Saxena R, Kaur P, R R, Srivastava S, Gupta V. Allosteric inhibition and kinetic characterization of Klebsiella pneumoniae CysE: An emerging drug target. Int J Biol Macromol. 2019 Nov 18. pii: S0141-8130(19)36577-8. doi: 10.1016/j.ijbiomac.2019.10.170. [Epub ahead of print] PubMed PMID: 31751684.

The emergence and spread of multidrug-resistant strains of Klebsiella pneumoniae is a major concern that necessitates the development of unique therapeutics. The essential requirement of serine acetyltransferase (SAT/CysE) for survival of several human pathogens makes it a very promising target for inhibitor designing and drug discovery. In this study, as an initial step to structure-based drug discovery, CysE from K. pneumonia was structurally and biochemically characterized. Subsequently, blind docking of selected natural products into the X-ray crystallography determined 3D structure of the target was carried out. Experimental validation of the inhibitory potential of the top-scorers established quercetin as an uncompetitive inhibitor of Kpn CysE. Molecular dynamics simulations carried out to elucidate the binding mode of quercetin reveal that this small molecule binds at the trimer-trimer interface of hexameric CysE, a site physically distinct from the active site of the enzyme. Detailed analysis of conformational differences incurred in Kpn CysE structure on binding to quercetin provides mechanistic understanding of allosteric modulation. Binding of quercetin to CysE leads to conformation changes in the active site loops and proximal loops that affect its internal dynamics and consequently its affinity for substrate/co-factor binding, justifying the reduced enzyme activity.



DOI: 10.1016/j.ijbiomac.2019.10.170
PMID: 31751684

175: Verma H, Panda S, Sikka K, Irugu DVK, Thakar A. Primary Spheno-Petro-Clival Tuberculosis. Indian J Otolaryngol Head Neck Surg. 2019 Nov;71(Suppl 3):1796-1799. doi: 10.1007/s12070-017-1159-5. Epub 2017 Jul 20. PubMed PMID: 31763248; PubMed Central PMCID: PMC6848799.

The increase awareness and advent of anti-tuberculosis therapy led to decline in tuberculosis. Now a resurgence of tuberculosis is with immunosuppression and with

resistant strains. The detection rate of extrapulmonary is increased with the advent of newer modalities of detection, imaging, and better testing. This case series documents our experience with seven cases of primary spheno-petro-clival lesion and details of the clinical and radiological presentations of these patients. Intraoperative obtained tissue was send for histopathological and microbiological evaluation. The most common symptoms were headache and nasal discharge. The final diagnosis of spheno-petro-clival tuberculosis was confirmed in all cases with histopathology and by culture post-operatively. Skull base tuberculosis is relative rare entity in past because of late occurrence of specific symptom, incomplete radiological evaluation and it may present as neck swelling by travelling through various neck spaces. (1) Tubercular infection should be considered as differential in skull base lesion as pickup rate is increasing with advancement in technology. (2) Two of our cases had retropharyngeal abscess have focus in skull base bone. The skull base, hence, may be one of foci in undetermined sites of tuberculous infections and should be searched for.



DOI: 10.1007/s12070-017-1159-5
PMCID: PMC6848799 [Available on 2020-11-01]
PMID: 31763248

176: Vuyyuru SK, Singh AD, Gamanagatti SR, Rout G, Gunjan D, Shalimar. A Randomized Control Trial of Thromboelastography-Guided Transfusion in Cirrhosis for High-Risk Invasive Liver-Related Procedures. Dig Dis Sci. 2019 Nov 13. doi: 10.1007/s10620-019-05939-2. [Epub ahead of print] PubMed PMID: 31720889.

