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

1: Agarwal R, Singh G, Ghosh A, Verma KK, Pandey M, Xess I. Chromoblastomycosis in India: Review of 169 cases. PLoS Negl Trop Dis. 2017 Aug 3;11(8):e0005534. doi: 10.1371/journal.pntd.0005534. eCollection 2017 Aug. Review. PubMed PMID: 28771470; PubMed Central PMCID: PMC5542425.

Chromoblastomycosis (CBM) is a chronic, progressive, cutaneous and subcutaneous fungal infection following the traumatic implantation of certain dematiaceous fungi. The disease has worldwide prevalence with predominant cases reported from humid tropical and subtropical regions of America, Asia, and Africa. Diagnosis is often delayed or misdirected either due to poor degree of clinical suspicions or clinical simulation of dermatological conditions. The infection is not uncommon in India and several case reports from the sub-Himalayan belt and western and eastern coasts of India have been published; however, very few have reviewed the cases. We reviewed 169 cases published in English literature from India during 1957 through May 2016, including 2 recent cases from our institute. A tremendous increase in the number of reported cases was noticed since 2012, since which, more than 50% of the cases had been published. A majority of the patients (74.1%) were involved in various agricultural activities directly or indirectly. The mean age at presentation was 43.3 years ± 16.0, with male to female ratio of 4.2:1. The duration of disease at the time of presentation varied from 20 days to 35 years. Any history of trauma was recalled only in 33.8% of the studied cases. The lower extremity was the most common site afflicted, followed by the upper extremity. The culture was positive in 80.3% of the cases with Fonsecaea pedrosoi, isolated as the most common fungal pathogen, followed by Cladophialophora carrionii. Although all the commercially available antifungals were prescribed in these cases, itraconazole and terbinafine were the most commonly used, either alone or in combination with other drugs/physical methods, with variable degrees of outcome. Combinations of different treatment modalities (chemotherapy and physical methods) yielded a cure rate of 86.3%. CBM is refractory to treatment and no single antifungal agent or regimen has demonstrated satisfactory results. Increased awareness with early clinical suspicion of the disease and adequate therapy are necessary to improve the outcome. However, depending upon the causative agent, disease severity, and the choice of antifungals, variable outcomes can be observed.

DOI: 10.1371/journal.pntd.0005534
PMCID: PMC5542425
PMID: 28771470 [Indexed for MEDLINE]

2: Aggarwal A, Srivastava DN, Jana M, Sharma R, Gamanagatti S, Kumar A, Kumar V, Malhotra R, Goyal V, Garg K. Comparison of Different Sequences of Magnetic Resonance Imaging and Ultrasonography with Nerve Conduction Studies in Peripheral Neuropathies. World Neurosurg. 2017 Dec;108:185-200. doi: 10.1016/j.wneu.2017.08.054. Epub 2017 Aug 24. PubMed PMID: 28842238.

BACKGROUND: Peripheral neuropathies refer to a group of disorders in which there is damage to the nerves of the peripheral nervous system. Electrophysiologic studies are the main stay for the diagnosis of peripheral neuropathies. However, direct visualization of the nerves is possible with exact localization of site of disease with high-resolution ultrasonography (USG) and 3-Tesla magnetic resonance imaging (MRI) scanner, and newer magnetic resonance (MR) sequences.
METHODS: We performed a cross-sectional study including 55 patients and 64 nerves with upper limb peripheral neuropathies. All patients included underwent high-resolution focused USG of the nerves and MR neurography. A nerve conduction velocity study was performed for reference.
RESULTS: The diagnostic confidence of the turbo spin echo T2-weighted (T2W) MR sequence was seen to be highest, with a sensitivity of 95.31%, whereas it was 81.25% for USG. Continuity of the nerve in patients with traumatic neuropathy was seen in 65.7% and 62.86% (22/35) nerves on MRI and USG, respectively. T1-weighted and T2W MR sequences were seen to be equally effective in establishing the continuity of the nerve. Increase in the caliber/thickening was seen in 77% of cases on MRI and 73.8% of cases on USG. Neuroma formation was seen equally on

both MR and USG in 60.66%. We consistently found low fractional anisotropy (FA) values at the site of disease.
CONCLUSIONS: USG is a sensitive technique to diagnose peripheral neuropathies and it should be used as a screening modality for focused MR to be performed later. Turbo spin echo T2W fast spin has the highest sensitivity to identify nerve disease and is comparable with nerve conduction studies. Among the newer sequences, diffusion tensor imaging should be performed to increase diagnostic confidence.

DOI: 10.1016/j.wneu.2017.08.054
PMID: 28842238 [Indexed for MEDLINE]

3: Aggarwal P, Kedia S, Sharma R, Bopanna S, Madhusudhan KS, Yadav DP, Goyal S, Jain S, Mouli VP, Das P, Dattagupta S, Makharia G, Ahuja V. Tubercular Intestinal Strictures Show a Poor Response to Anti-Tuberculous Therapy. Dig Dis Sci. 2017 Oct;62(10):2847-2856. doi: 10.1007/s10620-017-4727-3. Epub 2017 Aug 30. PubMed PMID: 28856488.

BACKGROUND: The literature on resolution of intestinal strictures in patients with intestinal tuberculosis (ITB) after anti-tuberculous therapy (ATT) is sparse and ambivalent. We aimed to assess the frequency of stricture resolution after ATT and its predictors.
METHODS: This ambispective cohort study included consecutive ITB patients with strictures who received ATT for ≥6 months and were on regular follow-up between January 2004 and December 2015. Resolution of stricture was assessed at the end of ATT by endoscopy/radiology.
RESULTS: Of 286 patients, 128 had strictures, and 106 were finally included (63 males, median age 35 years). The stricture location was distal ileum/ileocecal in 52 (49.1%), colon in 37 (34.9%), ileocolonic in 4 (3.8%), proximal small bowel in 10 (9.4%), and gastroduodenal in 4 (3.8%) patients. Although all patients demonstrated mucosal healing (indicating resolution of active infection), stricture resolution occurred only in 25/106 (23.6%) patients. Symptoms pertaining to stricture (pain abdomen/recurrent SAIO) were present in 104/106 (98%) patients, and after a median of 6 (6-9) months of ATT, these symptoms resolved only in half, 88% (22/25) in patients with stricture resolution and 38% (30/79) in patients with persistent strictures. Colonic strictures had the least resolution (5.4%) followed by proximal small intestinal (20%) and distal ileal/ileocecal (36.5%). Although not statistically significant, stricture resolution was less frequent in patients with multiple strictures, longer strictures (>3 cm), and strictures in which scope was not negotiable prior to ATT.
CONCLUSION: Only one-fourth of ITB patients with strictures show resolution of stricture following ATT. The resolution of strictures is dependent on disease location, and majority of them exhibit symptoms pertaining to stricture even after ATT.

DOI: 10.1007/s10620-017-4727-3
PMID: 28856488 [Indexed for MEDLINE]

4: Aggarwal P, Gupta A, Garg A. Multivariate brain network graph identification in functional MRI. Med Image Anal. 2017 Dec;42:228-240. doi: 10.1016/j.media.2017.08.007. Epub 2017 Aug 30. PubMed PMID: 28866433.

Motivated by recent interest in identification of functional brain networks, we develop a new multivariate approach for functional brain network identification and name it as Multivariate Vector Regression-based Connectivity (MVRC). The proposed MVRC method regresses time series of all regions to those of other regions simultaneously and estimates pairwise association between two regions with consideration of influence of other regions and builds the adjacency matrix. Next, modularity method is applied on the adjacency matrix to detect communities

or functional brain networks. We compare the proposed MVRC method with existing methods ranging from simple Pearson correlation to advanced Multivariate Adaptive Sparse Representation (ASR) methods. Experimental results on simulated and real fMRI dataset demonstrate that MVRC is able to extract functional brain networks that are consistent with the literature. Also, the proposed MVRC method is 650-750 times faster compared to the existing ASR method on 90 node network.

DOI: 10.1016/j.media.2017.08.007
PMID: 28866433

5: Aggarwal S, Sharma SC, N Das S. Dynamics of regulatory T cells (T(regs)) in patients with oral squamous cell carcinoma. J Surg Oncol. 2017 Dec;116(8):1103-1113. doi: 10.1002/jso.24782. Epub 2017 Aug 22. PubMed PMID: 28833201.

BACKGROUND AND OBJECTIVES: The immune dysfunction in oral squamous cell carcinoma (OSCC) patients is one of the major factors for growth and dissemination of tumor affecting disease-free survival.
METHODS: The phenotypic and functional characteristics of Regulatory T (Treg) CD4+ CD25+ FoxP3+ subsets in OSCC patients were assessed by multicolor flow cytometry and its effector component (TGF-β) by Western blot and qRT-PCR.
RESULTS: An increased ($P < 0.05$) prevalence of Treg phenotypes (CD4+ CD25+ , CD4+ FoxP3+ , CD8+ FoxP3+ , CD4+ CD25+ FoxP3+) was observed in the peripheral circulation of OSCC patients that positively correlated with clinicopathological features. The increased frequency of CD4+ CD8+ CD25+ FoxP3+ , a unique T cell subset, CTLA-4+ , GITR+ , NrP1+ , HLA-DR+ , CD127+ , Tbet+ , TGF-β+ , and granzyme B+ (GzmB) Tregs also showed a significantly higher prevalence in OSCC patients. Functionally, CD4+ FoxP3+ Tregs showed skewed expression of IL-2, IL-10, and IL-35 in patients as compared with the normal controls. Further, enhanced expression of CCR5 and CCR7 on Tregs with up regulation of their ligands (CCL5, CCL19, and CCL21) in tumor cells indicates efficient recruitment and trafficking of Tregs to the tumor site.
CONCLUSION: It seems reasonable to assume that modulation of functional dynamics of selective Treg subsets may be useful in developing immunotherapeutic strategy for OSCC patients.

DOI: 10.1002/jso.24782
PMID: 28833201

6: Agrawal P, Das S, Gupta V, Arora S. Unusual association of elbow dislocation with humeral biepicondylar fracture in a child: A case report and review of literature. J Clin Orthop Trauma. 2017 Aug;8(Suppl 1):S41-S44. doi: 10.1016/j.jcot.2017.03.004. Epub 2017 Mar 22. PubMed PMID: 28878539; PubMed Central PMCID: PMC5574863.

Humeral biepicondylar fracture with elbow dislocation is an unusual pattern of injury encountered in paediatric population. We reported a case of humeral biepicondylar fracture-dislocation of elbow in a 11-year-old boy, who presented with tender, swollen, and deformed left elbow following fall on his outstretched hand. Roentgenographic and CT evaluation confirmed the diagnosis, and also showed incarcerated medial epicondylar fragment. Closed reduction was unsuccessful; open reduction and internal fixation was performed with headless screws. Avulsed medial collateral ligament was repaired with suture anchor. Following 4 weeks of immobilization, physiotherapy was started. The child regained satisfactory range-of-motion of the elbow with complete bony union within 3 months. Two years following operation, the child is asymptomatic, with pain free stable elbow. High index of suspicion and astute clinical and radiological assessment is utilitarian for timely diagnosis and appropriate management. Open reduction and internal

fixation is believed to be pivotal to restore elbow stability and functionality.

DOI: 10.1016/j.jcot.2017.03.004
PMCID: PMC5574863 [Available on 2018-08-01]
PMID: 28878539

7: Arjuman A, Chandra NC. LOX-1: A potential target for therapy in atherosclerosis; an in vitro study. Int J Biochem Cell Biol. 2017 Oct;91(Pt A):65-80. doi: 10.1016/j.biocel.2017.08.013. Epub 2017 Aug 30. PubMed PMID: 28860004.

Pro-inflammatory signal generated from the interaction of oxLDL with its cognate receptor LOX-1 has been attenuated successfully by a novel combination siRNA (siLOX-1Ω) targeting unique regions of Homo sapien LOX-1 mRNA. Signalling via LOX-1R was studied in a potentially pro-atherogenic arena recreated in a metabolic, pulse-chase set up. An initial pulse of oxLDL (20μg/mL;5h) was chased (without oxLDL) on a temporal scale upto 72h. Our study shows that the pro-inflammatory signal generated via oxLDL-LOX-1R interaction was mediated in two rungs, an initial sustained increase in LOX-1R expression up to 12h, and a renewal after 48h. TNF-α acted as a primary mediator of LOX-1R signalling, presumably also stimulating CD40 and MMP-9. Both TNF-α and IL-6 were involved in the second rung of LOX-1R signalling; maximum secretion of both was detected at 48h. Our study suggests a temporal sustenance of LOX-1R signalling by pro-inflammatory cytokines even on withdrawal of oxLDL. Also, siLOX-1Ω successfully abated LOX-1R expression along with its signalling intermediates, NO and NF-kB. Overall, LOX-1 signalling and the crucial role of cytokines in sustaining it is reported. Attenuation of this receptor may be of therapeutic value in atherosclerosis.

DOI: 10.1016/j.biocel.2017.08.013
PMID: 28860004 [Indexed for MEDLINE]

8: Aron N, Sen S, Khokhar S. Comment on "Comparison of 45-degree Kelman and 45-degree balanced phaco tip designs in torsional microcoaxial phacoemulsification". Int J Ophthalmol. 2017 Aug 18;10(8):1334-1336. doi: 10.18240/ijo.2017.08.25. eCollection 2017. PubMed PMID: 28861365; PubMed Central PMCID: PMC5554858.

9: Arora R, Bharti V, Gaur P, Aggarwal S, Mittal M, Das SN. Operculina turpethum extract inhibits growth and proliferation by inhibiting NF-Î°B, COX-2 and cyclin D1 and induces apoptosis by up regulating P53 in oral cancer cells. Arch Oral Biol. 2017 Aug;80:1-9. doi: 10.1016/j.archoralbio.2017.03.015. Epub 2017 Mar 20. PubMed PMID: 28351666.

OBJECTIVES: Herbal drugs are popularly emerging as complementary and alternative medicines in cancer patients because of their cost effectiveness and minimal side-effects. The extract of Operculina turpethum (OT) is known to have antipyretic, anti-inflammatory and purgative properties. Since it is popularly known have antiinflammatory activity, we investigated its anti-tumor activity on four oral squamous cell carcinoma cell lines (OSCC) namely, (SCC-4, KB, SCC-9 and SCC-25).
DESIGN: Antitumor activities of Operculina turpathum extract (OTE) was investigated by MTT and clonogenic assay, effect on cell cycle and apoptosis induction by Annexin-V/propidium iodide (PI) staining and flow cytometry and invasive potential of the tumor was determined by matrigel assay. The expression of various proteins involved in these mechanisms was analysed by western blotting.
RESULTS: OTE specifically inhibited the growth and colony formation of OSCC cells in a dose-dependent manner via inhibiting NF-κB and its downstream target COX-2.

It further arrested cell cycle at G0/G1 phase by inhibiting cyclin-D1 and induced early apoptosis by up-regulating P53 in OSCC cells. It also limits the invasion capacity of OSCC cells by up to 55-60%.
CONCLUSIONS: OTE shows antitumor activities in OSCC cells by inhibiting NF-κB, COX-2 and cyclin D1 and upregulation of p53 expression. It may be developed as a safe and promising alternative chemopreventive/chemotherapeutic agent for oral cancer.

DOI: 10.1016/j.archoralbio.2017.03.015
PMID: 28351666

10: Bagri NK, Raj D, Kaur J, Punia H, Saini I, Lodha R, Kabra SK. Juvenile systemic sclerosis: experience from a tertiary care center from India. Rheumatol Int. 2017 Oct;37(10):1687-1691. doi: 10.1007/s00296-017-3793-3. Epub 2017 Aug 22. PubMed PMID: 28831595.

Juvenile systemic sclerosis (JSSc) is a rare disorder with paucity of information on its treatment and longterm outcome. Herein, we are sharing our experience with this rare entity. Case records of children, diagnosed to have systemic sclerosis attending Pediatric Rheumatology Clinic at All India Institute of Medical Sciences, New Delhi from January 1998 to June 2016 were reviewed. The demographic, clinical, laboratory, treatment and outcome details were recorded. Disease outcome was classified arbitrarily as controlled, partly controlled or non-responsive/progressive based on: (A) ability to perform activities of daily life (ADL) and (B) presence or absence of musculoskeletal symptoms, skin changes (ulceration/progressive digital pitting/gangrene), and visceral organ involvement (dyspahgia, cardiopulmonary symptoms). Controlled: ability to perform ADL and absence of B features for at least 6 months. Partly controlled: inability to perform ADL or any of the B features. Non-responsive/progressive disease: presence of both A and any of B features. Thirty-two children (21, girls) diagnosed as systemic sclerosis for whom follow-up of more than 6 months was available were included for this retrospective analysis. Mean (SD) age at presentation was 112.79 (30.05) months, while the median (IQR) delay in diagnosis was 28.5 (9-47.25) months. Of the 32 children 17 (53.12%) had diffuse systemic sclerosis (dSSc), 5 (15.62%) had limited systemic sclerosis (lSSc) and 10 (31.25%) had sclerosis with overlap syndrome. The common clinical features apart from sclerosis/induration proximal to metacarpophalangeal joint were Raynauds phenomenon (n = 22, 68.7%), skin rash (n = 20, 62%), arthritis or arthralgia (n = 16, 50%), and muscular weakness (n = 10, 31.2%). Among those for whom data regarding investigations were available; ANA was positive in 50% (12/24), whereas Anti Scl70 was positive in one out three cases. Treatment regimen included naproxen, methotrexate, calcium channel blockers with or without steroids. HCQ was added in children with skin rash or in children with partial control. Median (IQR) follow-up period was 19.75 (12-31.75) months. With the above treatment protocol, 19 (59.3%) children achieved disease control on treatment, 8 (26.6%) had partial control while 5 (16.6%) showed no response or progressive disease. Esophageal dysmotility and intertitial lung disease (ILD) were documented in three children each. Complication (cataract and herpes zoster) related to immunosuppressive therapy were observed in two children. There was no mortality during the study period. Juvenile Sclerosis though rare is associated with significant morbidities and lacks a curative treatment but a reasonable quality of life to perform daily activities can be achieved using methotrexate and steroid-based immuosuppressive therapy.

DOI: 10.1007/s00296-017-3793-3
PMID: 28831595

11: Basu A, Kumar A, Manchanda S, Wig N. Filarial huge splenomegaly dramatically regressed by anti-filarial medication: A rare clinical scenario. Intractable Rare Dis Res. 2017 Aug;6(3):215-218. doi: 10.5582/irdr.2017.01041. PubMed PMID:

28944146; PubMed Central PMCID: PMC5608934.

Lymphatic filariasis is caused by nematodes Wuchereria bancrofti, Brugia malayi and Brugia timori. Lymphatic filariasis is a spectrum of illness and can manifest as, asymptomatic microfilaraemia, acute lymphatic filariasis (lymphangitis and lymphoedema), chronic lymphoedema, elephantiasis, hydrocele, tropical pulmonary eosinophilia and some systemic manifestations which involves joint, heart, kidney, nerve, etc. We here present a case of huge splenomegaly caused by lymphatic filariasis which is a rare presentation and only few cases had been reported in the world literature so far. After treatment of filariasis spleen size was reduced dramatically and patient is doing well even after 6 months of follow up after therapy.

DOI: 10.5582/irdr.2017.01041
PMCID: PMC5608934
PMID: 28944146

12: Basu A, Chadda R, Sood M, Rizwan SA. Pre-treatment factor structures of the Montgomery and Ã…sberg Depression Rating scale as predictors of response to escitalopram in Indian patients with non-psychotic major depressive disorder. Asian J Psychiatr. 2017 Aug;28:154-159. doi: 10.1016/j.ajp.2017.04.029. Epub 2017 May 15. PubMed PMID: 28784374.

BACKGROUND: Major Depressive Disorder (MDD) is a broad heterogeneous construct resolving into several symptom-clusters by factor analysis. The aim was to find the factor structures of MDD as per Montgomery and Asberg Depression Rating Scale (MADRS) and whether they predict escitalopram response.
METHODS: In a longitudinal study at a tertiary institute in north India, 116 adult out-patients with non-psychotic unipolar MDD were assessed with MADRS before and after treatment with escitalopram (10-20mg) over 6-8 weeks for drug response.
RESULTS: For total 116 patients pre-treatment four factor structures of MADRS extracted by principal component analysis with varimax rotation altogether explained a variance of 57%: first factor 'detachment' (concentration difficulty, lassitude, inability to feel); second factor 'psychic anxiety' (suicidal thoughts and inner tension); third 'mood-pessimism' (apparent sadness, reported sadness, pessimistic thoughts) and fourth 'vegetative' (decreased sleep, appetite). Eighty patients (68.9%) who completed the study had mean age 35.37±10.9 yrs, majority were male (57.5%), with mean pre-treatment MADRS score 28.77±5.18 and majority (65%) having moderate severity (MADRS <30). Among them 56 (70%) responded to escitalopram. At the end of the treatment there were significant changes in all the 4 factor structures ($p<0.01$). Vegetative function was an important predictor of response ($p<0.01$, odd's ratio: 1.3 [1.1-1.6] 95% CI). Melancholia significantly predicted non-response ($p=0.04$).
CONCLUSIONS: Non-psychotic unipolar major depression having moderate severity in north Indian patients as per MADRS resolved into four factor-structures all significantly improved with adequate escitalopram treatment. Understanding the factor structure is important as they can be important predictor of escitalopram response.

DOI: 10.1016/j.ajp.2017.04.029
PMID: 28784374

13: Bhalla AS, Jana M. MRI Chest: A Game Changer? Indian J Pediatr. 2017 Sep;84(9):655-656. doi: 10.1007/s12098-017-2431-0. Epub 2017 Aug 2. Review. PubMed PMID: 28766054.

14: Bhari N, Sahni K, Dev T, Sharma VK. Symmetrical drug-related intertriginous and flexural erythema (Baboon syndrome) induced by simultaneous exposure to oral

and topical terbinafine. Int J Dermatol. 2017 Aug;56(8):e168-e170. doi: 10.1111/ijd.13581. Epub 2017 Feb 27. PubMed PMID: 28244137.

15: Bhatnagar M, Sarkar N, Gandharv N, Apang O, Singh S, Ghosal S. Evaluation of antimycobacterial, leishmanicidal and antibacterial activity of three medicinal orchids of Arunachal Pradesh, India. BMC Complement Altern Med. 2017 Aug 1;17(1):379. doi: 10.1186/s12906-017-1884-z. PubMed PMID: 28764749; PubMed Central PMCID: PMC5540558.

BACKGROUND: The ethnic population of Arunachal Pradesh uses a number of orchids as such, or in decoction for various ailments. Three untapped orchids namely, Rhynchostylis retusa, Tropidia curculioides and Satyrium nepalense, traditionally used in tuberculosis, asthma and cold stage of malaria in folk medicine, were selected for the present study.
METHODS: Dried material of each plant was divided into three parts. Solvent extraction and fractionation afforded altogether 30 extracts and fractions, which were evaluated against Mycobacterium tuberculosis (H37Rv and MDR strain) for antimycobacterial activity; promastigotes and amastigotes of Leishmania donovani for leishmanicidal activity and two gram positive and three gram negative clinical isolates for antibacterial activity.
RESULTS: The most significant antimycobacterial activity was observed with n-hexane fraction of the flower of Satyrium nepalense with MIC of 15.7 μg/mL. The most promising leishmanicidal activity was observed with diethyl ether fraction of the roots of Rhynchostylis retusa with IC50 values of 56.04 and 18.4 μg/mL against promastigotes and intracellular amastigotes respectively. Evaluation of antibacterial activity identified S. nepalense flower n-hexane and R. retusa roots diethyl ether as potential fractions with MIC values of ≤100 μg/mL against selected clinical isolates.
CONCLUSIONS: This is the first report of the plants possessing antimycobacterial and leishmanicidal activity. The investigation resulted in identification of S. nepalense as the most promising plant, which possessed all three activities in significant proportion. This laboratory outcome could be translated to marketable pharmaceutical products and also to produce maximum benefits to the local of nearby area. Antimycobacterial and leishmanicidal activity of medicinal orchids.

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PMCID: PMC5540558
PMID: 28764749 [Indexed for MEDLINE]

16: Bhatnagar S, Thulkar S, Dhamija E, Khandelwal I, Nandi R, Chana G. Evaluation of outcomes of ultrasound guided celiac plexus neurolysis using immediate post procedure computed tomography: An observational study. Indian J Gastroenterol. 2017 Jul;36(4):282-288. doi: 10.1007/s12664-017-0780-2. Epub 2017 Aug 22. PubMed PMID: 28828591.

BACKGROUND: An interventional procedure like celiac plexus neurolysis (CPN) has a significant role in relieving intractable pain in patients with locally advanced abdominal malignancies. Ultrasound (USG) guidance enables performance of bedside CPN by real-time visualization of the needle trajectory. The objective of the study was to perform percutaneous USG-guided CPN and to verify technical outcomes of the procedure using a post-procedure CT scan.
METHODS: Eleven eligible patients of advanced upper abdominal malignancies having a pain score of >3/10 on visual analog scale (VAS) were recruited to undergo CPN. A post-procedure CT scan was performed to evaluate technical outcomes of the procedure. Patients were evaluated for pain relief. They were followed up at the 1st, 4th, and 6th weeks after CPN.
RESULTS: Eleven patients underwent USG-guided CPN. The injected drug was visualized as an echogenic cloud in ultrasound in 7 out of 11 (64%) patients. In the remaining 4 patients, the echogenic cloud was not well formed. In the post-procedure CT scan, the spread of the drug was seen in all 11 patients. This spread was bilaterally symmetrical in 7 (64%) patients and asymmetrical or

unilateral in 4 (36%) patients. All patients in the immediate post-procedure period and 91% of the patients during the 1st-, 4th-, and 6th-week follow up had improvement in their pain scores.
CONCLUSION: A post-procedure CT scan was useful in verifying the technical outcome of USG-guided CPN in patients with advanced upper abdominal malignancies.

DOI: 10.1007/s12664-017-0780-2
PMID: 28828591

17: Bisht S, Faiq M, Tolahunase M, Dada R. Oxidative stress and male infertility. Nat Rev Urol. 2017 Aug;14(8):470-485. doi: 10.1038/nrurol.2017.69. Epub 2017 May 16. Review. PubMed PMID: 28508879.