BACKGROUND AND AIM: Hemostasis in cirrhosis is dynamic and balanced. Thromboelastography (TEG) assesses global coagulation status. We aimed to assess whether TEG-guided blood product transfusions result in lower blood product requirements in patients with cirrhosis undergoing invasive liver-related procedures as compared to the conventional standard of care (SOC).
METHODS: In this open-label, randomized controlled trial, cirrhosis patients with coagulopathy, undergoing invasive liver-related procedures, were randomized to either TEG-guided blood product transfusion or SOC. The primary outcome was difference in the amount of fresh frozen plasma (FFP) and platelet units transfused between the two groups. The secondary outcome was procedure-related bleeding complications within 5 days and any complications until 28 days.
RESULTS: From November 2017 till June 2019, 58 patients were recruited (29: TEG and 29: SOC). Most common procedures performed were percutaneous liver biopsy ($n=48$), followed by transjugular intrahepatic portosystemic shunt ($n=2$), percutaneous acetic acid injection ($n=2$), and transarterial chemoembolization ($n=2$). There were no differences in baseline demographics, hemostatic profile, and types of procedures between the two groups. Only nine patients in TEG group received transfusions compared to all patients in SOC (31% vs 100%; $P<0.001$). In TEG group, six (20.7%) received FFP ($P=0.753$ vs. SOC), two (6.9%) received platelets ($P<0.001$ vs. SOC), and 1(3.4%) patient received both FFP and platelet ($P\geq0.999$ vs. SOC) transfusion. None of the patients in either group developed procedure-related bleeding complications until 5 days post-procedure. The complication rates at 28-day follow-up were similar between the groups.
CONCLUSION: TEG-guided blood product transfusion strategy reduces blood product transfusion without increased risk of bleeding in cirrhotic patients undergoing invasive liver-related procedures (CTRI/2017/12/010822).

DOI: 10.1007/s10620-019-05939-2
PMID: 31720889

177: Vyas AK, Jindal A. Muddle and Mechanism of Hepatitis B Surface Antigen Seroclearance. Clin Gastroenterol Hepatol. 2019 Nov;17(12):2621. doi: 10.1016/j.cgh.2019.04.049. PubMed PMID: 31653316.

178: Yadav D, Ballal S, Yadav MP, Tripathi M, Roesch F, Bal C. Evaluation of [(68)Ga]Ga-DATA-TOC for imaging of neuroendocrine tumours: comparison with [(68)Ga]Ga-DOTA-NOC PET/CT. Eur J Nucl Med Mol Imaging. 2019 Nov 22. doi: 10.1007/s00259-019-04611-1. [Epub ahead of print] PubMed PMID: 31754796.

PURPOSE: Recently, the new hybrid chelator DATA (6-amino-1,4-diazepine-triacetate) has been introduced, which has the advantage of high yield and radiolabelling of DATA-based octreotide derivative (TOC) at room temperature in contrast to tetraazacyclododecane-1,4,7,10-tetraacetate (DOTA) that needs 95 °C for effective labelling. However, the diagnostic potential of DATA-TOC has not been studied with other chelators in humans. The aim of this study was to compare the diagnostic efficacy of [68Ga]Ga-DATA-TOC with [68Ga]Ga-DOTA-NOC (which is the current standard for imaging neuroendocrine tumours (NET)) in patients of gastroenteropancreatic neuroendocrine tumours (GEP-NETs).
METHODS: Fifty patients (thirty-one males and nineteen females) with biopsy-proven GEP-NETs were included in the study. Patients age ranged from 14 to 75 years (mean 46.11 years). All patients underwent two PET studies with [68Ga]Ga-DATA-TOC and [68Ga]Ga-DOTA-NOC. Images were evaluated visually and semi-quantitatively using maximum standardized uptake values (SUVmax) of tumour, mediastinum and liver. Tumour-to-liver (T/L) and tumour-to-mediastinum (T/M) SUVmax ratios were computed. For the purpose of comparison, patient-wise as well as lesion-wise analysis was carried out. The nonparametric-related samples Wilcoxon signed-rank test was used for comparison of the SUVmax values and ratios.
RESULTS: On visual evaluation, the biodistribution and image quality of [68Ga]Ga-DATA-TOC was similar to [68Ga]Ga-DOTA-NOC. Physiological liver uptake was lower in [68Ga]Ga-DATA-TOC as compared with [68Ga]Ga-DOTA-NOC, 7.65 ± 5.37 vs 8.94 ± 5.95 (p = 0.009), respectively. On a patient-wise analysis, both [68Ga]Ga-DATA-TOC and [68Ga]Ga-DOTA-NOC were lesion-positive in the 44 patients (88%) and were negative in the 6 patients (12%). On a lesion-based analysis, [68Ga]Ga-DATA-TOC had 98.6% concordance with [68Ga]Ga-DOTA-NOC (232 out of 235 lesions detected). The target tumour SUVmax on [68Ga]Ga-DATA-TOC and [68Ga]Ga-DOTA-NOC were 36.63 ± 32.24 and 40.82 ± 36.89, respectively (p = 0.097). The T/L SUVmax ratios were not significantly different (5.99 ± 5.52 vs 5.67 ± 4.96, p = 0.77).
CONCLUSION: [68Ga]Ga-DATA-TOC PET/CT imaging produced results that were comparable with [68Ga]Ga-DOTA-NOC. It, thus, has potential utility as an effective and safe alternative to 68Ga-DOTA-NOC with the added benefit of ease, cost-effective and improved yield of instant kit-type synthesis.