DNA damage, largely owing to oxidative stress, is a leading cause of defective sperm function. High levels of oxidative stress result in damage to sperm DNA, RNA transcripts, and telomeres and, therefore might provide a common underlying aetiology of male infertility and recurrent pregnancy loss, in addition to congenital malformations, complex neuropsychiatric disorders, and childhood cancers in children fathered by men with defective sperm cells. Spermatozoa are highly vulnerable to oxidative stress owing to limited levels of antioxidant defence and a single, limited DNA-damage detection and repair mechanism. Oxidative stress is predominantly caused by a host of lifestyle-related factors, the majority of which are modifiable. Antioxidant regimens and lifestyle modifications could both be plausible therapeutic approaches that enable the burden of oxidative-stress-induced male factor infertility to be overcome. Lifestyle interventions including yoga and meditation can substantially improve the integrity of sperm DNA by reducing levels of oxidative DNA damage, regulating oxidative stress and by increasing the expression of genes responsible for DNA repair, cell-cycle control and anti-inflammatory effects. Oxidative stress is caused by various modifiable factors, and the use of simple interventions can decrease levels of oxidative stress, and therefore reduce the incidence of both infertility and complex diseases in the resultant offspring.

DOI: 10.1038/nrurol.2017.69
PMID: 28508879

18: Bopanna S, Kedia S, Das P, Dattagupta S, Sreenivas V, Mouli VP, Dhingra R, Pradhan R, Kumar NS, Yadav DP, Makharia G, Ahuja V. Long-term follow-up reveals high incidence of colorectal cancer in Indian patients with inflammatory bowel disease. United European Gastroenterol J. 2017 Aug;5(5):708-714. doi: 10.1177/2050640616680552. Epub 2016 Nov 17. PubMed PMID: 28815035; PubMed Central PMCID: PMC5548352.

BACKGROUND: As the magnitude of sporadic colorectal cancer (CRC) in India is low, magnitude of CRC in ulcerative colitis (UC) is also considered low. As a result, screening for CRC in UC although advocated may not be followed everywhere. We report our data of UC-related CRC from a low-incidence area of sporadic CRC.
METHODS: A total of 1012 patients with left-sided colitis/pancolitis having more than one full-length colonoscopy performed at least a year after the onset of symptoms were included in retrospective analysis of prospectively maintained case records. In addition, 136 patients with duration of disease >10 years underwent surveillance white-light colonoscopy prospectively during the study period.
RESULTS: A total of 1012 individuals were finally included (6542 person-years of follow-up, 68.5% males, disease duration: 6.4±6.8 years). Twenty (1.97%) patients developed CRC. Two (10%) patients developed CRC during the first decade, 10/20 (50%) during the second and 8/20 (40%) after the second decade of disease. The cumulative risk of developing CRC was 1.5%, 7.2% and 23.6% in the first, second and third decade, respectively. Of 136 high-risk UC cases, five (3.6%) had CRC on screening colonoscopy. Disease duration and increasing age of onset were associated with higher risk of CRC.
CONCLUSIONS: Cumulative risk of CRC in Indian UC patients is as high as 23.6% at 30 years. The risk of CRC increases with increasing age of onset and increasing

duration of disease. A low risk of sporadic CRC does not confer a low risk of UC-related CRC, and regular screening is warranted.

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PMID: 28815035

19: Chandel DS, Perez-Munoz ME, Yu F, Boissy R, Satpathy R, Misra PR, Sharma N, Chaudhry R, Parida S, Peterson DA, Gewolb IH, Panigrahi P. Changes in the Gut Microbiota After Early Administration of Oral Synbiotics to Young Infants in India. J Pediatr Gastroenterol Nutr. 2017 Aug;65(2):218-224. doi: 10.1097/MPG.0000000000001522. PubMed PMID: 28121648; PubMed Central PMCID: PMC5524612.

OBJECTIVES: The authors examined the changes in the developing gut microbiota of Indian infants enrolled in a colonization study of an oral synbiotic (Lactobacillus plantarum and fructo-oligosaccharides) preparation.
METHODS: Frozen stool samples were available from a previously published clinical study of the synbiotic preparation administered daily for 7 days to full-term Indian infants delivered by C-section. 16S rRNA gene sequencing of fecal bacterial community-DNA was done in 11 infants sampled on day 7 and day 60 of life.
RESULTS: All infants showed changes in bacterial diversity with age. While Firmicutes and Proteobacteria were predominant in all, Actinobacteria and Bacteroidetes were initially low on day 7. In control infants, we observed a significant increase (P=0.012) in the proportions of Actinobacteria on day 60. In the treated group, during the 60-day period, there was a 10-fold increase in Bacteroidetes, a somewhat smaller increase in Firmicutes, and a reduction in Proteobacteria. Compared to controls, treated infants were increasingly colonized by different Gram-positive genera including Enterococcus, Lactobacillus, and Bifidobacterium. Relatively less known taxa and some unassigned sequence reads added to enriched diversity observed in the treated group.
CONCLUSIONS: There was a high level of bacterial diversity among infants examined in the present study. Synbiotic treatment induced an increase in overall taxa and Gram-positive diversity, especially in the first week of life. Changes in the microbiota during early infancy should be used as a rationale for selecting probiotics in diverse clinical settings.

DOI: 10.1097/MPG.0000000000001522
PMCID: PMC5524612 [Available on 2018-08-01]
PMID: 28121648

20: Chaudhari PB, Pathy S, Deo SSV, Chawla B, Mridha AR. Alveolar soft part sarcoma of orbit: A rare diagnosis. J Egypt Natl Canc Inst. 2017 Sep;29(3):167-170. doi: 10.1016/j.jnci.2017.07.001. Epub 2017 Aug 23. PubMed PMID: 28844593.

OBJECTIVE: Alveolar soft part sarcoma (ASPS) is an aggressive, rare tumour with unique morphological and histopathological features.
METHODS: We report a rare case of orbital ASPS and its management in a young male who presented with painless proptosis and progressive loss of vision.
RESULT: Twenty-two year male presented with a history of gradually increasing proptosis with loss of vision since 12months. He underwent radical re-excision of mass with right orbital exenteration and reconstruction using temporalis muscle flap. Adjuvant radiotherapy to a dose of 64Gy in 32 fractions over 6.5weeks was planned in view of positive surgical margins. Patient is free of disease and currently under follow up in multidisciplinary clinic.
CONCLUSION: Function preserving surgery remains the standard treatment approach in localised disease however the complex anatomy and locally aggressive nature makes it difficult to achieve clear surgical margin. Adjuvant radiotherapy has shown to improve local control in patients with positive surgical margins.

DOI: 10.1016/j.jnci.2017.07.001
PMID: 28844593

21: Chhikara S, Sazawal S, Seth T, Chaubey R, Singh K, Sharma R, Mishra P, Mahapatra M, Saxena R. Molecular Response to Imatinib and Its Correlation with mRNA Expression Levels of Imatinib Influx Transporter (OCT1) in Indian Chronic Myeloid Leukemia Patients. Asian Pac J Cancer Prev. 2017 Aug 27;18(8):2043-2048. PubMed PMID: 28843219; PubMed Central PMCID: PMC5697457.

Background and objectives: Imatinib mesylate is approved for the treatment of Chronic Myeloid Leukemia (CML).
About 20% of patients with CML do not respond to treatment with Imatinib either initially or because of acquired
resistance. In addition to mutated BCR-ABL1 kinase, the organic cation transporter1 (OCT1, encoded by SLC22A1) has
been considered to contribute to Imatinib resistance in patients with chronic myeloid leukemia (CML). OCT1 has been
reported to be the main influx transporter involved in Imatinib uptake into CML cells. To date, only a few studies have
been reported on involvement of influx transporters in development of Imatinib resistance. Therefore this study was
aimed to determine the expression level of Imatinib uptake transporter (OCT1) in CML patients and to correlate this level
with molecular response. Methods: One hundred fifty eight patients on Imatinib were considered for gene expression
analysis study for OCT1 gene. Total RNA was extracted from peripheral blood mononuclear cells. Complementary
DNAs (cDNAs) were synthesized and Real Time Polymerase Chain Reaction (RQ-PCR) was performed. Results:
High OCT1 expression was present in 81 (51.8%) patients and low OCT1 expression was in 77 (48.7%) patients. Low
Sokal risk score group have a significantly high OCT1 expression (p=0.048). The rate of molecular response was higher
in those with high OCT1 expression than in those with low OCT1 expression (p=0.05). Both event-free survival and
median overall survival were significantly shorter in patients with low OCT1 expressions when compared to the patients
with high OCT1 expression (p=0.03 and p=0.05). Conclusions: Our findings demonstrated that the mRNA expression
level of OCT1 was significantly correlated with molecular response in CML patients. Based on these findings, present
study believes that the pre-therapeutic higher expression of OCT1 may help to predict response to imatinib therapy in
CML patients.

DOI: 10.22034/APJCP.2017.18.8.2043
PMCID: PMC5697457
PMID: 28843219

22: Choudhary A, Gupta N, Ahmad H, Mirdha BR. Morphological variations on microscopy in oocysts of coccidian parasites: A prospective study from a tertiary care hospital in north India. Microsc Res Tech. 2017 Aug;80(8):969-972. doi: 10.1002/jemt.22892. Epub 2017 May 12. PubMed PMID: 28497876.

The modified acid fast staining technique is a commonly used procedure for the detection of coccidian parasites in developing countries. The morphological variations observed in these parasites play a significant role to some extent in both identification and diagnosis of these parasitic infections. A prospective

cross sectional study was performed over three years. The fecal smears were stained by modified Kinyoun acid-fast staining technique and were extensively studied for morphological variations in the coccidian parasites. Out of a total of two thousand one hundred fifty one (n=2,151) fecal samples received during the study period, 259 samples (12%) were positive for any one of the coccidian parasites. Morphological variations, especially in the staining character was noted in all the three coccidian parasites. This study was an attempt to characterize different variations in size, shape and staining characteristics of the three coccidian parasites.

DOI: 10.1002/jemt.22892
PMID: 28497876

23: Chowdhury UK, Rizvi A, Narang R, Seth S, Kalaivani M, Hasija S, Kumari L. Mitral Valve Replacement Using Carpentier-Edwards Pericardial Bioprosthesis in Patients with Rheumatic Heart Disease Aged Below 40 Years: 17-Year Results. Heart Lung Circ. 2017 Aug 1. pii: S1443-9506(17)31312-4. doi: 10.1016/j.hlc.2017.05.147. [Epub ahead of print] PubMed PMID: 29029949.

BACKGROUND: This study was designed to evaluate patients aged less than 40 years implanted with tissue heart valves with respect to survival, thromboembolism, structural degeneration and quality of life.
METHODS: Between January, 2000 and December, 2016, 132 patients (51 males) with rheumatic heart disease underwent mitral valve replacement using Carpentier-Edwards, perimount, pericardial bioprostheses. The patients' ages ranged between 12 and 39 years (mean±SD 30.12±5.51 years).
RESULTS: The hospital and late mortality were 1.5% and 1.5% respectively. The total cumulative follow-up period was 1330.98 patient-years with a mean of 124.78±50.3 months (range, 1-204 months). The actuarial survival and actuarial event-free survival at 204 months was 96.9% (±0.01%) and 93.4%(±0.03%) respectively. There was one episode of thromboembolism (0.32 events per 100 patient years). Six (4.7%) patients underwent redo mitral valve replacement for severe bioprosthetic degeneration with stiffening and calcification using a Medtronic mechanical prosthesis (Medtronic open pivot, MN, USA).
CONCLUSIONS: We conclude that Carpentier-Edwards perimount pericardial prosthesis provides satisfactory clinical performance in a young population with a low risk of degeneration and other valve-related events.

DOI: 10.1016/j.hlc.2017.05.147
PMID: 29029949

24: Das N, Mahapatra A, Sarkar S. Disulfiram induced psychosis: Revisiting an age-old entity. Asian J Psychiatr. 2017 Dec;30:94-95. doi: 10.1016/j.ajp.2017.08.011. Epub 2017 Aug 18. PubMed PMID: 28843144.

25: Dev T, Sethuraman G. Diagnosis of acrodermatitis enteropathica in resource limited settings. BMJ Case Rep. 2017 Aug 2;2017. pii: bcr-2017-220928. doi: 10.1136/bcr-2017-220928. PubMed PMID: 28768674.

Acrodermatitis enteropathica (AE) is a rare inherited zinc deficiency that usually manifests in infancy within days in cases of bottlefed infants and days to weeks after weaning in breastfed infants. It is characterised by diarrhoea, dermatitis, alopecia and systemic symptoms. We report a case of acquired nutritional AE in a 6-month-old female infant who had diarrhoeal episodes and the

characteristic dermatitis lesions in the acral and anogenital regions. She responded dramatically to oral zinc supplementation.

DOI: 10.1136/bcr-2017-220928
PMID: 28768674

Conflict of interest statement: Competing interests: None declared.

26: Devaraja K, Sagar P, Chirom AS. Tracheobronchopathia osteochondroplastica: awareness is the key for diagnosis and management. BMJ Case Rep. 2017 Aug 7;2017. pii: bcr-2017-220567. doi: 10.1136/bcr-2017-220567. PubMed PMID: 28784888.

Tracheobronchopathia osteochondroplastica is a rare airway disease of unknown aetiology. Due to overlapping symptomology and lack of awareness, the condition is often missed resulting in unnecessary medical or surgical treatment. A male patient presented with a long-standing history of hoarseness and had earlier received treatment for bronchial asthma and tuberculosis. On evaluation, he had typical submucosal calcified nodules distributed throughout the trachea sparing the posterior membranous part. Although the biopsy confirmed the diagnosis of tracheobronchopathia osteochondroplastica in our case, histopathological examination is not always needed to make this diagnosis. Our patient has been kept under conservative management and is having non-progression of disease at 1-year follow-up. After having reviewed the literature related to pathophysiology and management of tracheobronchopathia osteochondroplastica, we emphasise on the fact that the treating physicians' awareness about this condition is the key to its diagnosis and management.

DOI: 10.1136/bcr-2017-220567
PMID: 28784888

Conflict of interest statement: Competing interests: None declared.

27: Dhiman R, Devi S, Duraipandi K, Chandra P, Vanathi M, Tandon R, Sen S. Cysticercosis of the eye. Int J Ophthalmol. 2017 Aug 18;10(8):1319-1324. doi: 10.18240/ijo.2017.08.21. eCollection 2017. Review. PubMed PMID: 28861361; PubMed Central PMCID: PMC5554854.

Cysticercosis is a preventable and eradicable cause of blindness endemic in the Indian subcontinent, South-East Asia and other developing countries. Ocular and orbital cysticercosis has varied presentations depending upon the site of involvement, number of lesion and the host immune response. In this article we present a review of the various clinical manifestations, diagnosis and management protocol for orbital and ocular cysticercosis. Owing to its varied presentation, cysticercosis may pose a diagnostic challenge to the health professionals. Early diagnosis and management can prevent the vision loss and optimize visual outcomes.

DOI: 10.18240/ijo.2017.08.21
PMCID: PMC5554854
PMID: 28861361

28: Farmania R, Sitaraman S, Das RR. Goniometric Assessment of Muscle Tone of Preterm Infants and Impact of Gestational Age on Its Maturation in Indian Setting. J Neurosci Rural Pract. 2017 Aug;8(Suppl 1):S44-S48. doi:

10.4103/jnrp.jnrp_417_16. PubMed PMID: 28936071; PubMed Central PMCID: PMC5602260.

CONTEXT: The normative data on muscle tone of preterm infants by goniometric assessment in Indian setting are scarce.
AIM: The aim of this study it to provide a normative objective data of muscle tone of preterm infants by gestation using goniometer.
SETTINGS AND DESIGN: This was a prospective, observational study including preterm infants admitted in a tertiary care hospital from North India.
SUBJECTS AND METHODS: The objective dimension of muscle tone assessment of 204 healthy preterm infants was done; 61 infants completed follow-up till 40 weeks' postconceptional age (PCA) and were compared to term infants.
STATISTICAL ANALYSIS USED: SPSS (version 16.0) was used. The intergroup comparison was done through ANOVA, and the localization of differences between the groups was determined through multiple comparisons by post hoc test.
RESULTS: Mean gestational age was 34.3 ± 1.7 weeks. Angles were as follows: adductor = 100.1 ± 8.7, popliteal = 118.9 ± 8.6, dorsiflexion = 39.0 ± 9.0, heel to ear = 121.90 ± 7.90, wrist flexion = 46.0 ± 10.2, and arm recoil = 122.2° ± 16.6°. The evolution of muscle tone as indicated by heel-to-ear angle shows progressive maturation from 32 weeks' gestation while adductor angle, popliteal angle, and arm recoil mature predominantly after 36 weeks' gestation. Comparison of preterm infants to term at 40 weeks' PCA demonstrated significantly less tone in all except posture and heel to ear.
CONCLUSIONS: Goniometric assessment provides a objective normative data of muscle tone for preterm infants. Maturation of heel to ear and posture evolves from 32 weeks onwards and are the earliest neurologic marker to mature in preterm infants independent of the gestational age at birth.

DOI: 10.4103/jnrp.jnrp_417_16
PMCID: PMC5602260
PMID: 28936071

Conflict of interest statement: There are no conflicts of interest.

29: Garg PK, Jakhetiya A, Pandey R, Chishi N, Pandey D. Adjuvant radiotherapy versus observation following lumpectomy in ductal carcinoma in-situ: A meta-analysis of randomized controlled trials. Breast J. 2017 Aug 22. doi: 10.1111/tbj.12889. [Epub ahead of print] PubMed PMID: 28833776.

The role of adjuvant radiotherapy (RT) following lumpectomy for ductal carcinoma in-situ (DCIS) was addressed in four major randomized controlled trials (RCTs) which were conducted two to three decades ago. Initial results of these trials suggested the protective role of RT in reducing the ipsilateral breast recurrences. Long-term results of all these four trials, based on more than 10-years follow-up data, have recently been published. A meta-analysis of four published RCTs which have addressed the role of adjuvant RT following lumpectomy for DCIS was conducted. Review manager (Cochrane Collaboration's software) version RevMan 5.2 was used for analysis. Evaluated events were ipsilateral breast recurrences (both DCIS and invasive), regional recurrences, contralateral breast events, distant recurrences, and overall mortality. The events were entered as dichotomous variable. The present meta-analysis included four RCTs and a total of 3680 patients - 1710 received adjuvant RT following lumpectomy while 1970 patients did not receive any adjuvant treatment. Patients who received RT had almost half of risk of ipsilateral breast recurrence (RR = 0.53, 95% CI = 0.45-0.62) and regional recurrence (RR = 0.54, 95% CI = 0.32-0.91) compared to those who did not receive adjuvant treatment - there was absolute risk reduction in 15% (95% CI = 12%-17%) for ipsilateral breast recurrences in adjuvant RT treated patients. There was no significant difference in distant recurrence (RR = 1.06, 95% CI = 0.74-1.53), contralateral breast events (RR = 1.22, 95% CI = 0.98-1.52) and overall mortality (RR = 0.93, 95% CI = 0.79-1.09). Though addition of postoperative RT to lumpectomy does not reduce overall mortality, the present meta-analysis confirms that it decreases

the ipsilateral breast and regional recurrence by almost half.

DOI: 10.1111/tbj.12889
PMID: 28833776

30: Gautam D, Malhotra R. Bilateral simultaneous total hip replacement in Achondroplasia. J Clin Orthop Trauma. 2017 Aug;8(Suppl 1):S76-S79. doi: 10.1016/j.jcot.2017.02.008. Epub 2017 Apr 20. PubMed PMID: 28878547; PubMed Central PMCID: PMC5574849.

We present a case of bilateral simultaneous total hip replacement in a very short statured (height 112 cm) 45 years old male patient with Achondroplasia and disabling osteoarthritis of both the hips. We describe the difficulties encountered and provide a methodical approach for such cases.

DOI: 10.1016/j.jcot.2017.02.008
PMCID: PMC5574849 [Available on 2018-08-01]
PMID: 28878547

31: Goel T, Mahey R, Bhatla N, Kalaivani M, Pant S, Kriplani A. Pregnancy after endometrial scratching in infertile couples undergoing ovulation induction and intrauterine insemination cycles-a randomized controlled trial. J Assist Reprod Genet. 2017 Aug;34(8):1051-1058. doi: 10.1007/s10815-017-0949-8. Epub 2017 May 27. PubMed PMID: 28551840; PubMed Central PMCID: PMC5533680.

PURPOSE: To study the effect of endometrial scratching in infertile couples undergoing ovulation induction and intrauterine insemination (IUI) cycles.
METHODS: A prospective randomized controlled trial was conducted in the Department of Obstetrics and Gynaecology, AIIMS, New Delhi, India. One hundred forty-four women with primary/secondary infertility were recruited. Couples were either unexplained or male factor infertility. Subjects were randomized into intervention (scratching) and control group. All patients received ovulation induction with clomiphene citrate (day 2-6) 50 mg/day +75 IU HMG on days 6 and 7. In addition, endometrial scratching was done on day 8 of ovulation induction cycle in intervention group. All couples were planned for three cycles of ovulation induction and IUI over 6 months. After each failed cycle, couple was advised to try for natural conception for one cycle. Those who conceived were excluded from further analysis. Primary outcome was clinical pregnancy rate. Secondary outcome measures included conception rate, ongoing pregnancy, abortion and ectopic rate.
RESULTS: Baseline characteristics were comparable in both groups. Clinical pregnancy rate was significantly higher in intervention group (31.9%; 23/72) as compared to control group (16.7%; 12/72) (p value 0.030). On per cycle analysis, first IUI cycle had significantly high pregnancy rate (18.1%; 13/72) as compared to control group (5.6%; 4/72). Three patients in intervention group and one in control group conceived in wash out cycle. Ongoing pregnancy rate was significantly higher in scratching group (30.0%; 21/70) as compared to control group (15.7%; 11/70) (p value0.044).
CONCLUSIONS: Endometrial scratching can be used as a low cost-effective tool to improve clinical pregnancy and ongoing pregnancy rate in IUI cycles. Further large number studies are required to document its role in improving live birth rate.
TRIAL REGISTRATION NUMBER: CTRI/2015/12/006419.

DOI: 10.1007/s10815-017-0949-8
PMCID: PMC5533680 [Available on 2018-08-01]
PMID: 28551840

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2017 Aug;61(8):681-682. doi: 10.4103/ija.IJA_332_17. PubMed PMID: 28890567; PubMed Central PMCID: PMC5579862.

33: Gulla KM, Kabra SK. Peak Expiratory Flow Rate as a Monitoring Tool in Asthma. Indian J Pediatr. 2017 Aug;84(8):573-574. doi: 10.1007/s12098-017-2398-x. Epub 2017 Jun 14. Review. PubMed PMID: 28612223.

34: Gupta A, Shukla G. Polysomnographic determinants of requirement for advanced positive pressure therapeutic options for obstructive sleep apnea. Sleep Breath. 2017 Aug 18. doi: 10.1007/s11325-017-1556-8. [Epub ahead of print] PubMed PMID: 28822020.

BACKGROUND: A small percentage of adult patients with severe obstructive sleep apnea (OSA) has been recognized to be extraordinarily difficult to treat with conventional continuous or Bi-level positive airway pressure (together referred to as PAP) therapy.
AIM AND OBJECTIVES: The aim of this study was to determine polysomnographic (PSG) characteristics, which may help predict the requirement for advanced therapeutic options for OSA.
METHODS: Consecutive patients who underwent PAP titration at our sleep laboratory over a 2-year period were included. Patients with technically inadequate studies, those with incomplete titration due to intolerance, mask-related problems, or lack of sleep and those with significant co-morbidity and with other primary sleep disorders, were excluded. The PSGs (diagnostic + titration parts) were categorized into three types: type A (respiratory events evenly distributed over all sleep stages), type B (REM dominant respiratory events), and type C (non-REM dominant respiratory events, mainly during cyclic alternating pattern [CAP] sleep). Group A was further subdivided into A1 (those whose hypnogram normalized after adequate titration) and A2 (those whose hypnogram converted to a type C pattern on titration). These were categorized again into treatment group I (adequately PAP titrated) and group II (poor response to conventional PAP) for studying factors determining poor response to PAP.
RESULTS: Among 249 patients evaluated in the sleep laboratory over the study period, 123 (103 males, mean age 49.9 ± 10.8 years, mean BMI 29.3 ± 4) fulfilled inclusion criteria. These could be grouped as type A (n = 85), B (n = 33), and C (n = 5). On titration, 57 patients of type A and 21 of type B could be successfully titrated, while 24 in type A and 11 in type B, converted into type C. Therefore, in group II (n = 43), 38 patients fell in type C, overtly and after titration. Twelve of these had been successfully treated using adaptive servo ventilation (ASV) while another 28 could be treated using the Bi-level PAP-ST mode. The only PSG feature predicting poor response to conventional PAP was the presence of post-arousal central apnea (p = 0.001). The main difference between the A1 + B groups and A2 + C groups was the significantly higher non-REM apnea hypopnea index in the latter. Among these, on 1-year follow-up, eight patients were using Bi-level PAP-ST mode, while four patients were using ASV and were asymptomatic.
CONCLUSION: Non-REM sleep instability and the presence of post-arousal central apneas may be important determinants of poor response to conventional PAP and requirement for advanced therapeutic options among patients with severe OSA.

DOI: 10.1007/s11325-017-1556-8
PMID: 28822020

35: Gupta A, Kapil U. Undernutrition Amongst Under-five Children Belonging to High Income Group Communities in India. Indian Pediatr. 2017 Aug 15;54(8):686-687. Epub 2017 Jun 4. PubMed PMID: 28607215.

According to RSOC (2013-2014) data, high prevalence of stunting (26.7%) and wasting (13.0%) exists amongst under-five children belonging to highest wealth index communities. India possibly cannot achieve the 2025 Global nutrition

targets for reducing the rate of stunting and wasting amongst Under-five children, unless efforts are also directed towards this group.

PMID: 28607215 [Indexed for MEDLINE]

36: Gupta A, Verma A, Dhua A, Bhatnagar V. Vascular Anomalies: A Pediatric Surgeon's Perspective. Indian J Pediatr. 2017 Aug;84(8):612-617. doi: 10.1007/s12098-017-2355-8. Epub 2017 May 3. PubMed PMID: 28466404.

Anomalies affecting the capillary and venous channels form the bulk of the spectrum of vascular anomalies. As per International Society for the Study of Vascular Anomalies (ISSVA) classification, these are referred to as hemangiomas and venous malformations respectively. The present article is a descriptive note of their management and outcomes. Retrospective records of patients over 17 y (January 2000 through December 2016) were reviewed for presentation, management and outcomes. Outcomes were graded into 3 subgroups based on subjective assessment of clinical images: Group A = near-total response (>90%); Group B = 50-90% and Group C = <50% reduction. Among 90 cases of hemangioma, majority were located in head and neck (86.7%). Outcomes recorded in children who received steroids (n = 36) were: Group A = 61.1%, B = 25% and C = 13.9%; steroids and beta-blockers (n = 8): Group A = 62.5%, B = 25% and C = 12.5%; only beta-blockers (n = 4): Group A = 75% and B = 25%; intralesional sclerotherapy (n = 32): Group A = 55.2% and B = 44.8%; steroids followed by sclerotherapy (n = 7): Group A = 28.6% and B = 71.4%; excision (n = 3): Group A = 100%. Among 171 cases of venous malformation, majority were located in head and neck (49.6%). Outcomes recorded in children who received sclerotherapy (n = 165) were Group A = 20.7%, B = 51% and C = 28.3%; steroids (n = 3): Group A = 100%; beta-blockers (n = 1): Group C = 100%; excision (n = 2): Group A = 100%. Better outcome was noted in smaller-sized lesions and those who required lesser volume of sodium tetradecyl sulfate (STS) injection. Thus, to conclude, the decision regarding the choice and timing of each therapeutic modality should be individualized based on location, size and type of the lesion. The goal of management in these lesions should be to improve the quality of life rather than elimination of the lesion.

DOI: 10.1007/s12098-017-2355-8
PMID: 28466404

37: Gupta L, Yadav M, Thulkar S. 'Trident sign' in pelvis: sinister sign with poor prognosis. BMJ Case Rep. 2017 Aug 7;2017. pii: bcr-2017-220460. doi: 10.1136/bcr-2017-220460. PubMed PMID: 28784885.

The perineural spread of the cancer through the lumbosacral plexus gives an appearance of 'trident sign' on contrast-enhanced CT scan and MRI. It is associated with adverse survival rates and carries a poor prognostic value.

DOI: 10.1136/bcr-2017-220460
PMID: 28784885

Conflict of interest statement: Competing interests: None declared.

38: Gupta N, Tewari VV, Kumar M, Langeh N, Gupta A, Mishra P, Kaur P, Ramprasad V, Murugan S, Kumar R, Jana M, Kabra M. Asparagine Synthetase deficiency-report of a novel mutation and review of literature. Metab Brain Dis. 2017 Dec;32(6):1889-1900. doi: 10.1007/s11011-017-0073-6. Epub 2017 Aug 3. Erratum in: Metab Brain Dis. 2017 Sep 5;:. PubMed PMID: 28776279.

Asparagine synthetase deficiency is a rare inborn error of metabolism caused by a

defect in ASNS, a gene encoding asparagine synthetase. It manifests with a severe neurological phenotype manifesting as severe developmental delay, congenital microcephaly, spasticity and refractory seizures. To date, nineteen patients from twelve unrelated families have been identified. Majority of the mutations are missense and nonsense mutations in homozygous or compound heterozygous state. We add another case from India which harbored a novel homozygous missense variation in exon 11 and compare the current case with previously reported cases.

DOI: 10.1007/s11011-017-0073-6
PMID: 28776279

39: Gupta N, Banerjee S, Timitrov, Sharma R, Roy SG, Shende TM, Ansari MT, Singh G, Nischal N, Wig N, Soneja M. Osteomyelitis due to multiple rare infections in a patient with idiopathic CD4 lymphocytopenia. Intractable Rare Dis Res. 2017 Aug;6(3):206-210. doi: 10.5582/irdr.2017.01029. PubMed PMID: 28944144; PubMed Central PMCID: PMC5608932.
A 26-year-old male patient presented with features suggestive of osteomyelitis involving the entire left femur, hip joint and knee joint. Culture from the debrided tissue grew Acinetobacter spp. and he was treated with sensitivity based antibiotics but the symptoms did not resolve. The synovial biopsy showed multinucleated giant cells and acid fast bacilli on Ziehl Neelsen stain. Cartridge based nucleic acid amplification test (GeneXpert) was negative. The Mycobacteria growth indicator tube culture was found to be positive for Mycobacterium abscessus. The patient was started on imipenem, amikacin and macrolide based therapy. There was partial response initially but the patient worsened again. A girdle stone arthroplasty with cemented nail (with tobramycin) insertion after debridement of the infected tissue was done. Potassium hydroxide (KOH) mount from the debridement sample was found to be positive for aseptate hyphae suggestive of mucormycosis. He was treated with liposomal amphotericin B. He was evaluated for immunodeficiency in view of multiple atypical infections and was found to have a low CD4 count. The patient was discharged on amikacin, azithromycin, trimethoprim-sulfamethoxazole and posaconazole. Follow up showed considerable resolution both clinically and radiologically. To our knowledge, this is the first reported case of osteomyelitis with co-infection of Acinetobacter spp., M. abscessus and mucormycetes. We report this case to highlight the possibility of multiple rare infections in patients with immunodeficiency. Also, atypical complicated bone infections, such as Mycobacterium abscessus and mucormycetes might require combined medical and surgical treatment.

DOI: 10.5582/irdr.2017.01029
PMCID: PMC5608932
PMID: 28944144

40: Gupta N, Vashist P, Tandon R, Gupta SK, Kalaivani M, Dwivedi SN. Use of traditional eye medicine and self-medication in rural India: A population-based study. PLoS One. 2017 Aug 22;12(8):e0183461. doi: 10.1371/journal.pone.0183461. eCollection 2017. PubMed PMID: 28829812; PubMed Central PMCID: PMC5567472.

OBJECTIVE: To determine the type and nature of traditional eye medicine (TEM), their sources and use and practices related to self-medication for ophthalmic diseases in a rural Indian population.
METHODS: A population-based, cross-sectional study was conducted in 25 randomly selected clusters of Rural Gurgaon, Haryana, India as part of CORE (Cornea Opacity Rural Epidemiological) study. In addition to comprehensive ophthalmic examination, health-seeking behavior and use of self-medication and TEM was assessed in the adult population using a semi-structured questionnaire. Physical verification of available ophthalmic medications in the enumerated households was conducted by the study team. Descriptive statistics were computed along with multivariable logistic regression analysis to determine associated factors for use of self-medication and TEM.
RESULTS: Of the 2160 participants interviewed, 396 (18.2%) reported using

ophthalmic medications without consulting an ophthalmologist, mainly for symptoms like watering (37.1%), redness (27.7%), itching (19.2%) and infection (13.6%). On physical verification of available eye drops that were being used without prescription, 26.4% participants were practicing self-medication. Steroid, expired/unlabeled and indigenous eye drops were being used by 151(26.5%), 120(21.1%) and 75 (13.2%) participants respectively. Additionally, 25.7% (529) participants resorted to home remedies like 'kajal'(61.4%), honey (31.4%), ghee (11.7%) and rose water (9.1%).
CONCLUSION: Use of TEM is prevalent in this population. The rampant use of steroid eye drops without prescription along with use of expired or unlabelled eye drops warrants greater emphasis on safe eye care practices in this population. Public awareness and regulatory legislations must be implemented to decrease harmful effects arising due to such practices.

DOI: 10.1371/journal.pone.0183461
PMCID: PMC5567472
PMID: 28829812 [Indexed for MEDLINE]

41: Gupta RK, Saran RK, Srivastava AK, Jagetia A, Garg L, Sharma MC. T cell lymphoblastic lymphoma/leukemia within an adrenocorticotropic hormone and thyroid stimulating hormone positive pituitary adenoma: A cytohistological correlation emphasizing importance of intra-operative squash smear. Neuropathology. 2017 Aug;37(4):358-364. doi: 10.1111/neup.12375. Epub 2017 Mar 13. PubMed PMID: 28295636.

We present a rare case of primary pituitary T cell lymphoma/leukemia (T-LBL) in association with adrenocorticotropic hormone (ACTH) and thyroid stimulating hormone (TSH) expressing pituitary adenoma in a 55-year-old woman highlighting the importance of intra-operative squash smears examination. The patient presented with complaints of headache, diminution of vision and recent onset altered sensorium. MRI revealed a mass lesion in the sellar-suprasellar region with non-visualization of pituitary gland separately, extending to involve adjacent structures diagnosed as invasive pituitary macroadenoma. Intra-operative tissue was sent for squash smear examination. The cytology showed a tumor comprising of sheets of immature lymphoid cells intermixed with clusters of pituitary acinar cells with many mitoses and tingible body macrophages. A diagnosis of presence of immature lymphoid cells within the pituitary was offered and differentials of infiltration by lymphoma cells from systemic disease versus primary central nervous lymphoma-like lymphoma arising in the pituitary adenoma were considered. Later paraffin section examination and immunohistochemistry corroborated with the squash findings and a final diagnosis of primary pituitary T cell lymphoma/leukemia in association with ACTH and TSH expressing pituitary adenoma was made. To date, only six cases of primary pituitary T cell lymphomas, including three T-LBL cases, have been reported. This is the seventh case and first one additionally describing cytohistological correlation and importance of intra-operative cytology.

DOI: 10.1111/neup.12375
PMID: 28295636

42: Gupta V, Gupta S. Genital lichen sclerosus developing around 'ectopic' urethral orifices supports the role of occlusion and urine in its pathogenesis. Int J STD AIDS. 2017 Aug;28(9):940-942. doi: 10.1177/0956462416688159. Epub 2017 Jan 12. PubMed PMID: 28081682.

Several factors such as genetic susceptibility, autoimmunity, hormones, infections, local trauma, urine, and occlusion have been speculated to play a role in the pathogenesis of lichen sclerosus. We report two male patients with lichen sclerosus around 'ectopic' urethral openings and the opposing surfaces of the penile shaft and scrotum, providing further evidence in support of urine and

occlusion as contributing factors in the development of lichen sclerosus.

DOI: 10.1177/0956462416688159
PMID: 28081682 [Indexed for MEDLINE]

43: Gupta V, Somarajan BI, Gupta S, Chaurasia AK, Kumar S, Dutta P, Gupta V, Sharma A, Tayo BO, Nischal K. The inheritance of juvenile onset primary open angle glaucoma. Clin Genet. 2017 Aug;92(2):134-142. doi: 10.1111/cge.12906. Epub 2017 Feb 16. Review. PubMed PMID: 27779752.

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

DOI: 10.1111/cge.12906
PMID: 27779752

44: Jain D, Ramachandrappa VS, Singh V, Malik PS, Madan K, Faruq M, Guleria R. Use of Exfoliative Specimens and Fine-Needle Aspiration Smears for Mutation Testing in Lung Adenocarcinoma. Acta Cytol. 2017;61(6):455-461. doi: 10.1159/000479217. Epub 2017 Aug 22. PubMed PMID: 28848083.

OBJECTIVE: Cytology specimens are considered to be a promising alternative for detecting driver mutations in lung cancer patients. We aimed to explore the suitability and utility of various cytology samples of non-small-cell lung cancer (NSCLC) patients for mutation testing. In addition to mutation detection, the importance of preanalytic factors was discussed.
DESIGN: A total of 116 cytology samples including 32 controls comprising pleural effusions, bronchial washings, and direct fine-needle aspiration (FNA) smears were included in the study for the detection of EGFR, KRAS, and Her-2/neu gene mutations. Tumor content was checked by microscopic evaluation. Tumor enrichment was done by scraping direct smears. DNA yield was assessed before selecting the method of mutation detection. Sanger sequencing and real-time PCR-based methods were used.
RESULTS: Overall, 20.23% EGFR mutations and 2.74% KRAS mutations were observed in this study. Nondriver genetic polymorphisms were observed in EGFR exon 20 in 37% cases. The coexistence of the EGFR mutation and EGFR polymorphism was seen in 7 cases. DNA yield was better in pleural effusions and bronchial washings. Real-time PCR was used in specimens of low DNA yield.
CONCLUSIONS: Cytology samples are useful in ascertaining molecular diagnostic information for treatment purposes if they are optimized judiciously in their preanalytic phase.

DOI: 10.1159/000479217
PMID: 28848083 [Indexed for MEDLINE]

45: Jain S, Kedia S, Sethi T, Bopanna S, Yadav DP, Goyal S, Padhan R, Venigalla PM, Sahni P, Dash NR, Pal S, Makharia G, Travis SPL, Ahuja V. Predictors of long-term outcomes in patients with acute severe colitis: A Northern Indian cohort study. J Gastroenterol Hepatol. 2017 Aug 12. doi: 10.1111/jgh.13921. [Epub ahead of print] PubMed PMID: 28801987.

BACKGROUND AND AIM: Knowledge of long-term outcomes following an index episode of acute severe colitis (ASC) can help informed decision-making at a time of acute exacerbation especially when colectomy is an option. We aimed to identify long-term outcomes and their predictors after a first episode of ASC in a large North Indian cohort.
METHODS: Hospitalized patients satisfying Truelove and Witts' criteria under follow-up at a single centre from January 2003-December 2013 were included. Patients avoiding colectomy at index admission were categorized as complete (≤3 non bloody stool per day) or incomplete responders (CR, IR), based upon response to corticosteroids at day 7. Random Forest based machine learning models were constructed to predict the long term risk of colectomy or steroid dependence following an index episode of ASC.
RESULTS: Of 1731 patients with ulcerative colitis, 179(10%) had an index episode of ASC. Nineteen(11%) patients underwent colectomy at index admission and 42(26%) over a median follow-up of 56(1-159) months. Hazard ratio for colectomy for IR was 3.6(1.7-7.5, p=0.001) compared to CR. Modeling based on four variables: response at day 7 of hospitalization, steroid use during first year of diagnosis, longer disease duration prior to ASC and number of extra-intestinal manifestations, was able to predict colectomy with an accuracy of 77%.
CONCLUSIONS: Disease behavior of ASC in India is similar to the West, with a third undergoing colectomy at 10 years. Clinical features, especially response at day 7 hospitalization for index ASC, can predict both colectomy and steroid dependence with reasonable accuracy.

DOI: 10.1111/jgh.13921
PMID: 28801987

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INTRODUCTION: There is a significant difference in the Reactive Oxygen Species (ROS) levels of Chronic Myeloid Leukaemia (CML) patients before and during treatment with Tyrosine Kinase Inhibitors (TKIs). This is because high ROS levels support oncogenic phenotype of CML by inducing proliferation pathway and accumulation of further genetic mutations. Often the measurement is done on WBC or serum for ascertaining one type of ROS species, but measurement of global ROS in fresh whole blood will give more accurate estimation of ROS.
AIM: To measure global ROS in peripheral blood of CML patients.
MATERIALS AND METHODS: A case control study was undertaken to measure ROS in peripheral blood of CML patients from Northern India. CML patients on TKIs (n=40 on imatinib herein called treated) and untreated (n=17, who were not on any TKIs or alternative medicine, called as treatment naive) and 52 healthy controls were also enrolled. Chemiluminescent assay was carried out using luminol as signal enhancer in 400 µl of blood to measure ROS. The chemiluminescence was measured as Relative Light Units (RLU)/sec/104 WBC. Data was presented in terms of mean±SE or geometric mean (95% Confidence Interval) for continuous variables and percentage for categorical variables. Groups were compared using two sample t-test for continuous variables and chi-square test for categorical variables.
RESULTS: The WBC profile and ROS levels of patients taking TKIs were quite similar and showed no significant difference (p<0.999) compared to healthy controls. In contrast, significant increase was observed in the ROS levels of CML

patients not on TKIs (untreated) compared to patients under treatment (p<0.029) and healthy controls (p<0.007). We also observed that the absolute ROS values and WBC counts were higher in untreated patients compared to patients on TKIs and healthy controls, even though mean ROS value was less.
CONCLUSION: To ascertain the alterations in ROS levels of CML patients before and during treatment with TKIs, it is better to measure global ROS in fresh whole blood by chemiluminescent method using luminol. Luminol assay is a quick, easy and inexpensive method to measure global ROS. Patient under treatment with TKIs show significant decrease in ROS levels almost similar to the levels measured in healthy controls yet the mechanisms by which this decrease occurs needs to be elucidated.

DOI: 10.7860/JCDR/2017/28565.10425
PMCID: PMC5620896
PMID: 28969255

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INTRODUCTION: Rising burden of cardiovascular disease (CVD) and diabetes is a major challenge to the health system in India. Innovative approaches such as mobile phone technology (mHealth) for electronic decision support in delivering evidence-based and integrated care for hypertension, diabetes and comorbid depression have potential to transform the primary healthcare system. METHODS AND ANALYSIS: mWellcare trial is a multicentre, cluster randomised controlled trial evaluating the clinical and cost-effectiveness of a mHealth system and nurse managed care for people with hypertension and diabetes in rural India. mWellcare system is an Android-based mobile application designed to generate algorithm-based clinical management prompts for treating hypertension and diabetes and also capable of storing health records, sending alerts and reminders for follow-up and adherence to medication. We recruited a total of 3702 participants from 40 Community Health Centres (CHCs), with ≥90 at each of the CHCs in the intervention and control (enhanced care) arms. The primary outcome is the difference in mean change (from baseline to 1 year) in systolic blood pressure and glycated haemoglobin (HbA1c) between the two treatment arms. The secondary outcomes are difference in mean change from baseline to 1 year in fasting plasma glucose, total cholesterol, predicted 10-year risk of CVD, depression, smoking behaviour, body mass index and alcohol use between the two treatment arms and cost-effectiveness.
ETHICS AND DISSEMINATION: The study has been approved by the institutional Ethics Committees at Public Health Foundation of India and the London School of Hygiene and Tropical Medicine. Findings will be disseminated widely through peer-reviewed publications, conference presentations and other mechanisms.
TRIAL REGISTRATION: mWellcare trial is registered with Clinicaltrial.gov (Registration number NCT02480062; Pre-results) and Clinical Trial Registry of India (Registration number CTRI/2016/02/006641). The current version of the protocol is Version 2 dated 19 October 2015 and the study sponsor is Public Health Foundation of India, Gurgaon, India (www.phfi.org).

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PMCID: PMC5724108
PMID: 28801393

Conflict of interest statement: Competing interests: None declared.

49: Jha KA, Nag TC, Wadhwa S, Roy TS. Immunohistochemical Localization of GFAP and Glutamate Regulatory Proteins in Chick Retina and Their Levels of Expressions in Altered Photoperiods. Cell Mol Neurobiol. 2017 Aug;37(6):1029-1042. doi: 10.1007/s10571-016-0436-2. Epub 2016 Nov 4. PubMed PMID: 27815657.

Moderate to intense light is reported to damage the chick retina, which is cone dominated. Light damage alters neurotransmitter pools, such as those of glutamate. Glutamate level in the retina is regulated by glutamate-aspartate transporter (GLAST) and glutamine synthetase (GS). We examined immunolocalization patterns and the expression levels of both markers and of glial fibrillary acidic protein (GFAP, a marker of neuronal stress) in chick retina exposed to 2000 lux under 12-h light:12-h dark (12L:12D; normal photoperiod), 18L:6D (prolonged photoperiod), and 24L:0D (constant light) at post-hatch day 30. Retinal damage (increased death of photoreceptors and inner retinal neurons and Müller cell hypertrophy) and GFAP expression in Müller cells were maximal in 24L:0D condition compared to that seen in 12L:12D and 18L:6D conditions. GS was present in Müller cells and GLAST expressed in Müller cell processes and photoreceptor inner segments. GLAST expression was decreased in 24L:0D condition, and the expression levels between 12L:12D and 18L:6D, though increased marginally, were statistically insignificant. Similar was the case with GS expression that significantly decreased in 24L:0D condition. Our previous study with chicks exposed to 2000 lux reported increased retinal glutamate level in 24L:0D condition. The present results indicate that constant light induces decreased expressions of GLAST and GS, a condition that might aggravate glutamate-mediated neurotoxicity and delay neuroprotection in a cone-dominated retina.

DOI: 10.1007/s10571-016-0436-2
PMID: 27815657

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Low plasma TFPI levels have been associated with an increased risk of DVT; however its association with TFPI gene polymorphisms is controversial and not yet studied in India. The aim of our study was to analyze prevalence of TFPI gene polymorphisms, evaluate their effects on its plasma levels and determine its association with DVT. Plasma level and genetic polymorphisms (33T>C, 399C>T and 536C>T) of TFPI were screened in subjects (100 DVT patients and 100 controls). Mean TFPI level in patients was significantly lower than controls (Patients: 33.55±11.72ng/ml, Controls: 48.05±13.68ng/ml, p<0.001). DVT patients had significantly higher prevalence of 399C>T (p=0.001, ORa: 5.69, CI: 1.14-28.46) and lower prevalence of 33T>C polymorphism (p<0.001, ORa: 0.239, CI: 0.065-0.871). The wild type (TT genotype) of 33T>C and variant form (CT and TT genotype) of 399C>T polymorphism was significantly associated with low TFPI levels. TFPI 536C>T polymorphism was absent in all subjects. In conclusion, dual nature of TFPI gene polymorphisms were established in our association study; 33T>C being protective and 399C>T as an important risk factor in Indian DVT patients, probably mediated by alteration in TFPI levels. These findings may prove a vital role in risk stratification and treatment of DVT.

DOI: 10.1016/j.bcmd.2017.08.003
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"Safety assessment and attenuation of cisplatin induced nephrotoxicity by tuberous roots of Boerhaavia diffusa" [Regul. Toxicol. and Pharmacol. 81 (2016) 341-352]. Regul Toxicol Pharmacol. 2017 Aug;88:367-368. doi: 10.1016/j.yrtph.2017.05.020. Epub 2017 Jun 5. PubMed PMID: 28592367.

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Suturing is the joining of tissues with needle and thread so that the tissues will bind together and that healing occurs by primary intention with least scarring. Professionals like tailor and cobbler are also involved with suturing. Although both professions are involved with suturing, they are not dealing with live tissue, so there are no problems like poor healing, ischemia and wound edge necrosis. These complications, which are common with live tissue, may finally lead to wound dehiscence and increased risk of surgical site infection, and ugly scar. Every surgeon should be cognizant of principles of wound healing and aesthetics.

DOI: 10.1007/s12262-017-1681-4
PMCID: PMC5653591 [Available on 2018-10-01]
PMID: 29089715

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A sequence alignment of horse cytochrome c (cyt c) with all known cyts c shows that Leu at position 94 is conserved, except in 14 species which have either Val or Ile at this position. It is also known that Leu94 of the mammalian cyt c plays an important role in folding and stability. The important question here is as to what will happen in terms of folding and stability if Leu94 of the mammalian cyt c is substituted by Val or Ile. To answer this question, we introduced natural substitutes of Leu94 by Val and Ile in horse cyt c. The purified L94V and L94I mutants under native condition (pH 6.0, 25 ˚C) were characterized using far-UV, near-UV and Soret- circular dichroism, visible absorbance, Trp and ANS (1-anilino-8-napthaline sulphonate) fluorescence and dynamic light scattering measurements. Furthermore, stability parameters Tm (mid-point of denaturation) and ΔGD0 (Gibbs free energy change at 25 ˚C) were also determined using spectroscopic and differential scanning calorimetric methods. All these measurements led us to conclude that both mutants exist as molten globule and are less stable than the wild-type protein. These observations are supported well by examining the structure of horse cyt c (PDB ID, 1HRC).

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PMID: 28851624 [Indexed for MEDLINE]

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Central PMCID: PMC5613710.

Xanthine oxidase and xanthine dehydrogenase have been implicated in producing myocardial damage following reperfusion of an occluded coronary artery. We investigated and compared the effect of febuxostat and allopurinol in an experimental model of ischemia-reperfusion (IR) injury with a focus on the signaling pathways involved. Male Wistar rats were orally administered vehicle (CMC) once daily (sham and IR + control), febuxostat (10 mg/kg/day; FEB10 + IR), or allopurinol (100 mg/kg/day; ALL100 + IR) for 14 days. On the 15th day, the IR-control and treatment groups were subjected to one-stage left anterior descending (LAD) coronary artery ligation for 45 minutes followed by a 60-minute reperfusion. Febuxostat and allopurinol pretreatment significantly improved cardiac function and maintained morphological alterations. They also attenuated oxidative stress and apoptosis by suppressing the expression of proapoptotic proteins (Bax and caspase-3), reducing TUNEL-positive cells, and increasing the level of antiapoptotic proteins (Bcl-2). The MAPK-based molecular mechanism revealed suppression of active JNK and p38 proteins concomitant with the rise in ERK1/ERK2, a prosurvival kinase. Additionally, a reduction in the level of inflammatory markers (TNF-α, IL-6, and NF-κB) was also observed. The changes observed with febuxostat were remarkable in comparison with those observed with allopurinol. Febuxostat protects relatively better against IR injury than allopurinol by suppressing inflammation and apoptosis mediating the MAPK/NF-κBp65/TNF-α pathway.

DOI: 10.1155/2017/8095825
PMCID: PMC5613710
PMID: 29138678

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PurposeSeverely subluxated crystalline lenses pose a difficult situation to anterior segment surgeons and can only be managed surgically by removal of the lens as well as the capsular bag. Several techniques have been described in literature for the management of such cases. We describe a modified technique of endocapsular lens aspiration by the limbal route for lens extraction through small incisions on the cornea.Patients and methodsThirty-two eyes of 16 consecutive patients with severely subluxated crystalline lenses were recruited in the study. All eyes underwent a modified technique of lens aspiration within the capsular bag using a single instrument, vitrectomy cutter, and irrigation cannula, followed by sacrificing of the capsular bag. The patients were either left aphakic or implanted with an open loop anterior chamber intraocular lens (ACIOL Kelman Multiflex) and prospectively followed up for a period of 3 months.ResultsThe mean age of the patients was 9 years 3 months±3 years (range 5-15 yrs). All eyes underwent complete lens aspiration within the capsular bag with no dislocation of the lens matter. ACIOL was inserted in 22 eyes (68.7%) and 10 eyes (31.2%) were left aphakic. All the surgeries were uneventful. The mean best corrected visual acuity (BCVA) at 3 months post surgery was 0.47±0.11 logMAR which was significantly better than pre-operative BCVA (P=0.001). The percentage endothelial cell loss at 3 months was 7.1%. There was no evidence of glaucoma, corneal decompensation, or retinal detachment. The astigmatism which increased from 1.45D±086 preoperatively to 3.76D±2.02 1 week post-operatively due to sutures reduced to 1.97D±0.81 post suture removal at 3 months.ConclusionThe modified technique of endocapsular lens aspiration proves to be a simple and effective method of removal of the lens-capsular bag complex in severely subluxated lenses.Eye advance online publication, 11 August 2017; doi:10.1038/eye.2017.160.

DOI: 10.1038/eye.2017.160
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Severe bone loss in patients with complete edentulism poses a treatment challenge. In fabricating a denture, the stability of the prosthesis must be enhanced by recording the cameo surface within the confines of the physiological position of the cheek and tongue muscles (the neutral zone) and by shaping it accordingly. The treatment of a patient with a completely edentulous maxillary arch and severe maxillary anterior bone loss is described. The cameo surface was recorded within the physiological limits during the fabrication of a complete denture by using transcutaneous electrical nerve stimulation (TENS).