DOI: 10.1007/s00259-019-04611-1
PMID: 31754796

179: Yadav DK, Acharya SK, Bagga D, Jain V, Dhua A, Goel P. Sacrococcygeal Teratoma: Clinical Characteristics, Management, and Long-term Outcomes in a Prospective Study from a Tertiary Care Center. J Indian Assoc Pediatr Surg. 2020 Jan-Feb;25(1):15-21. doi: 10.4103/jiaps.JIAPS_219_18. Epub 2019 Nov 27. PubMed PMID: 31896894; PubMed Central PMCID: PMC6910050.

Introduction: The study focuses on the clinical presentation, management, and outcomes (both short term and long term) in patients with sacrococcygeal teratoma

managed over a decade in a tertiary care center.
Materials and Methods: This is a prospective study on children with sacrococcygeal teratoma over 12 years data collected included antenatal diagnosis, mode of delivery, age at diagnosis, clinical presentation, physical extent of mass (including Altman classification), levels of alpha-fetoprotein, surgical approach, histopathology, clinical outcome, recurrence and long-term results including bladder-bowel dysfunction and neurological impairment. Functional results were evaluated clinically and radiologically.
Results: During the study, 41 patients (male to female ratio of 1:3.1) with a median age of 36 days (1 day-11.6 years) with sacrococcygeal teratoma were managed at our center. The mean follow-up duration was 54 months (range 19-110 months). Nearly, two-thirds of the tumors were either Altman Type 1 or 2. Yolk sac tumor was present in 8 (19.5%) patients, while the rest has either mature or immature teratoma. Tumors were removed through a posterior sagittal or a chevron incision. In seven patients, abdominosacral approach was necessary. Eight patients with malignant disease received chemotherapy (neoadjuvant in 5). Overall survival was 95% at a mean follow-up of 54 months. Among the late complications, three patients had a local recurrence of tumor, and urinary dribbling was present in three patients.
Conclusions: Teratomas are the most common germ cell tumors of the sacrococcygeal region. Most of the tumors are benign, and the incidence of malignancy increases with age. The evaluation of malignancy is, therefore, necessary in these children. Excellent survival of 95% was achieved in this series. Morbidity due to associated malformation, disease recurrence, and treatment may persist in these patients; hence, proper follow-up is needed.



DOI: 10.4103/jiaps.JIAPS_219_18
PMCID: PMC6910050
PMID: 31896894

180: Yadav R, Yadav RK, Pandey RM, Upadhyay AD. Predictors of Health-Related Quality of Life in Indians with Metabolic Syndrome Undergoing Randomized Controlled Trial of Yoga-Based Lifestyle Intervention vs Dietary Intervention. Behav Med. 2019 Nov 19:1-10. doi: 10.1080/08964289.2019.1683711. [Epub ahead of print] PubMed PMID: 31743071.

The present study explores the efficacy of 12-week yoga + diet-based lifestyle intervention (YBLI) vs dietary intervention (DI) on health-related quality of life (HRQoL) and identifies the predictors of change in HRQoL in Indians with metabolic syndrome (Met S). Data from the historical randomized controlled trial was used including adults (n = 260, 20-45 years) with Met S. Four domains of HRQoL were measured at baseline, 2 and 12 weeks using WHOQOL-BREF questionnaire. Generalized estimating equation and chi-square test was used to compare 12-week changes in HRQoL domains and proportion of subjects, respectively. Changes in HRQoL were predicted using regression models concerning changes in body mass index (BMI), physical activity, total calorie intake, adiponectin, and superoxide dismutase (SOD) levels. Exploratory mediation analysis was carried out using Baron & Kenny approach. YBLI resulted in a significantly greater increase in the physical domain score of HRQoL than DI. A significantly greater proportion of subjects in YBLI group (71%) showed an increase in physical domain scores compared to DI (51%). A unit change in BMI negatively predicted a unit change in physical, psychological and environmental health. Whereas, a unit change in adiponectin and SOD levels positively predicted a unit change in physical and environmental health. Partial mediation between YBLI intervention and physical HRQoL domain was observed via adiponectin. In conclusion, a 12-week YBLI has a positive and greater effect on HRQoL physical domain score than following DI

alone. Changes in BMI, adiponectin, and SOD levels may predict changes in HRQoL domains after lifestyle intervention.

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