DOI: 10.1016/j.prosdent.2016.11.011
PMID: 28159341

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Diaphragmatic rupture occurs in 4%-5% cases of thoracoabdominal injuries. It may present acutely, in a delayed fashion or as a complicated hernia. We are describing the case of a young male presenting in respiratory distress with history of chest trauma 1.5 years back. On investigation, he was found to have left side diaphragmatic hernia containing gangrenous colon with lung collapse. The patient underwent successful operative intervention and discharged after 25 days of hospital stay. Record review suggested that the above mentioned diaphragm injury was missed in his evaluation 1.5 years back. Diaphragmatic injury must always be suspected in thoracoabdominal injuries, as missed injury may cause devastating complications like the one narrated above in due course.

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PMID: 28790100

Conflict of interest statement: Competing interests: None declared.

60: Kumar A, Misra S, Kumar P, Sagar R, Gulati A, Prasad K. Relationship of phosphodiesterase 4D (PDE4D) gene polymorphisms with risk of ischemic stroke: a hospital based case-control study. Neurol Res. 2017 Aug;39(8):689-694. doi: 10.1080/01616412.2017.1333975. Epub 2017 May 31. PubMed PMID: 28562233.

BACKGROUND: Stroke remains a leading cause of death and disability worldwide. Ischemic stroke (IS) accounts for around 80-85% of total stroke and is a complex polygenic multi-factorial disorder which is affected by a complex combination of vascular, environmental, and genetic factors.
OBJECTIVE: The study was conducted with an aim to examine the relationship of single nucleotide polymorphisms (SNPs) of PDE4D (T83C, C87T, and C45T) gene with

increasing risk of IS in patients in North Indian population.
METHODS: In this hospital-based case-control study, 250 IS subjects and 250 age-and sex-matched control subjects were enrolled from the Neurosciences Centre, A.I.I.M.S., New Delhi, India. Deoxyribonucleic acids (DNAs) were extracted using the conventional Phenol-Chloroform isolation method. Different genotypes were determined by Polymerase chain reaction- Restriction fragment length polymorphism method. Odds ratio (OR) and 95% Confidence Interval (CI) of relationship of polymorphisms with risk of IS were calculated by conditional multivariable regression analysis.
RESULTS: High blood pressure, low socioeconomic status, dyslipidemia, diabetes, and family history of stroke were observed to be statistically significant risk factors for IS. Multivariable adjusted analysis demonstrated a statistically significant relationship between SNP 83 of PDE4D gene polymorphism and increasing odds of IS under the dominant model of inheritance (OR, 1.59; 95% CI, 1.02 to 2.50; p value = 0.04) after adjustment of potential confounding variables. Stratified analysis on the basis of TOAST classification demonstrated a statistically significant association for increasing 2.73 times odds for developing large vessel disease stroke as compared to controls (OR, 2.73; 95% CI, 1.16 to 0.02; p value = 0.02). We did not find any significant association of SNPs (C87T and C45T) of the PDE4D gene with the risk of IS.
CONCLUSION: SNP 83 of PDE4D gene may increase the risk for developing IS whereas SNP 87 and SNP45 of PDE4D may not be associated with the risk of IS in the North Indian population. Prospective cohort studies are required to corroborate these findings.

DOI: 10.1080/01616412.2017.1333975
PMID: 28562233

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The dicentric Y chromosome is the most common cytogenetically visible structural abnormality of Y chromosome. The sites of break and fusion of dicentric Y are variable, but break and fusion at Yq12 (proximal to the pseudoautosomal region 2/PAR 2) is very rare. Dicentric Y chromosome is unstable during cell division and likely to generate chromosomal mosaicism. Here, we report a case of infertile male with nonmosaic 46,XY where chromosome Y was dicentric with break and fusion at Yq12 (proximal to PAR 2). Clinical presentation of the case was nonobstructive azoospermia due to early maturation arrest at the primary spermatocyte stage. Various molecular techniques such as FISH, STS-PCR and DNA microarray were carried out to characterise genetic defect leading to testicular maturation arrest in the patient. The break and fusion was found at Yq12 (proximal to PAR 2) and resulted in near total duplication of Y chromosome (excluding PAR 2). The reason for maturation arrest seems due to CNVs of PARs (gain in PAR 1 and loss of PAR 2) and azoospermia factors (gain).

DOI: 10.1111/and.12886
PMID: 28836280

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Serpiginoid multifocal choroiditis is a distinct morphological identity with a reported causal association with Mycobacterium tuberculosis. We report a case of serpiginoid multifocal choroiditis in a 17-year-old boy who was suffering from isolated splenic tuberculosis. He was treated with systemic steroids along with anti-tubercular treatment with good visual recovery. This case was unique as no other organs except spleen and choroid showed tubercular involvement. We hereby emphasize association of extrapulmonary sites with multifocal serpiginoid choroiditis and propose a thorough investigation for primary to be included in routine protocol of choroiditis workup.

DOI: 10.1007/s10792-017-0689-x
PMID: 28798995

64: Kumar V, Yadav B. HOLE-DOOR SIGN: A Novel Intraoperative Optical Coherence Tomography Feature Predicting Macular Hole Closure. Retina. 2017 Aug 8. doi: 10.1097/IAE.0000000000001791. [Epub ahead of print] PubMed PMID: 28796146.

PURPOSE: To describe a novel intraoperative finding during pars plana vitrectomy for macular hole using operating microscope-integrated spectral domain optical coherence tomography that predicts the closure of macular hole.
METHODS: Twenty-five eyes of 25 patients with macular hole, who underwent 25-gauge pars plana vitrectomy over a period of 16 months at a tertiary eye care center by a single surgeon, were recruited in this retrospective interventional study. All eyes were assessed with intraoperative spectral domain optical coherence tomography before and after internal limiting membrane peeling. The patients were assessed in terms of best-corrected visual acuity, preoperative minimal hole diameter, and type of hole closure.
RESULTS: After the internal limiting membrane was peeled, vertical pillars of tissue were seen at the edges of hole projecting into the vitreous cavity. This appearance was similar to that of an open door over the macular hole and was termed "hole-door sign." Hole-door sign was seen in 15 of 25 eyes (60%). All the eyes with hole-door sign had Type-1 closure of macular hole (100%), whereas only 6 of 10 eyes (60%) without hole-door sign had Type-1 closure of the macular hole.
CONCLUSION: Hole-door sign is a novel intraoperative finding that predicts postoperative Type-1 closure of macular hole. This may add to the utility of intraoperative optical coherence tomography in clinical practice.

DOI: 10.1097/IAE.0000000000001791
PMID: 28796146

65: Lokdarshi G, Pushker N, Kashyap S, Shameer A. Canaliculops: clinical examination. Can J Ophthalmol. 2017 Aug;52(4):e132-e134. doi: 10.1016/j.jcjo.2017.01.012. Epub 2017 Mar 18. PubMed PMID: 28774536.

66: Luthra A, Prabhakar H, Rath GP. Alleviating Stress Response to Tracheal Extubation in Neurosurgical Patients: A Comparative Study of Two Infusion Doses of Dexmedetomidine. J Neurosci Rural Pract. 2017 Aug;8(Suppl 1):S49-S56. doi: 10.4103/jnrp.jnrp_91_17. PubMed PMID: 28936072; PubMed Central PMCID: PMC5602261.

BACKGROUND: Tracheal extubation is almost always associated with increase in sympathoadrenal activity may result in hypertension, tachycardia, and arrhythmias. Attempts have been made to oppose the pressor response by the use of various drugs. Dexmedetomidine decreases norepinephrine which reduces the blood pressure and the heart rate (HR). We hypothesize that the infusion of dexmedetomidine may produce more stable hemodynamics during extubation as compared to boluses.
MATERIALS AND METHODS: Ninety adult patients aged 18-65 years, the American Society of Anesthesiologists Grade I-II undergoing intracranial surgeries for various neurologic problem at All India Institute of Medical Sciences were

enrolled in this randomized controlled trial. Primary.
OBJECTIVES: (1) To observe the hemodynamic changes (HR and mean arterial pressure [MAP]) and airway responses during tracheal extubation following two infusion doses of dexmedetomidine.
SECONDARY OBJECTIVES: (1) Time to emergence and time to tracheal extubation, (2) Early postoperative complications such as laryngospasm and bronchospasm, and (3) adverse effects of the study drug. Patients were assigned into three groups - (1) Group D0.2 - 0.2 μg/kg/h diluted to 50 ml, (2) Group D0.4 - 0.4 μg/kg/h diluted to 50 ml and Group P (Placebo) - 0.9% NS 50 ml. The hemodynamics including the HR and MAP were recorded just before the loading dose of the study drug and then were recorded every 5 min till the infusion was stopped at tracheal extubation and every 1 min till 10 min postextubation. In addition, the airway, respiratory and cardiovascular complications along with postoperative nausea and vomiting, shivering, cough grading, Aldrete score, Ramsay sedation scale, and intraoperative awareness were recorded.
STATISTICAL ANALYSIS: Continuous variables such as HR and MAP were analyzed using analysis of variance and categorical variables were analyzed using the Chi-square test.
RESULTS: Patient demographics were comparable between the three groups. There was a significant reduction in HR and MAP just before extubation and up to 10 min post extubation in the D0.2 and D0.4 groups as compared to placebo ($P < 0.001$) but the difference among the dexmedetomidine groups were not significant. Patients belonging to D0.2 group emerged faster than D0.4 group, however, the results were comparable with placebo group. 73.3% patients of the placebo group had tachycardia and hypertension at emergence as compared to only 3.3% patients in the D0.4 group ($P < 0.001$). Eighty percentage patients of D0.2 and 100% patients of D0.4 group had a significant reduction in cough as compared to placebo ($P < 0.001$). No patient in either groups had intraoperative awareness, any respiratory complications, or allergic reactions to the study drug. Modified Aldrete scoring and Ramsay sedation scale were comparable in all the three groups.
CONCLUSION: Dexmedetomidine suppresses cough and hemodynamic responses (HR and MAP) to tracheal extubation significantly without delaying emergence.

DOI: 10.4103/jnrp.jnrp_91_17
PMCID: PMC5602261
PMID: 28936072

Conflict of interest statement: There are no conflicts of interest.

67: Maharana PK, Sahay P, Singhal D, Garg I, Titiyal JS, Sharma N. Component corneal surgery: An update. Indian J Ophthalmol. 2017 Aug;65(8):658-672. doi: 10.4103/ijo.IJO_582_17. Review. PubMed PMID: 28820150; PubMed Central PMCID: PMC5598175.

Several decades ago, penetrating keratoplasty was a challenge to corneal surgeons. Constant effort by the corneal surgeon to improve the outcomes as well as utilization of the available resources has led to a revolutionary change in the field of keratoplasty. All these efforts have led to the evolution of techniques that allow a corneal surgeon to disease-specific transplant of individual layers of corneal "so-called component corneal surgery" depending on the layer of cornea affected. This has led to an improvement in corneal graft survival as well as a better utilization of corneal tissues. This article reviews the currently available literature on component corneal surgeries and provides an update on the available techniques.

DOI: 10.4103/ijo.IJO_582_17
PMCID: PMC5598175
PMID: 28820150 [Indexed for MEDLINE]

68: Majumdar A, Ahmad F, Sheikh T, Bhagat R, Pathak P, Joshi SD, Seth P, Tandon V, Tripathi M, Saratchandra P, Sarkar C, Sen E. miR-217-casein kinase-2 cross

talk regulates ERK activation in ganglioglioma. J Mol Med (Berl). 2017 Nov;95(11):1215-1226. doi: 10.1007/s00109-017-1571-z. Epub 2017 Aug 25. PubMed PMID: 28840260.

Gangliogliomas (GGs) are the most commonly diagnosed long-term epilepsy-associated tumors (LEATs). Although molecular characterizations of brain tumors have identified few novel biomarkers among the LEATs, mechanisms of pathogenesis remain poorly understood. In this study, global microarray-based microRNA (miRNA) expression profile on a set of 9 GGs indicated 66 miRNAs to be differentially expressed in GG as compared to normal brain. The differences validated by qRT-PCR indicated microRNA-217 to be the most downregulated. Through insilico analysis, ERK1/2 and casein kinase (CK-2α) were predicted to be miR-217 regulated. As decreased miR-217 expression was concomitant with upregulated ERK1/2 and CK-2α levels in GG; the interplay between these molecules was investigated in primary human neural precursor cells to mimic the glioneuronal characteristics of these tumors. miR-217 over-expression-mediated decrease in pERK, CK-2α, and mGluR1 levels was accompanied with increase in glycogen accumulation. Importantly, increase in miR-217 levels upon CK-2α inhibition indicated inverse correlation between the two. Inhibition of CK-2α also decreased ERK and mGluR1 levels. By demonstrating, for the first time, the existence of miR-217-CK-2 cross talk and its effects on known epileptogenic factors, these findings provide a unique insight into the pathogenesis of ganglioglioma. By highlighting the role of CK-2 in affecting miR-217/ERK/mGluR1 interplay, this study suggests that targeting CK-2 may afford a novel strategy aimed at LEATs.KEY MESSAGES: Global microarray of ganglioglioma indicates downregulation of miR-217. Decreased miR-217 expression is concomitant with elevated CK-2α and Erk levels. Inverse correlation between miR-217 and CK-2α in primary human neural precursors. miR-217 agomir or CK-2α inhibition decreases pERK and mGluR1 levels. CK-2α affects miR-217/ERK/mGluR1 interplay in long-term epilepsy-associated tumors.

DOI: 10.1007/s00109-017-1571-z
PMID: 28840260

69: Majumdar I, Ahuja V, Paul J. Altered expression of Tumor Necrosis Factor Alpha -Induced Protein 3 correlates with disease severity in Ulcerative Colitis. Sci Rep. 2017 Aug 25;7(1):9420. doi: 10.1038/s41598-017-09796-9. PubMed PMID: 28842689; PubMed Central PMCID: PMC5572729.

Ulcerative colitis (UC), an inflammatory disorder of the colon arises from dysregulated immune response towards gut microbes. Transcription factor NFκB is a major regulatory component influencing mucosal inflammation. We evaluated expression of Tumor Necrosis Factor Alpha Induced Protein3 (TNFAIP3), the inhibitor of NFκB activation and its associated partners ITCH, RNF11 and Tax1BP1 in inflamed mucosa of UC patients. We found highly significant up-regulated mRNA expression of TNFAIP3 that negatively correlated with disease activity in UC. mRNA levels of ITCH, RNF11 and Tax1BP1 were significantly down-regulated. Significant positive correlation with disease activity was noted for Tax1BP1. All four genes showed significant down-regulation at protein level. mRNA levels of inducers of TNFAIP3 expression, NFκB p65 subunit and MAST3 was determined. There was significant increase in p65 mRNA expression and down-regulated MAST3 expression. This suggested that increase in NFκB expression regulates TNFAIP3 levels. Deficiency of TNFAIP3 expression resulted in significant up-regulation of NFκB p65 sub-unit as well as its downstream genes such as iNOS, an inflammatory marker, inhibitors of apoptosis like cIAP2 and XIAP and mediators of anti-apoptotic signals TRAF1 and TRAF2. Taken together, decreased expression of TNFAIP3 and its partners contribute to inflammation and up-regulation of apoptosis inhibitors that may create microenvironment for colorectal cancer.

DOI: 10.1038/s41598-017-09796-9
PMCID: PMC5572729
PMID: 28842689

70: Malgulwar PB, Pathak P, Singh M, Kale SS, Suri V, Sarkar C, Sharma MC. Downregulation of SMARCB1/INI1 expression in pediatric chordomas correlates with upregulation of miR-671-5p and miR-193a-5p expressions. Brain Tumor Pathol. 2017 Oct;34(4):155-159. doi: 10.1007/s10014-017-0295-7. Epub 2017 Aug 20. PubMed PMID: 28825187.

Loss of SMARCB1/INI1 expression is considered to be a hallmark for childhood chordomas (CCs). Although mutation/loss of 22q has strongly established the loss of SMARCB1/INI1 in cancers, the cause in CCs remains elusive. Recent studies suggest role of miRNAs in regulation of SMARCB1/INI1 expressions. We examined 5 reported/target predicted miRNAs to SMARCB1/INI1 in SMARCB1/INI1 immunonegative and immunopositive cases, and found upregulation of miR-671-5p and miR-193a-5p in SMARCB1/INI1-immunonegative cases. Notably, these two miRNAs were significantly predicted to target TGF-β signaling, suggestive of dysregulation of developmental and osteoblast regulation pathway in CCs. Overall, we suggest miR-671-5p- and miR-193a-5p-mediated epigenetic mode of SMARCB1/INI1 loss and downregulated TGF-β pathway in CCs.

DOI: 10.1007/s10014-017-0295-7
PMID: 28825187

71: Malik S, Suchal K, Khan SI, Bhatia J, Kishore K, Dinda AK, Arya DS. Apigenin ameliorates streptozotocin-induced diabetic nephropathy in rats via MAPK-NF-Î°B-TNF-Î± and TGF-Î²1-MAPK-fibronectin pathways. Am J Physiol Renal Physiol. 2017 Aug 1;313(2):F414-F422. doi: 10.1152/ajprenal.00393.2016. Epub 2017 May 31. PubMed PMID: 28566504.

Diabetic nephropathy (DN), a microvascular complication of diabetes, has emerged as an important health problem worldwide. There is strong evidence to suggest that oxidative stress, inflammation, and fibrosis play a pivotal role in the progression of DN. Apigenin has been shown to possess antioxidant, anti-inflammatory, antiapoptotic, antifibrotic, as well as antidiabetic properties. Hence, we evaluated whether apigenin halts the development and progression of DN in streptozotocin (STZ)-induced diabetic rats. Male albino Wistar rats were divided into control, diabetic control, and apigenin treatment groups (5–20 mg/kg po, respectively), apigenin per se (20 mg/kg po), and ramipril treatment group (2 mg/kg po). A single injection of STZ (55 mg/kg ip) was administered to all of the groups except control and per se groups to induce type 1 diabetes mellitus. Rats with fasting blood glucose >250 mg/dl were included in the study and randomized to different groups. Thereafter, the protocol was continued for 8 mo in all of the groups. Apigenin (20 mg/kg) treatment attenuated renal dysfunction, oxidative stress, and fibrosis (decreased transforming growth factor-β1, fibronectin, and type IV collagen) in the diabetic rats. It also significantly prevented MAPK activation, which inhibited inflammation (reduced TNF-α, IL-6, and NF-κB expression) and apoptosis (increased expression of Bcl-2 and decreased Bax and caspase-3). Furthermore, histopathological examination demonstrated reduced inflammation, collagen deposition, and glomerulosclerosis in the renal tissue. In addition, all of these changes were comparable with those produced by ramipril. Hence, apigenin ameliorated renal damage due to DN by suppressing oxidative stress and fibrosis and by inhibiting MAPK pathway.

DOI: 10.1152/ajprenal.00393.2016
PMID: 28566504 [Indexed for MEDLINE]

72: Mallick S, Benson R, Melgandi W, Rath GK. Effect of Surgery, Adjuvant Therapy, and Other Prognostic Factors on Choroid Plexus Carcinoma: A Systematic Review and Individual Patient Data Analysis. Int J Radiat Oncol Biol Phys. 2017 Dec 1;99(5):1199-1206. doi: 10.1016/j.ijrobp.2017.08.012. Epub 2017 Aug 18. Review. PubMed PMID: 28939225.

PURPOSE: The optimal treatment of patients with choroid plexus carcinoma (CPC) is unclear. We conducted a systematic review and meta-analysis of individual patient information to determine the effect of surgery, adjuvant therapy, and other prognostic factors for CPC.
METHODS AND MATERIALS: A comprehensive search of the PubMed and Google Scholar databases was performed using the following MeSH terms to find all possible reports on CPC: choroid plexus tumor; choroid plexus carcinoma; choroid plexus carcinoma AND treatment; and choroid plexus carcinoma AND survival. We performed an individual patient data analysis to assess the strength of the potential associations between different variables and the outcomes for patients with CPC.
RESULTS: Data from 284 patients were retrieved from 89 studies. The median patient age was 2 years, with 26% patients diagnosed in the first year of their life. Of these 284 patients, 52.8% had undergone gross total resection (GTR) or near total resection. The median follow-up period for the entire cohort was 10.8 months. The median progression-free survival (PFS) was 13 months (95% confidence interval 8.14-17.8). PFS was better for patients >aged 5 years and those who had undergone GTR. The median overall survival (OS) was 29 months (95% confidence interval 16.3-41.7). OS was better for patients aged >5 years, those who had undergone GTR, those who had received adjuvant treatment, and those with a parenchymal tumor site.
CONCLUSIONS: CPC is an aggressive tumor, with a median PFS of 13 months and median OS of 29 months. All patients should undergo maximal safe resection, because GTR is associated with improved survival. The use of adjuvant radiation and chemotherapy were also associated with improved outcomes.

DOI: 10.1016/j.ijrobp.2017.08.012
PMID: 28939225 [Indexed for MEDLINE]

73: Mallick S, Benson R, Venkatesulu B, Melgandi W, Rath GK. Patterns of care and survival outcomes in patients with astroblastoma: an individual patient data analysis of 152 cases. Childs Nerv Syst. 2017 Aug;33(8):1295-1302. doi: 10.1007/s00381-017-3410-5. Epub 2017 May 5. PubMed PMID: 28477040.

BACKGROUND: Astroblastoma (AB) is a rare tumor with significant dilemma regarding diagnostic criteria, behavior, and optimum treatment.
MATERIALS AND METHODS: We searched PubMed, Google Search, and Cochrane Library for eligible studies with the following search words: astroblastoma, high-grade astroblastoma, and anaplastic astroblastoma till July 1, 2016, published in English language and collected data regarding age, sex, site of disease, pathological grade, treatment received, and survival.
RESULTS: Data of 152 patients were retrieved from 63 publications. Median age was 16 years (range 0-71). Females were affected twice more frequently than male (70.3 vs. 29.7%). Tumors were most commonly located in the frontal (39%) followed by parietal lobe (26.7%). Fifty-two and 25% of the patients had headache and seizure at presentation, 76.3% of the patients underwent a gross total resection, 41 out of 89 had a high-grade tumor, and 56 patients received adjuvant radiation with a median dose of 54 Gy (range 20-72). Adjuvant chemotherapy was used in 23 patients. Temozolomide was the most common drug used in 30% of the patients. A combination of cisplatin, etoposide with vincristine, or ifosfamide was used in 17%. Median follow-up duration was 37 months (range 1-238). Median progression-free survival and OS were 36 and 184 months, respectively. Patients with a higher-grade tumor had significantly worse OS with HR 5.260 and p = 0.001. Forty patients experienced local progression. Sixty-five percent patients underwent surgery while 50% underwent radiation as salvage.
CONCLUSION: AB has two distinct grades with higher-grade tumors having significantly poor survival. Maximal safe surgery followed by adjuvant radiation and temozolomide should be advocated for these tumors.

DOI: 10.1007/s00381-017-3410-5

PMID: 28477040

74: Mandal A, Priyadarshi M, Jat K, Kabra SK. Infantile Tremor Syndrome and Subdural Hemorrhage in an Infant with Cystic Fibrosis. J Trop Pediatr. 2017 Aug 1;63(4):328-332. doi: 10.1093/tropej/fmx003. PubMed PMID: 28334845.

Cystic fibrosis (CF), an autosomal recessive disease with multi-system involvement, may present with bleeding in infancy owing to vitamin K malabsorption. Infantile tremor syndrome (ITS) is an obscure condition associated with vitamin B12 and other micronutrient deficiencies, described predominantly in Indian subcontinent. We describe an infant presenting with ITS and chronic subdural hemorrhage. He was subsequently diagnosed to have CF. The ITS and subdural hemorrhage is rarely reported in children with CF. In the background of increasing recognition of CF in Indian children, this case demonstrates a new association of this disease.

DOI: 10.1093/tropej/fmx003
PMID: 28334845 [Indexed for MEDLINE]

75: Manoharan KS, Thakar A, Sharma SC. In reference to "The transotic approach for vestibular schwannoma: indications and results". Eur Arch Otorhinolaryngol. 2017 Dec;274(12):4269-4270. doi: 10.1007/s00405-017-4692-7. Epub 2017 Aug 4. PubMed PMID: 28779420.

76: Meel R, Devi S, Ganger A, S M, Pushker N. Isolated severe microblepharon in a neonate: a rare case. Int Ophthalmol. 2017 Aug 12. doi: 10.1007/s10792-017-0675-3. [Epub ahead of print] PubMed PMID: 28803395.

PURPOSE: To report a rare case of isolated severe microblepharon in a neonate.
METHODS: A 27 days old male child was brought by parents with redness, photophobia and discharge for two weeks. Thorough ophthalmological and systemic examination was performed.
RESULTS: The diagnosis of isolated severe microblepharon with infectious keratitis was made. After the appropriate management of infectious keratitis and achieving complete resolution, the child was subjected to bilateral lid reconstruction was done in the form of upper lid skin grafting and tarsorrhaphy and the patient is being followed up.
CONCLUSION: A rare case of bilateral isolated severe microblepharon affecting all four eyelids is being reported. Urgent surgical intervention is recommended in such cases in order to achieve good corneal coverage which results in faster healing of infective keratitis and a good visual outcome.

DOI: 10.1007/s10792-017-0675-3
PMID: 28803395

77: Mishra A, Pandey RK, Sharma A, Darlong V, Punj J, Goswami D, Sinha R, Rewari V, Chandralekha C, Bansal VK. Is perioperative administration of 5% dextrose effective in reducing the incidence of PONV in laparoscopic cholecystectomy?: A randomized control trial. J Clin Anesth. 2017 Aug;40:7-10. doi: 10.1016/j.jclinane.2017.03.048. Epub 2017 Apr 12. PubMed PMID: 28625451.

STUDY OBJECTIVE: To compare the incidence of postoperative nausea and vomiting (PONV) during perioperative administration of 5% dextrose and normal saline in laparoscopic cholecystectomy.
DESIGN: Prospective, randomized, double-blind trial.
SETTING: Operating rooms in a tertiary care hospital of Northern India.
PATIENTS: One hundred patients with American Society of Anesthesiologists status I to II undergoing laparoscopic cholecystectomy were enrolled in this study.

INTERVENTIONS: Patients were randomized into two groups [normal saline (NS) group and 5% dextrose (D) group]. Both the groups received Ringer acetate (Sterofundin ISO) intravenously as a maintenance fluid during intraoperative period. Besides this, patients of group NS received 250ml of 0.9% normal saline and patients of group D received 5% dextrose @ 100ml/h started at the time when gall bladder was taken out. It was continued in the postoperative period with the same rate till it gets finished.
MEASUREMENTS: Incidence of PONV, Apfel score, intraoperative opioids used and consumption of rescue antiemetics.
MAIN RESULTS: Demographic data was statistically similar. Out of total 100 patients, 47 patients (47%) had PONV. In group D, 14 patients (28%) had PONV while in group NS, 33 patients (66%) had PONV within 24h of surgery (p value 0.001). The incidence of PONV was reduced by 38% in group D which is significantly lower when compared with that of group NS (p value 0.001). The consumption of single dose of rescue antiemetics in group D was also reduced by 26% when compared to that of group NS (p value 0.002).
CONCLUSIONS: Perioperative administration of 5% dextrose in patients undergoing laparoscopic surgery can reduce PONV significantly and even if PONV occurs, the quantity of rescue antiemetics to combat PONV is also reduced significantly.

DOI: 10.1016/j.jclinane.2017.03.048
PMID: 28625451

78: Mishra S, Kusuma YS, Babu BV. Mother's Recognition of and Treatment Triggers for Common Childhood Illnesses among Migrant Santal Tribe Living in Bhubaneswar, Odisha, India. J Trop Pediatr. 2017 Aug 1;63(4):301-306. doi: 10.1093/tropej/fmw092. PubMed PMID: 28040697.

Background: Accelerating reduction in infant and other child mortality rates calls for comprehensive child survival strategies. Early recognition of illness and timely seeking of treatment are critical elements to prevent child deaths, and cultural explanation for these care-seeking behaviours is important. The present article reports (i) mothers' recognition of illness and (ii) triggers of treatment related to some childhood illnesses among a migrant tribal community living in Bhubaneswar city, India.
Methods: From the four tribal dominated slums, 175 Santal tribal households were selected based on the criteria, viz. (i) the family should have migrated within the past 12 years and (ii) having a child aged 0-14 years. Semi-structured interviews were conducted with mothers for data related to illnesses occurred to their youngest child during past 1 year.
Results: The recognition of illness was made based on multiple symptoms. Triggers of treatment and care-seeking behaviour vary from illness to illness. Usually people wait for 2-3 days after onset of any illness, expecting the symptoms to subside automatically. Late onset symptoms and severity trigger mother to take child for treatment.
Conclusion: Mothers were able to recognize the childhood illnesses. There was substantial delay in seeking care. Hence, provision of primary health care and health education-based interventions are needed to improve the mothers' recognition and care-seeking behaviour.

DOI: 10.1093/tropej/fmw092
PMID: 28040697 [Indexed for MEDLINE]

79: Nambirajan A, Shukla AK, Mathur SR, Kumar H, Kumar R, Bhowmik DM, Singh A, Jain D, Sharma MC, Kaushal S. Condyloma Acuminatum of Urinary Bladder in a Male Renal Transplant Recipient - A Diagnostic and Therapeutic Challenge. Clin Genitourin Cancer. 2017 Aug;15(4):e739-e742. doi: 10.1016/j.clgc.2016.12.007. Epub 2017 Jan 4. PubMed PMID: 28089720.

80: Nandakumar A, Rath GK, Kataki AC, Bapsy PP, Gupta PC, Gangadharan P, Mahajan RC, Bandyopadhyay MN, Swamy K, Vallikad E, Visweswara RN, Roselind FS, Sathishkumar K, Kumar DDV, Jain A, Sudarshan KL. Decreased Survival With Mastectomy Vis-Ã -Vis Breast-Conserving Surgery in Stage II and III Breast Cancers: A Comparative Treatment Effectiveness Study. J Glob Oncol. 2016 Oct 12;3(4):304-313. doi: 10.1200/JGO.2016.004614. eCollection 2017 Aug. PubMed PMID: 28831438; PubMed Central PMCID: PMC5560451.

PURPOSE: The primary purpose of hospital-based cancer registries is assessing patient care. Clinical stage-based survival and treatment-based survival are some of the key parameters for such assessment. Because of the challenges in obtaining follow-up parameters, a separate study on patterns of care and survival was undertaken by the Indian National Cancer Registry Program. The results for cancer of the female breast are presented here.
PATIENTS AND METHODS: Data abstracted in a standardized patient information form were transmitted online to a central repository. Treatment patterns were assessed for 9,903 patients diagnosed between January 1, 2006, and December 31, 2008, from 13 institutions. Survival analysis was restricted to 7,609 patients from nine institutions wherein follow-up details (as of December 31, 2012) were available for at least 60% of patients.
RESULTS: The overall 5-year survival rates with breast-conserving surgery (BCS) and mastectomy (MS) were 94.0% and 85.8%, respectively, for stage II disease (adjusted hazard ratio, 2.40; 95% CI, 1.8 to 3.2) and 87.1% and 69.0%, respectively, for stage III disease (hazard ratio, 2.82; 95% CI, 2.2 to 3.7). Patients who had MS did better with systemic therapy (chemotherapy and/or hormone therapy), whereas patients with BCS required just local radiation therapy to achieve best survival.
CONCLUSION: This observational study in the natural setting of care of patients with cancer in India showed significantly decreased survival with MS when compared with BCS. The reasons for lower survival with MS and the biologic or scientific rationale of the necessity of systemic therapy to achieve optimal survival in patients undergoing MS but not in those with BCS need further investigation.

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PMCID: PMC5560451
PMID: 28831438

Conflict of interest statement: The following represents disclosure information provided by authors of this manuscript. All relationships are considered compensated. Relationships are self-held unless noted. I = Immediate Family Member, Inst = My Institution. Relationships may not relate to the subject matter of this manuscript. For more information about ASCO's conflict of interest policy, please refer to www.asco.org/rwc or ascopubs.org/jco/site/ifc. Ambakumar NandakumarNo relationship to discloseGoura Kishor RathNo relationship to discloseAmal Chandra KatakiNo relationship to discloseP. Poonamalle BapsyNo relationship to disclosePrakash C. GuptaNo relationship to disclosePaleth GangadharanNo relationship to discloseRamesh C. MahajanNo relationship to discloseManas Nath BandyopadhyayNo relationship to discloseKumara SwamyNo relationship to discloseElizabeth VallikadNo relationship to discloseRudrapatna N. VisweswaraNo relationship to discloseFrancis Selvaraj RoselindNo relationship to discloseKrishnan SathishkumarNo relationship to discloseDampilla Daniel Vijay KumarNo relationship to discloseAnkush JainNo relationship to discloseKondalli Lakshminarayana SudarshanNo relationship to disclose

81: Narain P, Gomes J, Bhatia R, Singh I, Vivekanandan P. C9orf72 hexanucleotide repeat expansions and Ataxin 2 intermediate length repeat expansions in Indian patients with amyotrophic lateral sclerosis. Neurobiol Aging. 2017 Aug;56:211.e9-211.e14. doi: 10.1016/j.neurobiolaging.2017.04.011. Epub 2017 Apr 26. PubMed PMID: 28527524.

Repeat expansions in the chromosome 9 open reading frame 72 (C9orf72) gene have

been recognized as a major contributor to amyotrophic lateral sclerosis (ALS) and frontotemporal dementia in the Caucasian population. Intermediate length repeat expansions of CAG (polyQ) repeat in the ATXN2 gene have also been reported to increase the risk of developing ALS in North America and Europe. We screened 131 ALS patients and 127 healthy controls from India for C9orf72 and ATXN2 repeat expansions. We found pathogenic hexanucleotide expansions in 3 of the 127 sporadic ALS patients, in 1 of the 4 familial ALS patients, and in none of the healthy controls. In addition, our findings suggest that the 10 base-pair deletion that masks detection of C9orf72 repeat expansion does not explain the low frequency of this repeat expansion among Indian ALS patients. Intermediate length polyQ expansions (27Qs-32Qs) in the ATXN2 gene were detected in 6 of the 127 sporadic ALS patients and 2 of the 127 of the healthy controls. Long ATXN2 polyQ repeats (≥33Qs) were not present in any of the ALS patients or controls. Our findings highlight the need for large-scale multicenter studies on Indian ALS patients to better understand the underlying genetic causes.

DOI: 10.1016/j.neurobiolaging.2017.04.011
PMID: 28527524 [Indexed for MEDLINE]

82: Nishanth KN, Chadda RK, Sood M, Biswas A, Lakshmy R. Physical comorbidity in schizophrenia & its correlates. Indian J Med Res. 2017 Aug;146(2):281-284. doi: 10.4103/ijmr.IJMR_1510_15. PubMed PMID: 29265031.

The presence of common physical comorbidities, their demographic and clinical correlates and impact on functioning was assessed in 100 patients with schizophrenia. The patients had a mean age of 35.12±10.7 yr with mean duration of illness of 8.3±0.58 years. Seventy per cent were detected to have a comorbid physical condition. Common conditions included hypertension (21%), diabetes mellitus (15%) and anaemia (12%). Increasing age, being female, being married, longer duration of illness and longer duration of treatment were associated with higher risk of having a comorbid physical illness. Further studies need to be done with a large sample to confirm these findings.

DOI: 10.4103/ijmr.IJMR_1510_15
PMID: 29265031

83: Obedulla H, Pujari A, Gupta Y, Basheer S. Spontaneous extrusion of subconjunctival cysticercosis cyst. BMJ Case Rep. 2017 Aug 7;2017. pii: bcr-2017-221470. doi: 10.1136/bcr-2017-221470. PubMed PMID: 28784914.

84: Padhan RK, Kedia S, Garg SK, Bopanna S, Mouli VP, Dhingra R, Makharia G, Ahuja V. Long-Term Disease Course and Pregnancy Outcomes in Women with Inflammatory Bowel Disease: An Indian Cohort Study. Dig Dis Sci. 2017 Aug;62(8):2054-2062. doi: 10.1007/s10620-016-4353-5. Epub 2016 Oct 26. PubMed PMID: 27785711.

BACKGROUND: The literature on interaction between pregnancy and inflammatory bowel disease (IBD) is inconsistent, and there are no reports on this aspect from Asia. This study evaluated the impact both IBD and pregnancy have on each other in a large cohort of Indian patients.
METHODS: In total, 514 females with ulcerative colitis (UC) or Crohn's disease (CD) aged between 18 and 45 years attending IBD clinic, at our institute, from July 2004 to July 2013 were screened, and patients with data on pregnancy status were included (n = 406). Pregnancies were categorized as either before, after or coinciding with disease onset. Long-term disease course was ascertained from prospectively maintained records. Pregnancy and fetal outcomes were recorded from antenatal records or individual interviews.
RESULTS: Of 406 patients (UC: 336, CD: 70), 310 became pregnant (UC: 256, CD: 54), with a total of 597 pregnancies (UC: 524, CD: 73). More UC patients with

pregnancies were in long-term remission than non-pregnant patients (56.7 vs. 43.4 %, p = 0.04). Long-term remission was less frequent in UC patients in whom pregnancy coincided with disease onset than patients with pregnancies before and after/pregnancy after the disease onset (41.4 vs. 62.5 %, p = 0.023). Pregnancies after the disease onset were associated with more cesarean sections and adverse fetal outcomes than pregnancies before disease onset in both UC and CD patients. CONCLUSIONS: Long-term disease course in UC patients was better in pregnant as compared to non-pregnant patients. Among pregnant UC patients, disease course was worst when pregnancy coincided with disease onset. Pregnancy and fetal outcomes were worse in pregnancy after disease onset than pregnancy before disease onset.

DOI: 10.1007/s10620-016-4353-5
PMID: 27785711 [Indexed for MEDLINE]

85: Pandey A, Verma S, Kumar VL. Metformin maintains mucosal integrity in experimental model of colitis by inhibiting oxidative stress and pro-inflammatory signaling. Biomed Pharmacother. 2017 Oct;94:1121-1128. doi: 10.1016/j.biopha.2017.08.020. Epub 2017 Aug 16. PubMed PMID: 28821163.

Metformin, an antidiabetic drug, is well known for its multifarious properties and its ability to modulate inflammatory cascade. Ulcerative colitis (UC) is an inflammatory condition of the colon where drugs exhibiting anti-inflammatory property have been shown to induce and maintain remission. The objective of the present study was to evaluate the efficacy of metformin against acetic-acid induced colitis in rat. The study included five groups of rats namely normal control, experimental control, drug treated groups (50 and 500mg/kg of metformin, MET50, MET500 and 300mg/kg of mesalazine, MSZ300). Parameters like small intestinal transit and colonic macroscopic changes, ulcer score, weight/length (W/L) ratio, levels of oxidative stress and inflammatory markers, tissue histology and expression of COX-2, iNOS, NFκB(p65) were evaluated. The results of this study show that treatment with metformin significantly decreased colonic mucosal damage, maintained oxidative homeostasis and normalized intestinal transit and W/L ratio in a dose-dependent manner. The restorative effect of metformin on colonic mucosa was accompanied by a marked reduction in the tissue levels of pro-inflammatory mediators and immunoreactivity of COX-2, iNOS and NFκB(p65). Further, its protective effect was found to be comparable to that of mesalazine. This study shows that metformin targets oxidative stress and down regulates transcription factor NFκB(p65) mediated pro-inflammatory signaling and has a therapeutic potential in treating inflammatory conditions of the colon.

DOI: 10.1016/j.biopha.2017.08.020
PMID: 28821163

86: Panigrahi P, Parida S, Nanda NC, Satpathy R, Pradhan L, Chandel DS, Baccaglini L, Mohapatra A, Mohapatra SS, Misra PR, Chaudhry R, Chen HH, Johnson JA, Morris JG, Paneth N, Gewolb IH. A randomized synbiotic trial to prevent sepsis among infants in rural India. Nature. 2017 Aug 24;548(7668):407-412. doi: 10.1038/nature23480. Epub 2017 Aug 16. Erratum in: Nature. 2017 Nov 29;:. PubMed PMID: 28813414.

Sepsis in early infancy results in one million annual deaths worldwide, most of them in developing countries. No efficient means of prevention is currently available. Here we report on a randomized, double-blind, placebo-controlled trial of an oral synbiotic preparation (Lactobacillus plantarum plus fructooligosaccharide) in rural Indian newborns. We enrolled 4,556 infants that were at least 2,000 g at birth, at least 35 weeks of gestation, and with no signs of sepsis or other morbidity, and monitored them for 60 days. We show a significant reduction in the primary outcome (combination of sepsis and death) in the treatment arm (risk ratio 0.60, 95% confidence interval 0.48-0.74), with few deaths (4 placebo, 6 synbiotic). Significant reductions were also observed for

culture-positive and culture-negative sepsis and lower respiratory tract infections. These findings suggest that a large proportion of neonatal sepsis in developing countries could be effectively prevented using a synbiotic containing L. plantarum ATCC-202195.

DOI: 10.1038/nature23480
PMID: 28813414

87: Panigrahi P, Chandel DS, Hansen NI, Sharma N, Kandefer S, Parida S, Satpathy R, Pradhan L, Mohapatra A, Mohapatra SS, Misra PR, Banaji N, Johnson JA, Morris JG Jr, Gewolb IH, Chaudhry R. Neonatal sepsis in rural India: timing, microbiology and antibiotic resistance in a population-based prospective study in the community setting. J Perinatol. 2017 Aug;37(8):911-921. doi: 10.1038/jp.2017.67. Epub 2017 May 11. PubMed PMID: 28492525; PubMed Central PMCID: PMC5578903.

OBJECTIVE: To examine the timing and microbiology of neonatal sepsis in a population-based surveillance in the Indian community setting.
STUDY DESIGN: All live born infants in 223 villages of Odisha state were followed at home for 60 days. Suspect sepsis cases were referred to study hospitals for further evaluation including blood culture.
RESULTS: Of 12 622 births, 842 were admitted with suspected sepsis of whom 95% were 4 to 60 days old. Culture-confirmed incidence of sepsis was 6.7/1000 births with 51% Gram negatives (Klebsiella predominating) and 26% Gram positives (mostly Staphylococcus aureus). A very high level of resistance to penicillin and ampicillin, moderate resistance to cephalosporins and extremely low resistance to Gentamicin and Amikacin was observed.
CONCLUSION: The bacterial burden of sepsis in the Indian community is not high. Judicious choice of empiric antibiotics, antibiotic stewardship and alternate modalities should be considered for the management or prevention of neonatal sepsis in India.

DOI: 10.1038/jp.2017.67
PMCID: PMC5578903
PMID: 28492525

88: Pant K, Yadav AK, Gupta P, Islam R, Saraya A, Venugopal SK. Butyrate induces ROS-mediated apoptosis by modulating miR-22/SIRT-1 pathway in hepatic cancer cells. Redox Biol. 2017 Aug;12:340-349. doi: 10.1016/j.redox.2017.03.006. Epub 2017 Mar 7. PubMed PMID: 28288414; PubMed Central PMCID: PMC5350572.

Butyrate is one of the short chain fatty acids, produced by the gut microbiota during anaerobic fermentation of dietary fibres. It has been shown that it can inhibit tumor progression via suppressing histone deacetylase and can induce apoptosis in cancer cells. However, the comprehensive pathway by which butyrate mediates apoptosis and growth arrest in cancer cells still remains unclear. In this study, the role of miR-22 in butyrate-mediated ROS release and induction of apoptosis was determined in hepatic cells. Intracellular expression of miR-22 was increased when the Huh 7 cells were incubated with sodium butyrate. Over-expression of miR-22 or addition of sodium butyrate inhibited SIRT-1 expression and enhanced the ROS production. Incubation of cells with anti-miR-22 reversed the effects of butyrate. Butyrate induced apoptosis via ROS production, cytochrome c release and activation of caspase-3, whereas addition of N-acetyl cysteine or anti-miR-22 reversed these butyrate-induced effects. Furthermore, sodium butyrate inhibited cell growth and proliferation, whereas anti-miR-22 inhibited these butyrate-mediated changes. The expression of PTEN and gsk-3 was found to be increased while p-akt and β-catenin expression was decreased significantly by butyrate. These data showed that butyrate modulated both apoptosis and proliferation via miR-22 expression in hepatic cells.

DOI: 10.1016/j.redox.2017.03.006
PMCID: PMC5350572
PMID: 28288414

89: Panwar R. Letter to the Editor for "Low Versus Standard Urine Output Targets in Patients Undergoing Major Abdominal Surgery" by Puckett et al. Ann Surg. 2017 Aug 23. doi: 10.1097/SLA.0000000000002488. [Epub ahead of print] PubMed PMID: 28837446.

90: Panwar R, Sahni P. Retracted: Measuring Postoperative Complications: On the Right Path but Far Away From the Destination. Ann Surg. 2017 Aug 22. doi: 10.1097/SLA.0000000000001616. [Epub ahead of print] PubMed PMID: 27140508.
OBJECTIVE: The aim of the present study was to compare the proposed complication severity score (CSS) with comprehensive complication index (CCI) using a questionnaire-based survey of experienced gastrointestinal and hepato-pancreatico-biliary surgeons.
BACKGROUND: Morbidity rate has become an important outcome measure, as the mortality rates of most surgical procedures have decreased substantially. The recently developed CCI for measuring complications is a step forward in this process but has some drawbacks. We developed a new scoring system for calculating morbidity and compared it with CCI.
METHODS: We designed a questionnaire with 9 scenarios wherein each scenario compared a hypothetical patient who developed a number of lower grade complications with another hypothetical patient who underwent the same surgical procedure but developed a single higher grade complication. The questionnaire was sent to 50 experienced surgeons who were asked to choose the patient who in their opinion had more severe complication. The results thus obtained were compared with the CSS and the CCI for these patients.
RESULTS: Forty-nine of fifty experienced surgeons replied. Of the 9 sets of scenarios, experienced surgeons' opinion matched with CSS alone in six, CSS as well as CCI in one, and neither CSS or CCI in two scenarios. Of the total 441 responses, 281 matched with CSS while 143 matched with CCI (P = 0.0001, odds ratio: 3.7; 95% CI 2.8-4.8).
CONCLUSIONS: CCI was not accurate in calculating the severity of a combination of postoperative complications. The CSS more often matched the opinion of experienced senior surgeons but requires further modifications.

DOI: 10.1097/SLA.0000000000001616
PMID: 27140508

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BACKGROUND: A number of definitions have been used for delayed gastric emptying (DGE) after pancreatoduodenectomy and the reported rates varied widely. The International Study Group of Pancreatic Surgery (ISGPS) definition is the current standard but it is not used universally. In this comprehensive review, we aimed to determine the acceptance rate of ISGPS definition of DGE, the incidence of DGE after pancreatoduodenectomy and the effect of various technical modifications on its incidence.
DATA SOURCE: We searched PubMed for studies regarding DGE after pancreatoduodenectomy that were published from 1 January 1980 to 1 July 2015 and extracted data on DGE definition, DGE rates and comparison of DGE rates among different technical modifications from all of the relevant articles.
RESULTS: Out of 435 search results, 178 were selected for data extraction. The ISGPS definition was used in 80% of the studies published since 2010 and the average rates of DGE and clinically relevant DGE were 27.7% (range: 0-100%; median: 18.7%) and 14.3% (range: 1.8%-58.2%; median: 13.6%), respectively.

Pylorus preservation or retrocolic reconstruction were not associated with increased DGE rates. Although pyloric dilatation, Braun's entero-enterostomy and Billroth II reconstruction were associated with significantly lower DGE rates, pyloric ring resection appears to be most promising with favorable results in 7 out of 10 studies.
CONCLUSIONS: ISGPS definition of DGE has been used in majority of studies published after 2010. Clinically relevant DGE rates remain high at 14.3% despite a number of proposed surgical modifications. Pyloric ring resection seems to offer the most promising solution to reduce the occurrence of DGE.

DOI: 10.1016/S1499-3872(17)60037-7
PMID: 28823364

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93: Purakayastha DR, Rai SK, Broor S, Krishnan A. Cost of Treatment of Febrile Acute Respiratory Infection (FARI) Among Under-Five Children Attending Health Facilities of Ballabgarh, Haryana. Indian J Pediatr. 2017 Dec;84(12):902-907. doi: 10.1007/s12098-017-2420-3. Epub 2017 Aug 23. PubMed PMID: 28831731.

OBJECTIVE: To estimate the expenditure incurred towards treatment of an episode of respiratory infection among under-fives in outpatient and inpatient departments of primary and secondary level health facilities.
METHODS: During March 2011 - September 2012, under-five children presenting with febrile acute respiratory infection (FARI) in the outpatient (OPD) and inpatient (IPD) departments of public and private health facilities of Ballabgarh, Haryana were enrolled in the study. Children who were free from co-morbidities and whose contact number or proper address were available, were enrolled and followed up over telephone or by house visits till recovery. Information was collected on expenditure incurred towards treatment of FARI. Work loss of each day was valued as per capita national income per day. Cost of service in public facilities were supplemented by WHO-CHOICE estimates. The cost of respiratory episode in different settings are expressed in median and inter quartile range (IQR).
RESULTS: One hundred fourteen children from OPD and 75 from IPD were enrolled and followed up till recovery. Among eligible children 40% and 20% in OPD and IPD were excluded respectively as they could not provide address or contact number. The median costs of an episode treated in OPD and IPD were INR 447(IQR: INR 294-669) and INR 7506.06 (IQR: INR 3765-10,406) respectively.
CONCLUSIONS: Respiratory infections are responsible for substantial economic burden, especially with huge proportion of out-of-pocket expenditure. Total cost of a respiratory episode that required hospitalization was 1.5 times the per capita monthly income of an Indian.

DOI: 10.1007/s12098-017-2420-3
PMID: 28831731

94: Purbiya P, Golwala ZM, Manchanda A, Sreenivas V, Puliyel JM. Platelet Distribution Width to Platelet Count Ratio as an Index of Severity of Illness. Indian J Pediatr. 2018 Jan;85(1):10-14. doi: 10.1007/s12098-017-2432-z. Epub 2017 Aug 26. PubMed PMID: 28842812.

OBJECTIVE: To prospectively validate association between the ratio of platelet distribution width (PDW)/platelet count (PCT) and pediatric intensive care unit (PICU) mortality.
METHODS: The study was done in the pediatric intensive care unit (PICU). Platelet indices in the first sample taken after admission were used. In this case control

analysis, cases were the patients who died in PICU and the survivors served as controls. Consecutive 209 eligible patients over a period of 15 mo from January 2014 through March 2015 were included. Exposure was PDW/PC above 0.07. Of them 174 survived and 35 died.
RESULTS: The mean PDW for survivors was 16.77 (±0.92) and for those who died it was 17.33 (±1.03) (p 0.0015). Mean platelet count (PC) for survivors was 3,46,000 (±1,64,700) and for those who died it was 1,75,800 (±1,61,500) (p < 0.001). PDW/PC for survivors was 0.12 (±0.46) and for those who died it was 0.336 (±0.53) (p 0.0014). Using the cut-off of 0.07 for PDW/PC described by Golwala et al., 77.14% above the cut-off died, compared to 22.85% below that cut-off. The odds ratio (OR) for death was 10.6 (95% CI: 4.48 to 25.12). The area under the receiver operating curve (ROC) curve for PDW/PC ratio was 0.81.
CONCLUSIONS: The ratio of PDW/PC, higher than 0.07 in the first sample after admission can be considered as an independent predictor of mortality with sensitivity and specificity of 77.1% and 77.5%, respectively. It may be a useful component for inclusion in composite scores for predicting mortality.

DOI: 10.1007/s12098-017-2432-z
PMID: 28842812

95: Rai R, Dubey S, Santosh KV, Biswas A, Mehrotra V, Rao DN. Design and synthesis of multiple antigenic peptides and their application for dengue diagnosis. Biologicals. 2017 Sep;49:81-85. doi: 10.1016/j.biologicals.2017.08.005. Epub 2017 Aug 18. PubMed PMID: 28818423.

Major difficulty in development of dengue diagnostics is availability of suitable antigens. To overcome this, we made an attempt to develop a peptide based diagnosis which offers significant advantage over other methods. With the help of in silico methods, two epitopes were selected from envelope protein and three from NS1 protein of dengue virus. These were synthesized in combination as three multiple antigenic peptides (MAPs). We have tested 157 dengue positive sera confirmed for NS1 antigen. MAP1 showed 96.81% sera positive for IgM and 68.15% positive for IgG. MAP2 detected 94.90% IgM and 59.23% IgG positive sera. MAP3 also detected 96.17% IgM and 59.87% IgG positive sera. To the best of our knowledge this is the first study describing the use of synthetic multiple antigenic peptides for the diagnosis of dengue infection. This study describes MAPs as a promising tool for the use in serodiagnosis of dengue.

DOI: 10.1016/j.biologicals.2017.08.005
PMID: 28818423

96: Rai SK, Kant S, Srivastava R, Gupta P, Misra P, Pandav CS, Singh AK. Causes of and contributors to infant mortality in a rural community of North India: evidence from verbal and social autopsy. BMJ Open. 2017 Aug 11;7(8):e012856. doi: 10.1136/bmjopen-2016-012856. PubMed PMID: 28801384; PubMed Central PMCID: PMC5577880.

OBJECTIVE: To identify the medical causes of death and contribution of non-biological factors towards infant mortality by a retrospective analysis of routinely collected data using verbal and social autopsy tools.
SETTING: The study site was Health and Demographic Surveillance System (HDSS), Ballabgarh, North India PARTICIPANTS: All infant deaths during the years 2008-2012 were included for verbal autopsy and infant deaths from July 2012 to December 2012 were included for social autopsy.
OUTCOME MEASURES: Cause of death ascertained by a validated verbal autopsy tool and level of delay based on a three-delay model using the INDEPTH social autopsy tool were the main outcome measures. The level of delay was defined as follows: level 1, delay in identification of danger signs and decision making to seek care; level 2, delay in reaching a health facility from home; level 3, delay in

getting healthcare at the health facility.
RESULTS: The infant mortality rate during the study period was 46.5/1000 live births. Neonatal deaths contributed to 54.3% of infant deaths and 39% occurred on the first day of life. Birth asphyxia (31.5%) followed by low birth weight (LBW)/prematurity (26.5%) were the most common causes of neonatal death, while infection (57.8%) was the most common cause of post-neonatal death. Care-seeking was delayed among 50% of neonatal deaths and 41.2% of post-neonatal deaths. Delay at level 1 was most common and occurred in 32.4% of neonatal deaths and 29.4% of post-neonatal deaths. Deaths due to LBW/prematurity were mostly followed by delay at level 1.
CONCLUSION: A high proportion of preventable infant mortality still exists in an area which is under continuous health and demographic surveillance. There is a need to enhance home-based preventive care to enable the mother to identify and respond to danger signs. Verbal autopsy and social autopsy could be routinely done to guide policy interventions aimed at reduction of infant mortality.

DOI: 10.1136/bmjopen-2016-012856
PMCID: PMC5577880
PMID: 28801384

Conflict of interest statement: Competing interests: None declared.

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100: Roy M, Kaushal S, Jain D, Seth A, Iyer VK, Mathur SR. An institutional experience with The Paris System: A paradigm shift from ambiguous terminology to more objective criteria for reporting urine cytology. Cytopathology. 2017 Dec;28(6):509-515. doi: 10.1111/cyt.12448. Epub 2017 Aug 22. PubMed PMID: 28833848.

BACKGROUND: Urine cytology is a highly specific modality for diagnosing high-grade urothelial carcinoma (HGUC), but plagued by low sensitivity and wide inter-observer variability mainly ascribed to the lack of an established template of reporting. The Paris System (TPS) working group proposed such a template at the 2013 International Congress of Cytology, replete with objective criteria for categorising specimens into one of the seven categories: non-diagnostic, negative for HGUC, atypical urothelial cells, suspicious for HGUC, HGUC, low-grade urothelial neoplasm and others (including non-malignant entities). This study was undertaken to determine the impact of TPS criteria in the morphological interpretation of urine samples.
METHODS: A total of 255 voided urine specimens from 97 patients who had follow-up biopsies were re-assessed according to TPS criteria and correlated with the final

histological diagnosis.
RESULTS: Sixty-three patients were diagnosed with HGUC, and 34 had low-grade papillary UC on biopsy. Earlier samples from 40 (41.2%) patients were categorised as merely "atypical" wheereas the "positive for malignancy" category was assigned to 33 (34%) patients. After re-evaluation of the same cases using TPS criteria, cytological features in 44 (69.8%) out of 63 HGUC patients were correctly recognised as HGUC and samples from additional seven patients were re-categorised as suspicious for HGUC (total 81%). The sensitivity of the HGUC category in predicting HGUC was 69.8% which rose to 81% when HGUC was grouped with suspicious for HGUC category.
CONCLUSION: The criteria outlined by TPS facilitated the standardisation of urine cytology reporting and significantly increased the sensitivity of diagnosing HGUC.

DOI: 10.1111/cyt.12448
PMID: 28833848

101: Rufai SB, Singh A, Singh J, Kumar P, Sankar MM, Singh S; TB Research Team. Diagnostic usefulness of Xpert MTB/RIF assay for detection of tuberculous meningitis using cerebrospinal fluid. J Infect. 2017 Aug;75(2):125-131. doi: 10.1016/j.jinf.2017.04.010. Epub 2017 May 10. PubMed PMID: 28501491.

OBJECTIVE: Tuberculous meningitis (TBM) is the most severe form of extra-pulmonary tuberculosis (TB) due to association of diseases with high rates of mortality and morbidity. Diagnosis continues to be a clinical challenge as microbiological confirmation is rare and time consuming resulting in delayed treatment. Xpert MTB/RIF assay is a rapid and simple test, which has been endorsed by World Health Organization as an initial diagnostic test for the diagnosis of TBM. However, evidence still lacks for its performance on cerebrospinal fluid (CSF) for the diagnosis of TBM especially from India.
METHODS: A total of 267 CSF samples from patients with high clinico-radiological suspicion of TBM were included in this study. Ziehl-Neelsen (ZN) staining, BACTEC Mycobacterial Growth Indicator Tube (MGIT-960) culture system, and Xpert MTB/RIF assay (using cartridge version G4) were tested on all samples.
RESULTS: Of total 267 samples, all were negative for smear AFB and 52 (19.5%) were culture positive by MGIT-960 culture system. However, out of 52 (19.5%) cultures detected positive by MGIT-960, 5 (9.6%) were detected as resistant to rifampicin. Xpert MTB/RIF assay was positive in 38 (14.2%) samples and negative in 223 (83.5%) samples. Cartridge error was detected in 6 (2.2%) samples, which could not be repeated due to insufficient sample volume. The sensitivity and specificity of Xpert MTB/RIF assay in comparison to MGIT-960 was 55.1% (95%, CI: 40.2-69.3) and 94.8% (95%, CI: 90.9-97.4) respectively. Overall, Xpert MTB/RIF assay detected 38 (14.2%) as positive for MTB of which 4 (10.5%), 31 (81.6%) and 3 (7.9%) were found to be rifampicin resistant, sensitive and indeterminate respectively.
CONCLUSION: Xpert MTB/RIF assay showed lower sensitivity as compared to MGIT 960 culture for the diagnosis of TBM from CSF samples.

DOI: 10.1016/j.jinf.2017.04.010
PMID: 28501491 [Indexed for MEDLINE]

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A 40-years-old female patient was referred to the cornea clinic as a probable

case of bilateral keratitis. The patient had a history of headache followed by acute onset of redness, pain and discharge from both eyes for 15 days. The patient was diagnosed as bilateral keratitis by the first contact physician and was started on topical antibiotics, cycloplegics and lubricating eye-drops. At presentation, both eyes had visual acuity of perception of light, conjunctival congestion, limbal blanching, diffuse corneal oedema and epithelial defect. A detailed history revealed application of Vicks VapoRub [topical ayurvedic analgesic which contains (per 100 g of product) menthol (2.82 g), camphor (5.25 g) and eucalyptol (1.49 mL) and excipients include thymol (0.1 g), turpentine oil (5.57 mL), nutmeg oil (0.54 mL), cedar wood oil and petrolatum)] on the forehead and eyelids for headache several times over 2-3 days before the onset. The patient further confirmed the accidental application of the ointment in the eyes. A provisional diagnosis of acute chemical injury with Vicks VapoRub was made and treatment with topical antibiotic, cycloplegic, steroid, lubricant and vitamin C was started. On follow-up, both eyes showed gradual resolution of corneal oedema and epithelial defect. Visual acuity improved in the left eye to 6/60 with no change in right eye due to corneal haze.

DOI: 10.1136/bcr-2017-220739
PMID: 28827430

Conflict of interest statement: Competing interests: None declared.

103: Sarkar S, Varshney M, Patil V, Lal R. Maintainence Treatment of Opioid Dependence with Tramadol. J Neurosci Rural Pract. 2017 Aug;8(Suppl 1):S98-S101. doi: 10.4103/jnrp.jnrp_422_16. PubMed PMID: 28936080; PubMed Central PMCID: PMC5602271.

BACKGROUND: Although tramadol has been used in the management of acute withdrawal in patients with opioid dependence, its use for maintenance treatment as a harm reduction approach has not been assessed systematically. This case series describes patients with opioid dependence who were treated with tramadol for long-term maintenance.
METHODS: Patients with opioid dependence who received treatment at the National Drug Dependence Treatment Centre of All India Institute of Medical Sciences, New Delhi, were included in the study. Patients who received at least 6 months of tramadol and had follow-up adherence of more than 80% were included in the case series.
RESULTS: A total of 25 cases were included, all of whom were males. The types of opioids being taken at the time of initiation of tramadol were natural opiates (poppy husk and raw opium), followed by heroin. The median dose of tramadol at initiation and maintenance was 300 mg/day. Nineteen patients were able to achieve complete abstinence to other opiates on tramadol.
CONCLUSION: Tramadol may be an effective option in the long-term management of patients with opioid dependence. Further studies are required for establishing the efficacy of tramadol for agonist management of patients with opioid dependence.

DOI: 10.4103/jnrp.jnrp_422_16
PMCID: PMC5602271
PMID: 28936080

Conflict of interest statement: There are no conflicts of interest.

104: Sarkar S, Gupta N. Drug information update. Atypical antipsychotics and neuroleptic malignant syndrome: nuances and pragmatics of the association. BJPsych Bull. 2017 Aug;41(4):211-216. doi: 10.1192/pb.bp.116.053736. PubMed PMID: 28811916; PubMed Central PMCID: PMC5537576.

Neuroleptic malignant syndrome (NMS) is a rare but potentially fatal adverse event associated with the use of antipsychotics. Although atypical antipsychotics were initially considered to carry no risk of NMS, reports have accumulated over time implicating them in NMS causation. Almost all atypical antipsychotics have been reported to be associated with NMS. The clinical profile of NMS caused by certain atypical antipsychotics such as clozapine has been reported to be considerably different from the NMS produced by typical antipsychotics, with diaphoresis encountered more commonly, and rigidity and tremor encountered less frequently. This article briefly discusses the evidence relating to the occurrence, presentation and management of NMS induced by atypical antipsychotics.

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PMCID: PMC5537576
PMID: 28811916

Conflict of interest statement: Declaration of interest None.

105: Saunders JB, Hao W, Long J, King DL, Mann K, Fauth-BÃ¼hler M, Rumpf HJ, Bowden-Jones H, Rahimi-Movaghar A, Chung T, Chan E, Bahar N, Achab S, Lee HK, Potenza M, Petry N, Spritzer D, Ambekar A, Derevensky J, Griffiths MD, Pontes HM, Kuss D, Higuchi S, Mihara S, Assangangkornchai S, Sharma M, Kashef AE, Ip P, Farrell M, Scafato E, Carragher N, Poznyak V. Gaming disorder: Its delineation as an important condition for diagnosis, management, and prevention. J Behav Addict. 2017 Sep 1;6(3):271-279. doi: 10.1556/2006.6.2017.039. Epub 2017 Aug 17. PubMed PMID: 28816494; PubMed Central PMCID: PMC5700714.

Online gaming has greatly increased in popularity in recent years, and with this has come a multiplicity of problems due to excessive involvement in gaming. Gaming disorder, both online and offline, has been defined for the first time in the draft of 11th revision of the International Classification of Diseases (ICD-11). National surveys have shown prevalence rates of gaming disorder/addiction of 10%-15% among young people in several Asian countries and of 1%-10% in their counterparts in some Western countries. Several diseases related to excessive gaming are now recognized, and clinics are being established to respond to individual, family, and community concerns, but many cases remain hidden. Gaming disorder shares many features with addictions due to psychoactive substances and with gambling disorder, and functional neuroimaging shows that similar areas of the brain are activated. Governments and health agencies worldwide are seeking for the effects of online gaming to be addressed, and for preventive approaches to be developed. Central to this effort is a need to delineate the nature of the problem, which is the purpose of the definitions in the draft of ICD-11.

DOI: 10.1556/2006.6.2017.039
PMCID: PMC5700714
PMID: 28816494

106: Saxena R, Sharma M, Singh D, Sharma P. Anterior and nasal transposition of inferior oblique muscle in cases of superior oblique palsy. J AAPOS. 2017 Aug;21(4):282-285. doi: 10.1016/j.jaapos.2017.05.026. Epub 2017 Jul 14. PubMed PMID: 28713055.

PURPOSE: To report long-term outcome of inferior oblique anterior and nasal transposition in superior oblique palsy.
METHODS: The medical records of patients with superior oblique palsy who underwent inferior oblique anterior nasal transposition were reviewed retrospectively. A comprehensive ophthalmic evaluation, including prism bar cover test and measurement of torsion, was performed for all cases. One-year postoperative results were evaluated for alignment in primary gaze, contralateral gaze, and upgaze; reduction in inferior oblique overaction and changes in fundus

torsion to assess long-term outcome of the procedure.
RESULTS: A total of 12 patients were included. Three cases also underwent horizontal muscle surgery. Mean age at the time of surgery was 20.6 years. The median preoperative hypertropia was 21.5Δ (range, 12Δ-36Δ), corrected to 4.5Δ (range, 2Δ-10Δ) at 12 months postoperatively (P = 0.002). Median inferior oblique overaction decreased from +3 (range, +1 to +4) to 0 (range, -1 to +1). Preoperative fundus extorsion was 19.2° ± 6.7°; postoperative, 0.58° ± 1.8° (P < 0.001). No consecutive hypotropia or underaction in elevation was observed in 10patients; 1 patient complained of torsional diplopia in upgaze. Extorsion was eliminated and head tilt improved in all patients.
CONCLUSIONS: Inferior oblique anterior and nasal transposition resulted in good long-term outcomes in our patients with superior oblique palsy presenting with hypertropia, inferior oblique overaction, and extorsion in primary gaze.

DOI: 10.1016/j.jaapos.2017.05.026
PMID: 28713055

107: Seth R, Singh A, Seth S, Sapra S. Late effects of treatment in survivors of childhood cancers: A single-centre experience. Indian J Med Res. 2017 Aug;146(2):216-223. doi: 10.4103/ijmr.IJMR_196_16. PubMed PMID: 29265022.

BACKGROUND & OBJECTIVES: With improved survival of childhood cancer patients, the number of long-term cancer survivors is increasing. Some studies have assessed the long-term morbidity after childhood cancer treatment in the developing countries. This study was conducted to assess the spectrum of late effects of cancer treatment in paediatric cancer survivors.
METHODS: Evaluation of the first 300 patients who completed five years of follow up in the after treatment completion clinic was done. Details of primary diagnosis, treatment received and current clinical status were noted. The spectrum of late effects was ascertained by appropriate investigations.
RESULTS: Haematological malignancies comprised 25 per cent of total cases. Most common primary diagnosis comprised acute lymphoblastic leukaemia, retinoblastoma and Hodgkin's lymphoma. The median age at evaluation and follow up was 14 and 8.5 yr, respectively. Twenty three per cent (69) of the survivors had a minimal disability (growth retardation or underweight), 13 per cent (39) had moderate disabilities needing medical attention (hepatitis B surface antigen positive, myocardial dysfunction, azoospermia and hypothyroidism), while two per cent had major/life-threatening disabilities (mental retardation, liver disease and mortality). Eleven patients relapsed on follow up, of those five patients expired. Two second malignancies were recorded during the period of follow up.
INTERPRETATION & CONCLUSIONS: Late effects were of concern; however, severe disability (Grade 3-5) was seen in only two per cent survivors. Lifelong follow up of childhood cancer survivors is required to assess cancer-related morbidity, occurrence of a secondary neoplasm, to facilitate timely diagnosis and to implement remedial or preventive interventions to optimize health outcomes. Awareness towards the existence of late effects of cancer therapy is required among parents, patients and health professionals.

DOI: 10.4103/ijmr.IJMR_196_16
PMID: 29265022

108: Shakrawal J, Bali S, Sidhu T, Verma S, Sihota R, Dada T. Randomized Trial on Illuminated-Microcatheter Circumferential Trabeculotomy Versus Conventional Trabeculotomy in Congenital Glaucoma. Am J Ophthalmol. 2017 Aug;180:158-164. doi: 10.1016/j.ajo.2017.06.004. Epub 2017 Jun 15. PubMed PMID: 28624326.

PURPOSE: To compare 1-year outcomes of illuminated microcatheter-assisted circumferential trabeculotomy (IMCT) vs conventional partial trabeculotomy (CPT) for primary congenital glaucoma (PCG).

DESIGN: Randomized clinical trial.
METHODS: Forty eyes of 31 patients with unilateral or bilateral primary congenital glaucoma aged less than 2 years were randomized to undergo IMCT (20 eyes) or CPT (20 eyes). Primary outcome measure was intraocular pressure (IOP) reduction. The success criterion was defined as IOP ≤ 12 mm Hg without and with antiglaucoma medications (absolute success and qualified success, respectively).
RESULTS: The mean age of our study population was 8.35 ± 1.2 months. The mean preoperative IOP was 24.70 ± 3.90 mm Hg in the IMCT group and 24.60 ± 3.31 mm Hg in the CPT group. Both groups were comparable with respect to preoperative IOP, corneal clarity, corneal diameter, vertical cup-to-disc ratio, and refractive error. In the IMCT group, 360-degree cannulation was achieved in 80% (16/20) of eyes. For the IMCT group and CPT groups, respectively, the absolute success rates were 80% (16/20) and 60% (12/20) ($P < .001$) and qualified success rates were 90% (18/20) and 70% (14/20) ($P < .001$). Both procedures produced a statistically significant reduction in IOP, and eyes undergoing IMCT achieved a lower IOP than CPT group eyes at 12 months follow-up (9.5 ± 2.4 mm Hg and 11.7 ± 2.1 mm Hg, respectively, $P < .001$).
CONCLUSION: In primary congential glaucoma, illuminated microcatheter-assisted 360-degree circumferential trabeculotomy performed better than conventional partial trabeculotomy at 1 year follow-up and resulted in significantly lower IOP measurements.

DOI: 10.1016/j.ajo.2017.06.004
PMID: 28624326 [Indexed for MEDLINE]

109: Sharma A, Kumar S, Devarajan SLJ, Agarwal H. Rare Post-Tonsillectomy Internal Carotid Artery Pseudoaneurysm: Management by Parent Artery Occlusion Using Detachable Balloons. Vasc Endovascular Surg. 2017 Oct;51(7):506-508. doi: 10.1177/1538574417723154. Epub 2017 Aug 2. PubMed PMID: 28764608.

Iatrogenic cervical internal carotid artery pseudoaneurysm is a rare and potentially lethal complication following tonsillectomy. It can be complicated by thromboembolism, mass effect and eventually may rupture leading to death. Various endovascular treatment options are available for the management of these pseudoaneurysms, including coil embolization, detachable balloon occlusion, or stent graft placement. Parent artery occlusion using detachable balloons can be a therapeutic option in a subset of patients. However, evaluation of cross circulation with preprocedure balloon test occlusion is imperative in such cases.

DOI: 10.1177/1538574417723154
PMID: 28764608 [Indexed for MEDLINE]

110: Sharma P, Chaurasia S, Rasal A. Bilateral medial rectus aplasia and a modified surgical approach of transposition myopexy of vertical recti. BMJ Case Rep. 2017 Aug 9;2017. pii: bcr-2017-220404. doi: 10.1136/bcr-2017-220404. PubMed PMID: 28794089.

A 16-year-old girl presented with left eye large-angle exotropia. On examination, we found bilateral limitation of adduction. CT orbit showed hypoplastic medial rectus bilaterally, but intraoperatively we found absent medial recti on both sides. This case report explains discrepancy between the imaging and the intraoperative findings and discusses the management dilemma in view of the risk of anterior segment ischaemia and how marked exodeviation and adduction limitation was tackled by the new technique of transposition myopexy, a modification of the procedure described by Nishida along with recession of lateral rectus to achieve good alignment. This procedure changes the vector forces of the vertical rectus without splitting or tenotomy of the muscles.

expressly granted.

DOI: 10.1136/bcr-2017-220404
PMID: 28794089

Conflict of interest statement: Competing interests: None declared.

111: Sharma S, Gupta DK. Varied facets of rectal atresia and rectal stenosis. Pediatr Surg Int. 2017 Aug;33(8):829-836. doi: 10.1007/s00383-017-4106-3. Epub 2017 Jun 10. PubMed PMID: 28601898.

Rectal atresia (RA) and rectal stenosis (RS) are rare anomalies with varied treatment options. A thorough literature review was done on reported cases/series of RA and RS. Based on evidence from cases managed over last 15 years, new insights into embryology were hypothesized. A comprehensive review was compiled with updated knowledge on diagnosis and management. RA is classified into five types I: II: III: IV: V as RS: RA with septal defect: RA with a fibrous cord between two atretic ends: RA with a gap: Multiple RA and/or RS. Current definitive surgical repair of these anomalies preserves the anal canal, dentate line, and sphincter complex. Most neonates with RA undergo sigmoid colostomy except few with RS who can rarely decompress adequately. Membranous RS and septal RA may seldom respond to dilatation or be amenable to transanal repair. Posterior sagittal anorectoplasty with an end-to-end/side repair is recommended for RA and most intramural RS. RS may be associated with a presacral mass and colonic/rectal motility disorders. The expected postoperative outcome is good if the normally developed anal sphincter complex is retained undamaged. Early recognition of the type of anomaly is necessary for appropriate management.

DOI: 10.1007/s00383-017-4106-3
PMID: 28601898

112: Sharma SC, Sakthivel P. Cricopharyngeal bar. Pan Afr Med J. 2017 Aug 23;27:288. doi: 10.11604/pamj.2017.27.288.13296. eCollection 2017. PubMed PMID: 29187957; PubMed Central PMCID: PMC5660909.

113: Sharma V, Gupta N, Srivastava N, Rana V, Chandna P, Yadav S, Sharma A. Diagnostic potential of inflammatory biomarkers in early childhood caries - A case control study. Clin Chim Acta. 2017 Aug;471:158-163. doi: 10.1016/j.cca.2017.05.037. Epub 2017 Jun 1. PubMed PMID: 28579141.

BACKGROUND: Early Childhood Caries (ECC) is most common chronic infectious disease of childhood. Diagnosis of dental caries has been limited to clinical, visual and radiographic methods but its inflammatory component remained unexplored. Hence, this study aims to evaluate salivary levels of inflammatory cytokines in children with ECC to assess their potential as non-invasive biomarkers.
METHODS: 50 subjects were recruited (25 ECC patients and 25 healthy children). Saliva samples were taken from all subjects and collected again from patients after rehabilitative intervention. Levels of IL-6, IL-8 and TNF-α were determined using ELISA. Cytokines level were statistically correlated with each other and with DMF score along with ROC curve analysis.
RESULTS: Salivary levels of IL-6, IL-8 & TNF-α were significantly higher in patients which got significantly reduced after rehabilitative intervention. Levels of these cytokines were significantly associated with severity of dental caries. These cytokines were correlating with each other along with DMF score upon Spearman correlation. ROC curve reveals optimum sensitivity and specificity of these cytokines for diagnosis in ECC with absolute levels observed for IL-6.
CONCLUSIONS: Significant elevation of IL-6, IL-8 and TNF-α with optimum sensitivity and specificity might imply their involvement as potential non-invasive diagnostic/prognostic markers in ECC.

DOI: 10.1016/j.cca.2017.05.037
PMID: 28579141

114: Shukla G, Kazutaka J, Gupta A, Mosher J, Jones S, Alexopoulos A, Burgess RC. Magnetoencephalographic Identification of Epileptic Focus in Children With Generalized Electroencephalographic (EEG) Features but Focal Imaging Abnormalities. J Child Neurol. 2017 Oct;32(12):981-995. doi: 10.1177/0883073817724903. Epub 2017 Aug 22. PubMed PMID: 28828916.

PURPOSE: Children with generalized seizures are often excluded as epilepsy surgery candidates. This prospective study was conducted to evaluate the utility of magnetoencephalography (MEG) to refine the location of the "irritative zone" in children with single lesions on magnetic resonance imaging (MRI) but with generalized ictal electroencephalographic (EEG) findings.
METHODS: Patients admitted with refractory epilepsy with imaging studies showing focal or hemispheric abnormalities but scalp video EEG showing generalized or multiregional epileptiform abnormalities were included. Patients were encouraged into natural sleep, and simultaneous whole-head MEG/EEG was recorded. Source localization of epileptic spikes on MEG was carried out while blinded to other results. Acceptable dipoles were classified into 3 groups: focal, hemispheric clusters, and single focal cluster with additional widespread dipoles.
RESULTS: Nine patients (4 female, 5 males; ages 10 months to 15 years) were included. Two had focal features on clinical semiology, whereas all had generalized or multiregional interictal and ictal EEG. Etiologies included tuberous sclerosis complex (2), postencephalitic sequelae (1), focal cortical dysplasia (1), and unknown (2). Five patients had clear focal lesions on brain MRI whereas the other 2 had focal positron emission tomography (PET) abnormalities. An average of 38 spikes were accepted (average goodness of fit = 85.3%). A single tight cluster of dipoles was identified in 5 patients, 1 had dipoles with propagation from left occipital to right temporal. One patient had 2 distinct dipole clusters. MEG demonstrated focal findings 9 times more often than the simultaneously recorded scalp EEG, and 3 times more often than the associated multiday video EEG recordings.
CONCLUSION: This study shows that neurophysiologic evidence of focal epileptiform abnormalities in patients with focal brain lesions and generalized EEG findings can be strengthened using MEG. Further feasibility of surgical candidacy should be evaluated in these patients.

DOI: 10.1177/0883073817724903
PMID: 28828916

115: Singh A, Kumar MS, Jaryal AK, Ranjan P, Deepak KK, Sharma S, Lakshmy R, Pandey RM, Vikram NK. Diabetic status and grade of nonalcoholic fatty liver disease are associated with lower baroreceptor sensitivity in patients with nonalcoholic fatty liver disease. Eur J Gastroenterol Hepatol. 2017 Aug;29(8):956-961. doi: 10.1097/MEG.0000000000000898. PubMed PMID: 28471821.

OBJECTIVES: Baroreceptor sensitivity (BRS), a functional consequence of vascular stiffness, may be affected by the presence of diabetes mellitus (DM) and nonalcoholic fatty liver disease (NAFLD). The present study was designed to assess the effect of diabetic status and NAFLD grade on the BRS in patients with NAFLD.
METHODS: Seventy-five individuals (25 NAFLD without DM, 25 NAFLD with DM and 25 controls) were recruited for the study who underwent anthropometric and body composition analysis along with estimation of plasma glucose, serum insulin and serum lipids. BRS and blood pressure variability (BPV) analysis was carried out in both time and frequency domains. Carotid-radial and carotid-dorsalis pedis artery pulse wave velocity, and radial artery augmentation index were computed as measures of arterial stiffness.
RESULTS: BRS was found to be lower in the NAFLD with DM group as well those with

grade II NAFLD compared with the controls. Correlation analysis showed a negative correlation of BRS with postprandial blood glucose level (r=-0.39) and BMI (r=-0.467). The diabetic status and grade of NAFLD were associated independently with a decrease in BRS as well as the low-frequency component of diastolic BPV. The augmentation index and carotid-distal pulse wave velocity were higher in the NAFLD with DM group compared with controls.
CONCLUSION: Both the diabetic status and grade of NAFLD were shown to have an independent effect on the decrease in the BRS with a consequent effect on BPV, with a greater influence of diabetic status rather than NAFLD grade on arterial stiffness.

DOI: 10.1097/MEG.0000000000000898
PMID: 28471821

116: Singh AR, Pakhare A, Kokane AM, Shewade HD, Chauhan A, Singh A, Gangwar A, Thakur PS. 'Before reaching the last mile'- Knowledge, attitude, practice and perceived barriers related to tuberculosis directly observed therapy among ASHA workers in Central India: A mixed method study. J Epidemiol Glob Health. 2017 Dec;7(4):219-225. doi: 10.1016/j.jegh.2017.07.002. Epub 2017 Aug 14. PubMed PMID: 29110861.

INTRODUCTION: Community-based direct observed treatment (DOT) providers are an important bridge for the national tuberculosis programme in India to reach the unreached. The present study has explored the knowledge, attitude, practice and barriers perceived by the community-based DOT providers.
METHODS: Mixed-methods study design was used among 41 community-based DOT providers (Accredited Social Health Activist (ASHAs)) working in 67 villages from a primary health center in Raisen district of Madhya Pradesh, India. The cross-sectional quantitative component assessed the knowledge and practices and three focus-group discussions explored the attitude and perceived barriers related to DOT provision.
RESULT: 'Adequate knowledge' and 'satisfactory practice' related to DOT provision was seen in 14 (34%) and 13 (32%) ASHAs respectively. Only two (5%) received any amount of honorarium for completion of DOT in last 3years. The focus-group discussions revealed unfavourable attitude; inadequate training and supervision, non-payment of honorarium, issues related to assured services after referral and patient related factors as the barriers to satisfactory practice of DOT.
CONCLUSION: Study revealed inadequate knowledge and unsatisfactory practice related to DOT provision among ASHAs. Innovations addressing the perceived barriers to improve practice of DOT provision by ASHAs are urgently required.

DOI: 10.1016/j.jegh.2017.07.002
PMID: 29110861

117: Singh AR, Kharate A, Bhat P, Kokane AM, Bali S, Sahu S, Verma M, Nagar M, Kumar AM. Isoniazid Preventive Therapy among Children Living with Tuberculosis Patients: Is It Working? A Mixed-Method Study from Bhopal, India. J Trop Pediatr. 2017 Aug 1;63(4):274-285. doi: 10.1093/tropej/fmw086. PubMed PMID: 28082666.

Objective: We assessed uptake of isoniazid preventive therapy (IPT) among child contacts of smear-positive tuberculosis (TB) patients and its implementation challenges from healthcare providers' and parents' perspectives in Bhopal, India.
Methods: A mixed-method study design: quantitative phase (review of programme records and house-to-house survey of smear-positive TB patients) followed by qualitative phase (interviews of healthcare providers and parents).
Results: Of 59 child contacts (<6 years) of 129 index patients, 51 were contacted. Among them, 19 of 51 (37%) were screened for TB and one had TB. Only 11 of 50 (22%) children were started and 10 of 50 (20%) completed IPT. Content analysis of interviews revealed lack of awareness, risk perception among parents,

cumbersome screening process, isoniazid stock-outs, inadequate knowledge among healthcare providers and poor programmatic monitoring as main barriers to IPT implementation.
Conclusion: National TB programme should counsel parents, train healthcare providers, simplify screening procedures, ensure regular drug supply and introduce an indicator to strengthen monitoring and uptake of IPT.

DOI: 10.1093/tropej/fmw086
PMID: 28082666 [Indexed for MEDLINE]

118: Singh BK, Sharma SK, Sharma R, Sreenivas V, Myneedu VP, Kohli M, Bhasin D, Sarin S. Diagnostic utility of a line probe assay for multidrug resistant-TB in smear-negative pulmonary tuberculosis. PLoS One. 2017 Aug 22;12(8):e0182988. doi: 10.1371/journal.pone.0182988. eCollection 2017. PubMed PMID: 28829779; PubMed Central PMCID: PMC5568731.

OBJECTIVE: To evaluate the performance of Genotype MTBDRplus VER 2.0 in the diagnosis of Mycobacterium tuberculosis (MTB) in sputum smear-negative pulmonary TB cases.
METHODS: A total of 572 Ziehl-Neelsen sputum smear-negative samples were selected and subjected to line probe assay (Genotype MTBDRplus VER 2.0), and culture in mycobacterial growth indicator tube (MGIT-960). Immunochromatographic test was used to confirm the MTB-complex (MTBC) in culture-positive samples and phenotypic drug-susceptibility testing was done using MGIT-960.
RESULTS: The line probe assay was able to diagnose MTBC in 38.2% (213/558) of specimens after excluding 14 nontuberculous mycobacteria. Sensitivity and specificity of the assay were 68.4% and 89.3% respectively, considering MGIT-960 culture as gold standard after excluding contaminated and invalid results. On comparing with composite reference standard, the assay had 71.5% sensitivity and 100% specificity in the diagnosis of tuberculosis. The sensitivity and specificity for detecting resistance to rifampicin (RMP) were 100% and 99.24% respectively and for resistance to isoniazid (INH) were 97.62% and 98.55%, respectively.
CONCLUSION: Genotype MTBDRplus VER 2.0 is a rapid and precise diagnostic tool for detection of MTB in sputum smear-negative samples. It also facilitates accurate diagnosis of RMP and INH resistance within turn around-time.

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PMCID: PMC5568731
PMID: 28829779 [Indexed for MEDLINE]

119: Singh D, K Mishra S, Agarwal E, Sharma R, Bhartiya S, Dada T. Assessment of Retinal Nerve Fiber Layer Changes by Cirrus High-definition Optical Coherence Tomography in Myopia. J Curr Glaucoma Pract. 2017 May-Aug;11(2):52-57. doi: 10.5005/jp-journals-10028-1223. Epub 2017 Aug 5. PubMed PMID: 28924339; PubMed Central PMCID: PMC5577120.

INTRODUCTION: To evaluate the relationship between retinal nerve fiber layer (RNFL) thickness measured by Cirrus high-definition (HD) optical coherence tomography (OCT) and the axial length and refractive error of the eye.
MATERIALS AND METHODS: A total of 100 eyes of 100 healthy subjects (age 20-34 years with M/F ratio of 57/43), comprising 50 eyes with emmetropia [spherical equivalent (SE) 0 D], 25 eyes with moderate myopia (SE between -4 D and -8 D), and 25 eyes with high myopia (SE between -8 D and -12 D) were analyzed in this cross-sectional study. Average and mean clock hour RNFL thicknesses were measured by cirrus HD-OCT and compared between the three groups. Associations between RNFL measurements and axial length and SE were evaluated by linear regression analysis.
RESULTS: The average RNFL measurements were significantly lower in high myopia (78.68 +/- 5.67) and moderate myopia (83.76 +/- 3.44) group compared with emmetropia group (91.26 +/- 2.99), also in the superior and inferior mean clock hours. Significant correlations were evident between RNFL measurements and the SE

and axial length. The average RNFL thickness decreased with increasing axial length (r = -0.8115) and negative refractive power (r = 0.8397). Myopia also affected the RNFL thickness distribution. As the axial length increased and the SE decreased, the thickness of the superior, inferior, and nasal peripapillary RNFL decreased.
CONCLUSION: The axial length/refractive error of the eye affected the average RNFL thickness and the RNFL thickness distribution. Analysis of RNFL thickness in the evaluation of glaucoma should always be interpreted with reference to the refractive status. When interpreting the RNFL thickness of highly myopic patients by OCT, careful attention must be given to the inherently thinner RNFL to avoid a false diagnosis of glaucoma.
HOW TO CITE THIS ARTICLE: Singh D, Mishra SK, Agarwal E, Sharma R, Bhartiya S, Dada T. Assessment of Retinal Nerve Fiber Layer Changes by Cirrus High-definition Optical Coherence Tomography in Myopia. J Curr Glaucoma Pract 2017;11(2):52-57.

DOI: 10.5005/jp-journals-10028-1223
PMCID: PMC5577120
PMID: 28924339

Conflict of interest statement: Source of support: Nil Conflict of interest: None

120: Singh I, Swarup V, Shakya S, Goyal V, Faruq M, Srivastava AK. Single-step blood direct PCR: A robust and rapid method to diagnose triplet repeat disorders. J Neurol Sci. 2017 Aug 15;379:49-54. doi: 10.1016/j.jns.2017.05.042. Epub 2017 May 22. PubMed PMID: 28716278.

OBJECTIVE: DNA extraction prior to polymerase chain reaction (PCR) amplification in genetic diagnoses of triplet repeat disorders (TRDs) is tedious and labour-intensive and has the limitations of sample contamination with foreign DNA, including that from preceding samples. Therefore, we aimed to develop a rapid, robust, and cost-effective method for expeditious genetic investigation of TRDs from whole blood as a DNA template.
METHODS: Peripheral blood samples were collected from 70 clinically suspected patients of progressive ataxia. The conventional method using genomic DNA and single-step Blood-Direct PCR (BD-PCR) method with just 2µl of whole blood sample were tested to amplify triplet repeat expansion in genes related to spinocerebellar ataxia (SCA) types 1, 2, 3, 12 and Friedreich's ataxia (FRDA). Post-PCR, the allele sizes were mapped and repeat numbers were calculated using GeneMapper and macros run in Microsoft Excel programmes.
RESULTS: Successful amplification of target regions was achieved in all samples by both methods. The frequency of the normal and mutated allele was concordant between both methods, diagnosing 37% positive for a mutation in either of the candidate genes. The BD-PCR resulted in higher intensities of product peaks of normal and pathogenic alleles.
CONCLUSIONS: The nearly-accurate sizing of the normal and expanded allele was achieved in a shorter time (4-5h), without DNA extraction and any risk of cross contamination, which suggests the BD-PCR to be a reliable, inexpensive, and rapid method to confirm TRDs. This technique can be introduced in routine diagnostic procedures of other tandem repeat disorders.

DOI: 10.1016/j.jns.2017.05.042
PMID: 28716278

121: Singh P, Kumar A, Yadav S, Prakash L, Nayak B, Kumar R, Kapil A, Dogra PN. "Targeted" prophylaxis: Impact of rectal swab culture-directed prophylaxis on infectious complications after transrectal ultrasound-guided prostate biopsy. Investig Clin Urol. 2017 Sep;58(5):365-370. doi: 10.4111/icu.2017.58.5.365. Epub 2017 Aug 8. PubMed PMID: 28868509; PubMed Central PMCID: PMC5577334.

PURPOSE: To assess the prevalence of fluoroquinolone resistance among patients

undergoing transrectal ultrasound (TRUS)-guided prostate biopsy and the impact of rectal swab culture-directed antibiotic prophylaxis on postbiopsy infectious complications.
MATERIALS AND METHODS: We prospectively analyzed all patients undergoing TRUS-guided prostate biopsy from April 2013 to February 2015. Antibiotic prophylaxis was tailored to the results of rectal swab cultures. If the organism was fluoroquinolone-sensitive, oral ciprofloxacin 500 mg with tinidazole 600 mg was prescribed. If the organism was fluoroquinolone-resistant, then a culture-directed antibiotic was prescribed. In both cases the antibiotic was continued for 3 days. All patients were followed for 14 days after biopsy to record infectious complications.
RESULTS: A total of 247 patients were included, and Escherichia coli was isolated on rectal swab cultures in 99.5% of the patients. Of these, 41.7% harbored fluoroquinolone-resistant E. coli. Piperacillin/tazobactam was the most common culture-directed antibiotic prescribed (59.3%), with amoxicillin/clavulanic being the second most common (25.5%) for the fluoroquinolone-resistant group. Only 2 patients (0.9%) developed postbiopsy fever and none had sepsis.
CONCLUSIONS: Colonization of rectal flora with fluoroquinolone-resistant E. coli was seen in 40% of men undergoing prostate biopsy. Targeted prophylaxis, which uses the results of prebiopsy rectal swab culture to direct antibiotic prophylaxis, results in low rates of postbiopsy infections.

DOI: 10.4111/icu.2017.58.5.365
PMCID: PMC5577334
PMID: 28868509

Conflict of interest statement: CONFLICTS OF INTEREST: The authors have nothing to disclose.

122: Singh PK, Verma SK, Garg M, Sawarkar DP, Kumar A, Agrawal D, Chandra SP, Kale SS, Sharma BS, Mahapatra AK. Evaluation of Correction of Radiologic Parameters (Angulation and Displacement) and Accuracy of C2 Pedicle Screw Placement in Unstable Hangman's Fracture with Intraoperative Computed Tomography-Based Navigation. World Neurosurg. 2017 Nov;107:795-802. doi: 10.1016/j.wneu.2017.08.075. Epub 2017 Aug 24. PubMed PMID: 28842231.

BACKGROUND: Opinions vary regarding optimal treatment of unstable hangman's fractures, including rigid orthosis and internal fixation. The anatomy of upper cervical spine is complex. The advent of intraoperative 3-dimensional navigation systems facilitates safe and accurate instrumentation.
OBJECTIVE: To evaluate radiologic parameters of fracture morphology in unstable hangman's fracture in preoperative and postoperative period and accuracy of inserting axis pedicle screws by using intraoperative computed tomography-based navigation.
METHODS: Fifteen patients with unstable hangman's fractures with age ranging from 17 years to 81 years were operated using computed tomography-based navigation from September 2011 to march 2016. Patient's age, sex, mechanism of injury, associated injuries, and neurologic status were noted. Clinical outcome, accuracy of screw insertion, preoperative and postoperative displacement, and angulation of C2 over C3 and bony fusion were assessed.
RESULTS: Overall, 76 screws were inserted including 30 screws in C2 pedicle with 2 (2/60; 6.7%) malplaced screws in C2 pedicle. Mean follow-up period was 34 ± 18 months (range 7-80 months). Mean hospital stay was 12.8 ± 2.4 days. Mean preoperative and postoperative displacements were 4.09 mm ± 1.78 mm and 1.82 mm ± 1.14 mm respectively with a mean reduction of 2.27 mm ± 1.49 mm. Mean preoperative angulation was 7.23° ± 11.96° and postoperative angulation was 2.32° ± 4.77° with a mean reduction of 5.11° ± 11.96°. Bony fusion was achieved and rotation was preserved at C1-C2 joint in all cases.
CONCLUSIONS: Intraoperative O-arm-based navigation is a safe, accurate, and effective tool for screw placement in patients with unstable hangman fracture and achieves good anatomical reduction.

DOI: 10.1016/j.wneu.2017.08.075
PMID: 28842231 [Indexed for MEDLINE]

123: Singh PM, Panwar R, Borle A, Mulier JP, Sinha A, Goudra B. Perioperative analgesic profile of dexmedetomidine infusions in morbidly obese undergoing bariatric surgery: a meta-analysis and trial sequential analysis. Surg Obes Relat Dis. 2017 Aug;13(8):1434-1446. doi: 10.1016/j.soard.2017.02.025. Epub 2017 Mar 10. PubMed PMID: 28396128.

BACKGROUND: Opioid-sparing analgesia for bariatric surgery in morbidly obese can potentially prevent catastrophic airway complications. Our meta-analysis attempts to consolidate the evidence on dexmedetomidine evaluating its analgesic and safety profile.
METHODS: Trails comparing perioperative dexmedetomidine infusion to conventional analgesic regimens for bariatric surgery were searched. Comparisons were made for 24-hour and postanesthesia care unit (PACU) morphine consumed, PACU pain scores, postoperative nausea and vomiting pain scores, and heartrate. Meta-regression was performed for length of stay to evaluate various analgesic control subgroups.
RESULTS: Six trials were included in the final analysis. Dexmedetomidine infusion (reported in 5 intraoperative subgroups and 2 postoperative subgroups) decreased 24-hour morphine by 18.13±6.11 mg (random effects: P<.001, I2 = 95.48%). Despite the small number of included studies, the sample size for avoiding a false positive result was adequate as the trial sequential analysis found the present sample size (362) to be well past the required "sample size" (n = 312) for 85% power. Meta-regression for infusion dose on morphine consumption difference found a predictability of 49% (coefficient = 39.93, random-effects, Tau2 = 396.08), and predictability of the model improved to 68% on inclusion of time of initiation of infusion. The dexmedetomidine group had lower PACU morphine consumption (by 6.91±1.19, I2 = 34.37%), lower pain scores (scale of 0-10±2.27, I2 = 88.14%), lower postoperative nausea and vomiting incidence (odds ratio =±0.26, I2 = 0%), and lower heart rate (73.25 versus. 83.50) (mean difference =±10.15 I2 = 94.04%). No adverse events were reported across trials.
CONCLUSION: Perioperative dexmedetomidine infusion in obese patients undergoing bariatric surgery is a promising and safe alternative. Both intraoperative or postoperative infusions lead to significant opioid sparing in early and extend postoperative recovery phase. Morbidly obese patients receiving perioperative dexmedetomidine infusions have overall better pain control and lower incidence of postoperative nausea-vomiting. All the aforementioned merits come with a stable hemodynamic profile and without any reported major adverse events.

DOI: 10.1016/j.soard.2017.02.025
PMID: 28396128

124: Singh S, Sahoo AK, Bhari N, Yadav S. Vulvar acrochordons arranged in a linear pattern. J Obstet Gynaecol. 2017 Aug 8:1-2. doi: 10.1080/01443615.2017.1332580. [Epub ahead of print] PubMed PMID: 28784000.

125: Singh S, Balhara YPS. A review of Indian research on co-occurring cannabis use disorders& psychiatric disorders. Indian J Med Res. 2017 Aug;146(2):186-195. doi: 10.4103/ijmr.IJMR_791_15. Review. PubMed PMID: 29265019.

BACKGROUND & OBJECTIVES: Cannabis is a widely used illicit drug and its use is often associated with co-occurring psychiatric disorders. This systematic review was aimed to provide information on the published Indian studies on co-occurring cannabis use disorders and psychiatric disorders.
METHODS: An electronic search of available Indian literature using relevant

search terms was carried out in May 2015 and 52 articles in English language published from India were included in the current review.
RESULTS: Studies on cannabis and associated psychotic disorders (n=16) chiefly described acute episodes with predominant positive symptoms, following cannabis use. Some studies (n=6) observed an overall increased prevalence of all psychiatric disorders and symptoms owing to cannabis use, while others (n=14) elaborated on high rates of substance use in those with psychiatric disorders. The effect of cannabis use on cognitive function was the focus of some of the Indian studies (n=7). All these studies barring one had all male subjects, and a single study described the service delivery model for those with dual diagnosis disorders in India. Most of the research used cross-sectional observational design and focussed on treatment-seeking population.
INTERPRETATION & CONCLUSIONS: A review of Indian literature on cannabis use and its association with psychiatric disorders indicates a high co-prevalence of psychotic disorders, especially in vulnerable individuals as well as high rates of co-occurrence of other psychiatric comorbidities. However, there is limited focus on exploring the aetiological association between cannabis use and psychiatric disorders; understanding the neurobiology of this association and management-related issues.

DOI: 10.4103/ijmr.IJMR_791_15
PMID: 29265019

126: Sivanandan S, Agarwal R, Sethi A. Respiratory distress in term neonates in low-resource settings. Semin Fetal Neonatal Med. 2017 Aug;22(4):260-266. doi: 10.1016/j.siny.2017.04.004. Epub 2017 Apr 26. Review. PubMed PMID: 28456514.

Most neonatal deaths worldwide occur in low- and middle-income countries (LMICs). Respiratory distress is an important cause of neonatal morbidity and mortality. The epidemiology of respiratory distress among term neonates who constitute the vast majority of births is under reported. The scarcely available data from LMICs suggest an incidence of 1.2% to 7.2% among term live births and greater morbidity compared to that in high-income countries. Pneumonia and meconium aspiration syndrome are the predominant causes among outborn neonates, but next only to transient tachypnea among inborn neonates. Community management of neonatal sepsis/pneumonia using simplified antibiotic regimens when referral is not feasible, implementation of non-invasive ventilation, and innovative low-cost technologies to deliver respiratory therapy are important advances that have taken place in these settings. There is an urgent need to generate data on respiratory morbidities among term neonates so that the limited resources in these settings can be allocated judiciously.

DOI: 10.1016/j.siny.2017.04.004
PMID: 28456514

127: Sodhi KS, Bhalla AS, Mahomed N, Laya BF. Imaging of thoracic tuberculosis in children: current and future directions. Pediatr Radiol. 2017 Sep;47(10):1260-1268. doi: 10.1007/s00247-017-3866-1. Epub 2017 Aug 29. Review. PubMed PMID: 29052772.

Tuberculosis continues to be an important cause of morbidity and mortality worldwide. It is the leading cause of infection-related deaths worldwide. Children are amongst the high-risk groups for developing tuberculosis and often pose a challenge to the clinicians in making a definitive diagnosis. The newly released global tuberculosis report from World Health Organization reveals a 50% increase in fatality from tuberculosis in children. Significantly, diagnostic and treatment algorithms of tuberculosis for children differ from those of adults. Bacteriologic confirmation of the disease is often difficult in children; hence radiologists have an important role to play in early diagnosis of this disease. Despite advancing technology, the key diagnostic imaging modalities for primary

care and emergency services, especially in rural and low-resource areas, are chest radiography and ultrasonography. In this article, we discuss various diagnostic imaging modalities used in diagnosis and treatment of tuberculosis and their indications. We highlight the use of US as point-of-care service along with mediastinal US and rapid MRI protocols, especially in mediastinal lymphadenopathy and thoracic complications. MRI is the ideal modality in high-resource areas when adequate infrastructure is available. Because the prevalence of tuberculosis is highest in lower-resource countries, we also discuss global initiatives in low-resource settings.

DOI: 10.1007/s00247-017-3866-1
PMID: 29052772

128: Sokhal N, Rath GP, Chaturvedi A, Singh M, Dash HH. Comparison of 20% mannitol and 3% hypertonic saline on intracranial pressure and systemic hemodynamics. J Clin Neurosci. 2017 Aug;42:148-154. doi: 10.1016/j.jocn.2017.03.016. Epub 2017 Mar 22. PubMed PMID: 28342705.

Mannitol and hypertonic saline (HS) are most commonly used hyperosmotic agents for intraoperative brain relaxation. We compared the changes in ICP and systemic hemodynamics after infusion of equiosmolar solutions of both agents in patients undergoing craniotomy for supratentorial tumors. Forty enrolled adults underwent a standard anesthetic induction. Apart from routine monitoring parameters, subdural ICP with Codmann catheter and cardiac indices by Vigileo monitor, were recorded. The patients were randomized to receive equiosmolar solutions of either 20% mannitol (5ml/kg) or 3% HS (5.35ml/kg) for brain relaxation. The time of placement of ICP catheter was marked as T0 and baseline ICP and systemic hemodynamic variables were noted; it was followed by recording of the same parameters every 5min till 45min (Study Period). After the completion of study period, brain relaxation score as assessed by the neurosurgeon was recorded. Arterial blood gas (ABG) was analysed every 30min starting from T0 upto one and half hours (T90), and values of various parameters were recorded. Data was analysed using appropriate statistical methods. Both mannitol and HS significantly reduced the ICP; the values were comparable in between the two groups at most of the times. The brain relaxation score was comparable in both the groups. Urine output was significantly higher with mannitol. The perioperative complications, overall hospital stay, and Glasgow outcome score at discharge were comparable in between the two groups. To conclude, both mannitol and hypertonic saline in equiosmolar concentrations produced comparable effects on ICP reduction, brain relaxation, and systemic hemodynamics.

DOI: 10.1016/j.jocn.2017.03.016
PMID: 28342705

129: Srivastava A, Srivastava A, Pandey RM. Was RA Fisher Right? Indian J Surg. 2017 Oct;79(5):444-445. doi: 10.1007/s12262-017-1679-y. Epub 2017 Aug 19. Review. PubMed PMID: 29089706; PubMed Central PMCID: PMC5653589.

Randomized controlled trials have become the most respected scientific tool to measure the effectiveness of a medical therapy. The design, conduct and analysis of randomized controlled trials were developed by Sir Ronald A. Fisher, a mathematician in Great Britain. Fisher propounded that the process of randomization would equally distribute all the known and even unknown covariates in the two or more comparison groups, so that any difference observed could be ascribed to treatment effect. Today, we observe that in many situations, this prediction of Fisher does not stand true; hence, adaptive randomization schedules have been designed to adjust for major imbalance in important covariates. Present essay unravels some weaknesses inherent in Fisherian concept of randomized controlled trial.

DOI: 10.1007/s12262-017-1679-y
PMCID: PMC5653589 [Available on 2018-10-01]
PMID: 29089706

130: Subramanian K, Sarkar S, Kattimani S, Philip Rajkumar R, Penchilaiya V. Role of stressful life events and kindling in bipolar disorder: Converging evidence from a mania-predominant illness course. Psychiatry Res. 2017 Dec;258:434-437. doi: 10.1016/j.psychres.2017.08.073. Epub 2017 Aug 30. PubMed PMID: 28870645.

Stressful life events can precipitate relapses and recurrences in bipolar disorder. Kindling in bipolar disorder has been linked to maladaptive psychological reactivity to minor stressful life events. Systematic studies on life events and kindling are rare in bipolar disorder with a manic predominant polarity. One hundred and forty-nine remitted patients with bipolar I disorder were recruited. The National Institute of Mental Health-Life Chart Methodology was used to depict the illness course retrospectively, and the Presumptive Stressful Life Events Scale-Lifetime version was used to record the stressful life events. The role of stressful life events and the probability of kindling were assessed using appropriate statistics. There was a mania-predominant course of bipolar disorder in the sample with 55.7% (n = 83) having only recurrent mania. Family conflict and altered sleep patterns were the commonly reported stressful life events. When controlled for the severity of the stressor, the stressful life events were often associated with the initial episodes rather than the latter ones. Kindling may occur in bipolar disorder with mania as the predominant polarity. However, retrospective recall bias and hospital-based sampling limit generalizability of such observations.

DOI: 10.1016/j.psychres.2017.08.073
PMID: 28870645

131: Subramanian VS, Subramani V, Chilukuri S, Kathirvel M, Arun G, Swamy ST, Subramanian K, Fogliata A, Cozzi L. Multi-isocentric 4Ï€ volumetric-modulated arc therapy approach for head and neck cancer. J Appl Clin Med Phys. 2017 Sep;18(5):293-300. doi: 10.1002/acm2.12164. Epub 2017 Aug 20. PubMed PMID: 28834021.

OBJECTIVES: To explore the feasibility of multi-isocentric 4π volumetric-modulated arc therapy (MI4π-VMAT) for the complex targets of head and neck cancers.
METHODS: Twenty-five previously treated patients of HNC underwent re-planning to improve the dose distributions with either coplanar VMAT technique (CP-VMAT) or noncoplanar MI4π-VMAT plans. The latter, involving 3-6 noncoplanar arcs and 2-3 isocenters were re-optimized using the same priorities and objectives. Dosimetric comparison on standard metrics from dose-volume histograms was performed to appraise relative merits of the two techniques. Pretreatment quality assurance was performed with IMRT phantoms to assess deliverability and accuracy of the MI4π-VMAT plans. The gamma agreement index (GAI) analysis with criteria of 3 mm distance to agreement (DTA) and 3% dose difference (DD) was applied.
RESULTS: CP-VMAT and MI4π-VMAT plans achieved the same degree of coverage for all target volumes related to near-to-minimum and near-to-maximum doses. MI4π-VMAT plans resulted in an improved sparing of organs at risk. The average mean dose reduction to the parotids, larynx, oral cavity, and pharyngeal muscles were 3 Gy, 4 Gy, 5 Gy, and 4.3 Gy, respectively. The average maximum dose reduction to the brain stem, spinal cord, and oral cavity was 6.0 Gy, 3.8 Gy, and 2.4 Gy. Pretreatment QA results showed that plans can be reliably delivered with mean gamma agreement index of 97.0 ± 1.1%.
CONCLUSIONS: MI4π-VMAT plans allowed to decrease the dose-volume-metrics for relevant OAR and results are reliable from a dosimetric standpoint. Early clinical experience has begun and future studies will report treatment outcome.

DOI: 10.1002/acm2.12164
PMID: 28834021

132: Synnot A, Karlsson A, Brichko L, Chee M, Fitzgerald M, Misra MC, Howard T, Mathew J, Rotter T, Fiander M, Gruen RL, Gupta A, Dharap S, Fahey M, Stephenson M, O'Reilly G, Cameron P, Mitra B; Australia-India Trauma System Collaboration. Prehospital notification for major trauma patients requiring emergency hospital transport: A systematic review. J Evid Based Med. 2017 Aug;10(3):212-221. doi: 10.1111/jebm.12256. PubMed PMID: 28467026.

OBJECTIVE: This systematic review aimed to determine the effect of prehospital notification systems for major trauma patients on overall (<30 days) and early (<24 hours) mortality, hospital reception, and trauma team presence (or equivalent) on arrival, time to critical interventions, and length of hospital stay.
METHODS: Experimental and observational studies of prehospital notification compared with no notification or another type of notification in major trauma patients requiring emergency transport were included. Risk of bias was assessed using the Cochrane ACROBAT-NRSI tool. A narrative synthesis was conducted and evidence quality rated using the GRADE criteria.
RESULTS: Three observational studies of 72,423 major trauma patients were included. All were conducted in high-income countries in hospitals with established trauma services, with two studies undertaking retrospective analysis of registry data. Two studies reported overall mortality, one demonstrating a reduction in mortality; (adjusted odds ratio (OR) 0.61, 95% confidence interval (CI) 0.39 to 0.94, 72,073 participants); and the other demonstrating a nonsignificant change (OR 0.61, 95% CI 0.23 to 1.64, 81 participants). The quality of this evidence was rated as very low.
CONCLUSION: Limited research on the topic constrains conclusive evidence on the effect of prehospital notification on patient-centered outcomes after severe trauma. Composite interventions that combine prehospital notification with effective actions on arrival to hospital such as trauma bay availability, trauma team presence, and early access to definitive management may provide more robust evidence towards benefits of early interventions during trauma reception and resuscitation.

DOI: 10.1111/jebm.12256
PMID: 28467026

133: Takkar B, Venkatesh P, Khokhar S, Gagrani M. Aborted choroidal coloboma: fundus imaging and optical coherence tomography. BMJ Case Rep. 2017 Aug 7;2017. pii: bcr-2017-220992. doi: 10.1136/bcr-2017-220992. PubMed PMID: 28784898.

Choroidal coloboma is characterised by poor embryonic development of chorioretinal structures and is of different types. We present a case of choroidal coloboma where the retinal pigment epithelium was present, clinically and on imaging, but rest of the structures were poorly formed. This observation suggests that in some cases, fusion of the fetal cleft may occur aberrantly, resulting in an aborted choroidal coloboma.

DOI: 10.1136/bcr-2017-220992
PMID: 28784898

Conflict of interest statement: Competing interests: None declared.

134: Takkar B, Venkatesh P, Gaur N, Garg SP, Vohra R, Ghose S. Patterns of uveitis in children at the apex institute for eye care in India: analysis and review of literature. Int Ophthalmol. 2017 Aug 31. doi: 10.1007/s10792-017-0700-6. [Epub ahead of print] PubMed PMID: 28861733.

AIM: To study patterns of uveitis in Indian children and compare with data sets published earlier in the literature.
METHODS: Consecutive patients below 16 years of age presenting to the uvea clinic of a tertiary eye care center were included prospectively through the period of July 2009-August 2013. Children with retinal vasculitis, exogenous endophthalmitis and masquerade syndromes were excluded from analysis. Uveitis was classified as per the nomenclature system adopted by the International Uveitis Study Group. Hemogram, Mantoux test and chest X-ray were done for each patient, along with tailored investigations and pediatric review as per clinical profile. Clinical pattern and etiology were the main outcome measures.
RESULTS: One hundred and thirty-four children were analyzed. Anterior uveitis (40%) was the commonest pattern followed by intermediate uveitis (25%), panuveitis (18%) and posterior uveitis (17%). Bilateral disease was present in 54%, 15% had infectious uveitis, 10% had granulomatous uveitis and 54% had idiopathic uveitis. Complications were present in half of the patients. Juvenile idiopathic arthritis (22), followed by toxoplasmosis (10) and tuberculosis (5), was the commonest etiology. Intermediate uveitis, non-granulomatous inflammation and older onset of disease had the high odds ratio of having idiopathic disease.
CONCLUSION: Patterns of pediatric uveitis can vary between regions from even within the same geopolitical region. Anterior uveitis is commonest, and juvenile idiopathic arthritis and toxoplasmosis are the most frequent etiologies. Diagnosis of pediatric ocular tuberculosis is more difficult than in adults and needs better and well-defined criteria.

DOI: 10.1007/s10792-017-0700-6
PMID: 28861733

135: Takkar B, Venkatesh P, Agarwal D, Kumar A. Optic disc coloboma with pit treated as glaucoma: diagnostic utility of ultrasound and swept source optical coherence tomography. BMJ Case Rep. 2017 Aug 22;2017. pii: bcr-2017-221967. doi: 10.1136/bcr-2017-221967. PubMed PMID: 28830904.

136: Talukdar A, Rai R, Aparna Sharma K, Rao DN, Sharma A. Peripheral Gamma Delta T cells secrete inflammatory cytokines in women with idiopathic recurrent pregnancy loss. Cytokine. 2017 Aug 9. pii: S1043-4666(17)30218-1. doi: 10.1016/j.cyto.2017.07.018. [Epub ahead of print] PubMed PMID: 28802663.

BACKGROUND: Gamma delta (γδ) T cells are known to link innate and adaptive immunity. Decidual γδ T cells are known to provide immunotolerance by producing IL-10 and TGF-β. In recurrent pregnancy loss (RPL) females, the role of peripheral γδ T cells remain unstudied.
OBJECTIVE: To investigate the different phenotypes of γδ T cells in the peripheral blood of women with idiopathic RPL and their possible involvement in RPL condition.
METHODS: A total of 120 women were recruited for the study. Peripheral blood lymphocytes were isolated and they were stained with appropriate antibodies to determine the phenotype of γδ T cells and major cytokines produced by them in the blood using flow cytometry.
RESULTS: We observed a significant decrease in the proportion of CD3+CD4-CD8-γδ T

cells (p<0.001) and increase in the percentage of IFN-γ (p<0.05) and IL-17 (p<0.001) producing γδ T cells in RPL pregnant as compared to normal pregnant females.
CONCLUSION: Increase in IFN-γ and IL-17-producing CD3+ CD4-CD8- γδ T cells is associated with creating inflammatory cytokine milieu, thereby, may contribute towards pregnancy loss in RPL females.

DOI: 10.1016/j.cyto.2017.07.018
PMID: 28802663

137: Tarique M, Saini C, Naz H, Naqvi RA, Khan FI, Sharma A. Fate of T cells and their secretary proteins during the progression of leprosy. Curr Protein Pept Sci. 2017 Aug 29. doi: 10.2174/1389203718666170829120729. [Epub ahead of print] PubMed PMID: 28847289.

Leprosy is an infectious disease caused by non-cultivable bacteria Mycobacterium leprae. Ridley and Jopling classified the disease into five polar forms, Tuberculoid (TT) and Lepromatous (LL), in between two forms of the disease Borderline tuberculoid (BT), Borderline (BB) and Borderline lepromatous (BL) are laid. The tuberculoid type (BT/TT) leprosy patients show good recall of cell-mediated immune (CMI) response and Th1 type of immune response, while lepromatous leprosy (LL) patients show defect in cell-mediated immunity to the causative agent and Th2 type of immune response. Due to distinct clinical and immunological spectra of the disease, leprosy attracted immunologists to consider an ideal model for the study of deregulations of various immune reactions. Recent studies show that Tregs, Th3 (TGF-β, IL-10), IL-35 producing Treg immune response associated with the immune suppressive environment, survival of bugs and associated with lepromatous leprosy. IL-17 producing Th17 immune response associated with tuberculoid leprosy and play protective role. γδ T cells also increased from tuberculoid to lepromatous pole of leprosy. In this review, we will discuss the role of various subtypes of T-cell and their cytokines in the pathogenesis of leprosy.

DOI: 10.2174/1389203718666170829120729
PMID: 28847289

138: Vallonthaiel AG, Walia R, Pramanik R, Sharma MC, Jain D. p40 in metastatic pulmonary trophoblastic tumour: potential diagnostic pitfall on histopathology. Malays J Pathol. 2017 Aug;39(2):175-179. PubMed PMID: 28866701.

p40, one of the two isomers of p63, is nowadays widely used for diagnosis of squamous cell carcinoma, especially in subtyping non-small cell carcinoma on lung biopsies. We describe a case in which lung tumour was misdiagnosed as squamous cell carcinoma due to p40 immunopositivity. A 36-year-old lady presented with cough and left sided chest pain of 2 months duration. Chest imaging revealed a lesion in left lower lobe of the lung and biopsy was suggestive of squamous cell carcinoma. However, past history revealed amputation of great toe for non-healing discharging ulcer which on histopathology was diagnosed as choriocarcinoma. She also had a history of hysterectomy five years ago, details of which were not available. Post-amputation β-hCG levels were high and she had been treated with multimodality chemotherapy for choriocarcinoma. She had good response to chemotherapy initially, however became resistant later on. Review of the lung biopsy in the light of the past history along with extensive literature review led to the final diagnosis of metastatic trophoblastic tumour to lung. Hence, awareness that p40 immunopositivity can be seen in trophoblastic tumours is essential to avoid misdiagnosis, especially in sites like the lung where squamous cell carcinoma is common.

PMID: 28866701

139: Vatsa R, Bharti J, Roy KK, Kumar S, Sharma JB, Singh N, Singhal S, Meena J. Evaluation of amnion in creation of neovagina in women with Mayer-Rokitansky-Kuster-Hauser syndrome. Fertil Steril. 2017 Aug;108(2):341-345. doi: 10.1016/j.fertnstert.2017.05.026. Epub 2017 Jun 16. PubMed PMID: 28624115.

OBJECTIVE: To assess the outcome of amnion vaginoplasty in cases of vaginal agenesis due to Mayer-Rokitansky-Kuster-Hauser (MRKH) syndrome managed at the authors' institution.
DESIGN: Retrospective study.
SETTING: Tertiary care hospital.
PATIENT(S): Fifty women with MRKH who underwent neovaginoplasty.
INTERVENTION(S): Modified McIndoe's vaginoplasty was done in all the patients, using human amnion graft.
MAIN OUTCOME MEASURE(S): Functional status assessed by Female Sexual Function Index, anatomic status (length and width of neovagina), and epithelialization of vagina.
RESULT(S): Mean (±SD) vaginal length after surgery was 8.2 ± 1 cm. Mean vaginal length at 6-month follow-up in sexually active patients was significantly longer as compared with the patients who were not sexually active after surgery (8.4 ± 1.04 cm vs. 6.6 ± 2.4 cm). Mean Female Sexual Function Index score was 30.8 ± 2.1. Vaginal biopsy showed complete epithelialization of vaginal mucosa.
CONCLUSION(S): In a developing nation like India, McIndoe's method with amnion graft seems to be a promising option owing to its low cost, easy availability, and safety, ease of the procedure not requiring any special instrument, physiologic outcome with respect to epithelialization of the vagina without hair growth, and satisfying functional outcome.

DOI: 10.1016/j.fertnstert.2017.05.026
PMID: 28624115 [Indexed for MEDLINE]

140: Venkatesh P, Takkar B. Suprachoroidal injection of biological agents may have a potential role in the prevention of progression and complications in high myopia. Med Hypotheses. 2017 Sep;107:90-91. doi: 10.1016/j.mehy.2017.08.020. Epub 2017 Aug 24. PubMed PMID: 28915972.

The prevalence of myopia and its severe/progressive visually impairing forms is increasing all over the globe. Most of the preliminary clinical research has focused on rehabilitation and treatment of its complications. Pharmacological prevention of myopic progression has shown encouraging results recently and currently the scleral structure is believed to be responsible for disease progression. In this article, we have hypothesized injecting a biological cement in the potential space between the choroid and the sclera to halt the progressive elongation of the eye ball while preventing complications related to myopia.

DOI: 10.1016/j.mehy.2017.08.020
PMID: 28915972

141: Vogel JP, Oladapo OT, Pileggi-Castro C, Adejuyigbe EA, Althabe F, Ariff S, Ayede AI, Baqui AH, Costello A, Chikamata DM, Crowther C, Fawole B, Gibbons L, Jobe AH, Kapasa ML, Kinuthia J, Kriplani A, Kuti O, Neilson J, Patterson J, Piaggio G, Qureshi R, Qureshi Z, Sankar MJ, Stringer JSA, Temmerman M, Yunis K, Bahl R, Metin GÃ¼lmezoglu A. Antenatal corticosteroids for women at risk of imminent preterm birth in low-resource countries: the case for equipoise and the

need for efficacy trials. BMJ Glob Health. 2017 Aug 30;2(3):e000398. doi: 10.1136/bmjgh-2017-000398. eCollection 2017. Review. PubMed PMID: 29082019; PubMed Central PMCID: PMC5656119.

The scientific basis for antenatal corticosteroids (ACS) for women at risk of preterm birth has rapidly changed in recent years. Two landmark trials-the Antenatal Corticosteroid Trial and the Antenatal Late Preterm Steroids Trial-have challenged the long-held assumptions on the comparative health benefits and harms regarding the use of ACS for preterm birth across all levels of care and contexts, including resource-limited settings. Researchers, clinicians, programme managers, policymakers and donors working in low-income and middle-income countries now face challenging questions of whether, where and how ACS can be used to optimise outcomes for both women and preterm newborns. In this article, we briefly present an appraisal of the current evidence around ACS, how these findings informed WHO's current recommendations on ACS use, and the knowledge gaps that have emerged in the light of new trial evidence. Critical considerations in the generalisability of the available evidence demonstrate that a true state of clinical equipoise exists for this treatment option in low-resource settings. An expert group convened by WHO concluded that there is a clear need for more efficacy trials of ACS in these settings to inform clinical practice.

DOI: 10.1136/bmjgh-2017-000398
PMCID: PMC5656119
PMID: 29082019

Conflict of interest statement: Competing interests: CC is currently chief investigator on a randomised controlled trial to evaluate the role of maternal intramuscular dexamethasone versus betamethasone prior to preterm birth (A*STEROID Trial). AHJ has consulted for possible therapies for respiratory distress syndrome and bronchopulmonary dysplasia with Chiesi; has received respiratory supplies from Fisher & Paykel and surfactant from Chiesi for animal model research; and has received grant support from the National Institute of Child Health and Development, the National Heart, Lung and Blood Institute, Burroughs Welcome, Glaxo Smith Kline and the Bill and Melinda Gates Foundation for studies with premature animal models. FA is a recipient of a research grant from the Bill and Melinda Gates Foundation. The authors otherwise report they have no competing interests to declare.

142: Watkins DA, Johnson CO, Colquhoun SM, Karthikeyan G, Beaton A, Bukhman G, Forouzanfar MH, Longenecker CT, Mayosi BM, Mensah GA, Nascimento BR, Ribeiro ALP, Sable CA, Steer AC, Naghavi M, Mokdad AH, Murray CJL, Vos T, Carapetis JR, Roth GA. Global, Regional, and National Burden of Rheumatic Heart Disease, 1990-2015. N Engl J Med. 2017 Aug 24;377(8):713-722. doi: 10.1056/NEJMoa1603693. PubMed PMID: 28834488.

BACKGROUND: Rheumatic heart disease remains an important preventable cause of cardiovascular death and disability, particularly in low-income and middle-income countries. We estimated global, regional, and national trends in the prevalence of and mortality due to rheumatic heart disease as part of the 2015 Global Burden of Disease study.
METHODS: We systematically reviewed data on fatal and nonfatal rheumatic heart disease for the period from 1990 through 2015. Two Global Burden of Disease analytic tools, the Cause of Death Ensemble model and DisMod-MR 2.1, were used to produce estimates of mortality and prevalence, including estimates of uncertainty.
RESULTS: We estimated that there were 319,400 (95% uncertainty interval, 297,300 to 337,300) deaths due to rheumatic heart disease in 2015. Global age-standardized mortality due to rheumatic heart disease decreased by 47.8% (95% uncertainty interval, 44.7 to 50.9) from 1990 to 2015, but large differences were observed across regions. In 2015, the highest age-standardized mortality due to and prevalence of rheumatic heart disease were observed in Oceania, South Asia,

and central sub-Saharan Africa. We estimated that in 2015 there were 33.4 million (95% uncertainty interval, 29.7 million to 43.1 million) cases of rheumatic heart disease and 10.5 million (95% uncertainty interval, 9.6 million to 11.5 million) disability-adjusted life-years due to rheumatic heart disease globally. CONCLUSIONS: We estimated the global disease prevalence of and mortality due to rheumatic heart disease over a 25-year period. The health-related burden of rheumatic heart disease has declined worldwide, but high rates of disease persist in some of the poorest regions in the world. (Funded by the Bill and Melinda Gates Foundation and the Medtronic Foundation.).

DOI: 10.1056/NEJMoa1603693
PMID: 28834488 [Indexed for MEDLINE]

143: Woodhouse LJ, Scutt P, Hamdy S, Smithard DG, Cohen DL, Roffe C, Bereczki D, Berge E, Bladin CF, Caso V, Christensen HK, Collins R, Czlonkowska A, de Silva A, Etribi A, Laska AC, Ntaios G, Ozturk S, Phillips SJ, Prasad K, Szatmari S, Sprigg N, Bath PM. Route of Feeding as a Proxy for Dysphagia After Stroke and the Effect of Transdermal Glyceryl Trinitrate: Data from the Efficacy of Nitric Oxide in Stroke Randomised Controlled Trial. Transl Stroke Res. 2017 Aug 2. doi: 10.1007/s12975-017-0548-0. [Epub ahead of print] PubMed PMID: 28770403.

Post-stroke dysphagia is common, associated with poor outcome and often requires non-oral feeding/fluids. The relationship between route of feeding and outcome, as well as treatment with glyceryl trinitrate (GTN), was studied prospectively. The Efficacy of Nitric Oxide in Stroke (ENOS) trial assessed transdermal GTN (5 mg versus none for 7 days) in 4011 patients with acute stroke and high blood pressure. Feeding route (oral = normal or soft diet; non-oral = nasogastric tube, percutaneous endoscopic gastrostomy tube, parenteral fluids, no fluids) was assessed at baseline and day 7. The primary outcome was the modified Rankin Scale (mRS) measured at day 90. At baseline, 1331 (33.2%) patients had non-oral feeding, were older, had more severe stroke and more were female, than 2680 (66.8%) patients with oral feeding. By day 7, 756 patients had improved from non-oral to oral feeding, and 119 had deteriorated. Non-oral feeding at baseline was associated with more impairment at day 7 (Scandinavian Stroke Scale 29.0 versus 43.7; 2p < 0.001), and worse mRS (4.0 versus 2.7; 2p < 0.001) and death (23.6 versus 6.8%; 2p = 0.014) at day 90. Although GTN did not modify route of feeding overall, randomisation ≤6 h of stroke was associated with a move to more oral feeding at day 7 (odds ratio = 0.61, 95% confidence intervals 0.38, 0.98; 2p = 0.040). As a proxy for dysphagia, non-oral feeding is present in 33% of patients with acute stroke and associated with more impairment, dependency and death. GTN moved feeding route towards oral intake if given very early after stroke. Clinical Trial Registration Clinical Trial Registration-URL: http://www.controlled-trials.com . Unique identifier: ISRCTN99414122.

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145: Yadav K, Singh A, Jaryal AK, Coshic P, Chatterjee K, Deepak KK. Modulation of cardiac autonomic tone in non-hypotensive hypovolemia during blood donation. J Clin Monit Comput. 2017 Aug;31(4):739-746. doi: 10.1007/s10877-016-9912-y. Epub 2016 Aug 2. PubMed PMID: 27484693.

Non-hypotensive hypovolemia, observed during mild haemorrhage or blood donation leads to reflex readjustment of the cardiac autonomic tone. In the present study, the cardiac autonomic tone was quantified using heart rate and blood pressure variability during and after non-hypotensive hypovolemia of blood donation. 86 voluntary healthy male blood donors were recruited for the study (age 35 ± 9 years; weight 78 ± 12 kg; height 174 ± 6 cms). Continuous lead II ECG and beat-to-beat blood pressure was recorded before, during and after blood donation followed by offline time and frequency domain analysis of HRV and BPV. The

overall heart rate variability (SDNN and total power) did not change during or after blood donation. However, there was a decrease in indices that represent the parasympathetic component (pNN50 %, SDSD and HF) while an increase was observed in sympathetic component (LF) along with an increase in sympathovagal balance (LF:HF ratio) during blood donation. These changes were sustained for the period immediately following blood donation. No fall of blood pressure was observed during the period of study. The blood pressure variability showed an increase in the SDNN, CoV and RMSSD time domain measures in the post donation period. These results suggest that mild hypovolemia produced by blood donation is non-hypotensive but is associated with significant changes in the autonomic tone. The increased blood pressure variability and heart rate changes that are seen only in the later part of donation period could be because of the progressive hypovolemia associated parasympathetic withdrawal and sympathetic activation that manifest during the course of blood donation.

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146: Yadav SP, Singh PK, Sharma P, Iqbal N, Kaur P, Sharma S, Singh TP. Structure and binding studies of proliferating cell nuclear antigen from Leishmania donovani. Biochim Biophys Acta. 2017 Nov;1865(11 Pt A):1395-1405. doi: 10.1016/j.bbapap.2017.08.011. Epub 2017 Aug 24. PubMed PMID: 28844736.

Proliferating cell nuclear antigen (PCNA) acts as a sliding clamp to support DNA replication and repair. The structure of PCNA from Leishmania donovani (LdPCNA) has been determined at 2.73Å resolution. Structure consists of six crystallographically independent molecules which form two trimeric rings. The pore diameter of the individual trimeric ring is of the order of 37Å. The two rings are stacked through their front to front faces. In order to gain a stable packing, the rings are rotated by 42° about the pore axis and shifted by 7Å and tilted by 16° along the perpendicular direction to pore axis. This form of stacking reduced the effective diameter of the pore to 32Å. The sequence of LdPCNA consists of a long segment of 41 amino acid residues (186-Gly-Val-Ser-Asp-Arg-Ser-Thr-Lys-Ser-Glu-Val-Lys-Ala-Glu-Val-Lys-Ala-Glu-Ala-Arg-Asp-Asp-Asp-Glu-Glu-Pro-Leu-Ser-Arg-Lys-Tyr-Gly-Lys-Ala-Asp-Ser-Ser-Ala-Asn-Ala-Ile-226) whereas the corresponding segments in other PCNAs contain only eight residues corresponding to 186-Gly-Val-Ser-Asp-Arg------224-Asn-Ala-Ile-226. The enhanced length of this segment in LdPCNA may influence its mode of interaction with DNA and other proteins. The dissociation constants obtained using real time binding studies with surface plasmon resonance (SPR) for two peptides, Lys-Arg-Arg-Gln-Thr-Ser-Met-Thr-Asp-Phe-Tyr-His (P1) from human cyclin-dependent kinase inhibitor-1(CKI-1) and Lys-Thr-Gln-Gly-Arg-Leu-Asp-Ser-Phe-Phe-Thr-Val (P2) from flap endonuclease 1 (Fen-1) as well as with two small molecule inhibitors, (S)-4-(4-(2-amino-3-hydroxypropyl)-2, 6-diiodophenoxy) phenol hydrochloride (ADPH) and N-(3-methylthiophene-2-carboxylicacid)-N'-((3-hydroxy-2-naphthalenyl) methylene) hydrazide (MCMH) are 0.29±0.09μM, 0.37±0.08μM, 0.35±0.09μM and 1.20±0.08μM respectively. The corresponding values obtained using fluorescence spectroscopic methods were 0.22±0.06μM, 0.68±0.07μM, 0.44±0.07μM and 0.75±0.05μM respectively.

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147: Zangmo R, Singh N, Kumar S, Vatsa R. Second Look of Endosalpingiosis: A Rare Entity. J Obstet Gynaecol India. 2017 Aug;67(4):299-301. doi: 10.1007/s13224-016-0960-5. Epub 2016 Dec 7. PubMed PMID: 28706372; PubMed Central PMCID: PMC5491413.